Birla Institute of Technology & Science (BITS), Pilani
Practice School Division
Practice School-II course (3rd July – 16 Dec, 2025)
PS Chronicles (A compilation of student experience during PS-II)

BITS-PILANI (PILANI CAMPUS)

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From the Desk of the Editor

It is my great pleasure to bring forth the 19th edition of the PS-II Chronicles. This edition features over 558 plus articles from students (Pilani, K.K. Birla Goa, and Hyderabad) sharing their experiences during I Semester of 2025-2026. This sustained high numbers of experience sharing are a testimony to the usefulness of the PS- II Chronicles and its increasing popularity, especially during the PS preference form filling process.

The primary aim of the PS-II Chronicles is to record the overall PS-II experiences of all the stakeholders – the students, the PS faculty and the Industry mentors. Currently, this version is the compilation of all student experiences. The objectives of this Chronicles are manifold
Prospective PS-II students can get to know about the experiences of their seniors, currently at PS thereby increasing awareness in the student community. Increasing awareness among faculty about the nature of work happening at various PS-II stations. Bring back the experiences gained at PS-II station into academics - making the curriculum more industry relevant.

I would like to thank students for sharing their experiences during their stint at the organization. I would also like to thank the entire PSD team members for reviewing the articles and providing us the valuable feedback. I would also like to extend our sincere thanks to Mr. Om Prakash Singh Shekhawat, Ms. Ankita Duggal, Mr. Shyam Sunder Saini and Mr. Varun Singh of the Practice School Division, of BITS Pilani, Pilani Campus, Pilani for their help in bringing out this edition of PS-II Chronicles.

I would be happy to receive any feedback regarding the Chronicles. Please feel free to email me at psd@pilani.bits-pilani.ac.in or at murugesan@pilani.bits-pilani.ac.in.

The Associate Dean,
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PS-II Station : GeoIQ (Quantduo Technologies Pvt. Ltd., Bengaluru 297
Faculty 297
Name: A Michael Alphonse 297
Student 297
Name: PAKKIRU GUNA SHEKHAR REDDY(2020B3A41510G) 297
Name: PRABHAT PATI TRIPATHI(2022A4PS0655G) 298
Name: KRISHNENDU BISWAL .(2022A4PS1392H) 299
PS-II Station : GMDC Science & Research Centre, Ahmedabad, Ahmedabad 302
Faculty 302
Name: Santosh Sopanrao Khandgave 302
Student 302
Name: PIYUSH KUMAR(2021B1A40815P) 302
Name: ANIKET BHAGWAN PRASAD(2022A1PS0714P) 304
PS-II Station : Goodera - Software Development Engineer (SDE), Bengaluru 305
Faculty 305
Name: Ashish Narang 305

Student 306
Name: PARVER CHHABRA(2021B1A72304P) 306
PS-II Station : Goodera - Software Development Engineer Testing (SDET), Bengaluru 307
Faculty 307
Name: Ashish Narang 307
Student 307
Name: GUPTESH RANJAN SAHOO(2022A2PS1067P) 307
PS-II Station : Gosprint logistics pvt ltd, Bengaluru. 308
Faculty 308
Name: Arindam Roy 308
Student 308
Name: ADITYA HARESH KORDE(2021B1A43006G) 308
PS-II Station : Grahith Learning, Nalgonda 309
Faculty 309
Name: Bhamidipati Vaishali 309
Student 309
Name: SIRIGIRI SOWMITH REDDY(2020B3A80556G) 309
PS-II Station : Grasim Industries, Nagda 311
Faculty 311
Name: Arun Maity 311
Student 311
Name: PRABHALA SREEJIT .(2021B5A43175H) 311
PS-II Station : GRASIM Pulp & Fiber Innovation Center, Mumbai 313
Faculty 313
Name: Arun Maity 313
Student 313
Name: VARUN MANOHAR CHITLANGE(2021B1A12733P) 313
Name: HARSH ACHARYA(2022A1PS1056P) 315
PS-II Station : GreenFortune Windows and Doors - Product Strategy, Hyderabad 317
Faculty 317
Name: Rakesha Chandra Dash 317
Student 317

Name: NISARG PATEL(2022A4PS1219G) 317
PS-II Station : Greenlight, Bengaluru 318
Faculty 318
Name: Raja Vadhana Prabhakar 318
Student 318
Name: DISHANT SURANA(2021B3A71114G) 318
Name: PRANAV BHUSHAN AKULA .(2022A7PS0033H) 319
PS-II Station : H2e Power Systems Private Limited, Pune 320
Faculty 320
Name: Ravi Shrikrishna Reosekar 320
Student 321
Name: SAMARTH SINHA(2022A1PS1514G) 321
PS-II Station : Habanero Labs - a subsidiary of Spicenet, Bengaluru 322
Faculty 322
Name: Shreyas Suresh Rao 322
Student 322
Name: VARUN L .(2020A7PS0068P) 322
PS-II Station : HEAPS HEALTH SOLUTIONS INDIA PVT. LTD - Customer Success- , Hyderabad 323
Faculty 323
Name: Bharathi R 323
Student 323
Name: ADITI SANJAY PURI(2022A5PS1461P) 323
Name: RAKSHITA DAVE(2022A5PS1457P) 324
PS-II Station : HEAPS HEALTH SOLUTIONS INDIA PVT. LTD - Data Science, Bengaluru 326
Faculty 326
Name: Bharathi R 326
Student 326
Name: ADITYA PRAKASH(2021B1A82684G) 326
PS-II Station : Hevo Technologies India Pvt. Ltd., Bengaluru 328
Faculty 328
Name: Jyotsana Grover 328
Student 328

Name: KUSHAGRA MISHRA .(2021B5A72970H) 328
PS-II Station : Hubert Enviro Care Systems - R&D, Chennai 329
Faculty 329
Name: Gopalakrishnan Venkiteswaran 329
Student 329
Name: SWAJEET SWAIN(2022A1PS1330P) 330
PS-II Station : Hyrefox Consultants Ltd., Jaipur 331
Faculty 331
Name: Perumal Jayakumar 331
Student 331
Name: PARTH RANA(2021B1A12473P) 331
PS-II Station : Ideaspring Capital Advisors LLP - , Bengaluru 332
Faculty 332
Name: Uma Nagarajan 332
Student 332
Name: KHATRI HARSHVARDHAN KESHAV(2021B2A22160P) 332
PS-II Station : IFB Industries, Goa 333
Faculty 333
Name: Pavan Kumar Potdar 333
Student 333
Name: ARUNAV GARG(2022A4PS1301P) 333
PS-II Station : Impactsure Technologies Private Limited, Mumbai 335
Faculty 335
Name: Perumal Jayakumar 335
Student 335
Name: SHOURYA PRATAP SINGH .(2022AAPS0283H) 335
PS-II Station : Incubrew Innovations Private Limited, Naini Tal 336
Faculty 336
Name: Sandeep Kayastha 336
Student 336
Name: APOORV KAKAR(2022A4PS0680P) 336
PS-II Station : India Accelerator - Non Tech, Gurgaon 338

Faculty 338
Name: Sidharth Mishra 338
Student 338
Name: ANOUSHKA BURMAN ROY(2022A1PS1115P) 338
PS-II Station : India Accelerator - Tech, Gurgaon 340
Faculty 340
Name: Uma Nagarajan 340
Student 340
Name: IHA BHATIA(2022AAPS0021P) 340
PS-II Station : Indira Gandhi Centre for Atomic Research,Kalpakkam, Kalpakkam 341
Faculty 341
Name: Madhuri Bayya 341
Student 341
Name: YASH AMOL PATIL(2022A3PS0437P) 341
Name: MANTHAN HADIYA(2022AAPS0371G) 342
PS-II Station : IndusInd Bank, Gurgaon 343
Faculty 343
Name: Gaurav Nagpal 343
Student 343
Name: VISHWAM AGGARWAL(2022A3PS1224P) 343
PS-II Station : InMobi Technologies Pvt Ltd - Business/ Product Analytics, Bengaluru 344
Faculty 344
Name: Seetha Parameswaran 344
Student 344
Name: AMARDEEP SINGH GREWAL(2022A2PS0851P) 345
Name: HIMANSHI MALIK .(2022A5PS1240H) 346
Name: VAISHNAVI SINGHAL(2022B5PS1530P) 347
PS-II Station : InMobi Technologies Pvt Ltd - HR (Learning & Development), Bengaluru 348
Faculty 348
Name: Seetha Parameswaran 348
Student 348
Name: KAVYA KASHISH(2022A5PS1426P) 348

PS-II Station : InMobi Technologies Pvt Ltd - Software Engineer, Bengaluru 350
Faculty 350
Name: Preethi N. G 350
Student 350
Name: NIKHILESH .(2021B5A33166H) 350
Name: SHOAIB KHAN .(2022A3PS0573H) 352
Name: SATYA NAGA DATTA HARSHITH ASAPU(2022A3PS0639H) 353
Name: VATSAL KAILASH HEDA(2022A3PS1205P) 354
Name: ANANT JAIN(2022A3PS1270G) 356
Name: ADITI GUPTA(2022A8PS0281G) 357
Name: NIKITA GUPTA .(2022A8PS0554H) 358
Name: SHIRISH PATEL(2022A8PS0709G) 359
Name: VISSWAAK REDDI THEEPIREDDY .(2022A8PS0820H) 361
PS-II Station : InMobi Technologies Pvt Ltd - Business Finance, Bengaluru 362
Faculty 362
Name: Seetha Parameswaran 362
Student 362
Name: VAIBHAV JAIN(2021B3A21132P) 362
PS-II Station : Integra Design, Delhi 363
Faculty 363
Name: Eht E Sham 363
Student 363
Name: SAUMITRA(2021B2A83019G) 363
PS-II Station : Integrated Active Monitoring Pvt. Ltd.,, Pune 365
Faculty 365
Name: Manoj Subhash Kakade 365
Student 365
Name: SHIV ANAND(2022A3PS0502G) 365
PS-II Station : Intel - Hardware, Bengaluru 366
Faculty 366
Name: Swapna S Kulkarni 366
Student 367

Name: MARIVADA UDAY SANKAR(2021B3A30999G) 367
PS-II Station : IPG MEDIABRAND, Pune 368
Faculty 368
Name: Mrityunjay Kumar 368
Student 368
Name: PRANET UDAY NAIR(2022A4PS0845G) 368
PS-II Station : ITC Limited, Paperboards and Specialty Papers Division (PSPD), Tribeni (TBN), Kolkata .. 369
Faculty 370
Name: Panchagnula Jayaprakash Sharma 370
Student 370
Name: AMAN ALI(2021B1A22735P) 370
PS-II Station : ITC- Printing and Packaging Business (PPB)- , Chennai 371
Faculty 371
Name: Panchagnula Jayaprakash Sharma 371
Student 372
Name: MANAN GUPTA(2021B4A41689P) 372
Name: DIVESH TIWARI(2022A4PS0624P) 372
PS-II Station : ITC- Printing and Packaging Business (PPB)- Nadiad, Gujrat, Nadiad 374
Faculty 374
Name: Panchagnula Jayaprakash Sharma 374
Student 374
Name: ANISHA JAYANT JOSHI(2021B1A43042G) 374
PS-II Station : IUDX Program Unit, Indian Institute of science - Data Kaveri,, Bengaluru 376
Faculty 376
Name: A Rekha 376
Student 376
Name: SHIVEN SAIGAL(2021B4AA3035G) 376
Name: AYUSH GOYAT(2022AAPS0344P) 377
PS-II Station : Joinditto, Bengaluru 378
Faculty 378
Name: Arindam Roy 378
Student 378

Name: SPANDAN KAHATE(2022A7PS1123G) 378
Name: SEHAJPREET SINGH SODHI(2022A8PS1250P) 380
Name: HARSHIL NARESHBHAI CHAUDHARI(2022AAPS0338G) 381
PS-II Station : JPMC - Chief Data & Analytics Office, Mumbai 382
Faculty 382
Name: Gaurav Nagpal 382
Student 382
Name: JENIL SUNIL SHAH(2021B5A73027G) 382
Name: RISHI BHARADWAJ .(2022A7PS2001H) 383
PS-II Station : JPMC - CIB R&A - Banking, Mumbai 384
Faculty 384
Name: Sidharth Mishra 384
Student 384
Name: ARPIT SRIVASTAVA(2022A1PS1454G) 384
Name: PARTH MAHESHWARI(2022A2PS1159P) 385
Name: SAMAR GUPTA(2022A4PS0856G) 386
Name: ARYAN DAS .(2022A4PS1480H) 387
Name: PARVA BHARGAVA .(2022A4PS1731H) 388
Name: KSHITIJ TAKALE(2022A7PS0739G) 389
Name: DHRUBA RAY .(2022AAPS0326H) 390
PS-II Station : JPMC - CIB R&A – Markets – Sales & CCAR, Mumbai 391
Faculty 391
Name: Bhamidipati Vaishali 392
Student 392
Name: DEVARSHI SHAH(2022AAPS0552G) 392
PS-II Station : JPMC - GR&C WCR Portfolio Analytics- Analytics Strategy, Mumbai 393
Faculty 393
Name: Bhamidipati Vaishali 393
Student 393
Name: GOURYSHETTY KHUSHI(2021B3A73042H) 393
PS-II Station : JPMC - Risk Reporting & Middle Office/Risk Controller, Mumbai 394
Faculty 394

Name: Bhamidipati Vaishali . 394
Student 394
Name: NAMAN PATEL(2022ABPS1346P) 394
PS-II Station : Kale Logistics Solutions- AI/ML, Thane 395
Faculty 395
Name: Sugata Ghosal . 395
Student 395
Name: AARYAN RAJESH SARAF(2022A8PS1239P) 395
PS-II Station : Kotak Mahindra Bank, Mumbai 396
Faculty 396
Name: Arindam Roy . 396
Student 396
Name: ARYAN KARAS .(2022A4PS1662H) 396
PS-II Station : KPMG G&PS – E&S, , Chennai 397
Faculty 397
Name: Parag Rastogi 397
Student 397
Name: THAKKALLAPALLY SRAVAN KUMAR .(2022A2PS1873H) 397
Name: ABHIVANSH JAIN(2022ABPS1358P) 399
PS-II Station : KPMG G&PS – E&S, Gurugram, Gurgaon 400
Faculty 400
Name: Parag Rastogi 400
Student 400
Name: PATEL HET PANKAJKUMAR(2022A1PS0742P) 400
PS-II Station : Localbuy Technologies Pvt Ltd (SuperK), Bengaluru 401
Faculty 401
Name: Atul Kumar Arora 401
Student 401
Name: ROHIT ROY KOMARAVATHI(2022A1PS1307G) 401
PS-II Station : Max Now Pte. Ltd. (Heymax.ai), Singapore 403
Faculty 403
Name: Raghavendra Singh 403

Student 403
Name: HRUDAY K(2022A7PS1161G) 403
PS-II Station : Max TransTech Ltd - Financial Reports and Data Analysis, Gurgaon 404
Faculty 404
Name: Atul Kumar Arora 404
Student 404
Name: DISHITA GUPTA(2022B5PS1510P) 404
PS-II Station : MBB Labs Private Limited (Maybank), Bengaluru 405
Faculty 405
Name: Pravin Yashwant Pawar 405
Student 405
Name: EDSON GEORGE REBELLO(2021B2A81247G) 405
Name: SUBHAM SHREYASH(2021B2A82381G) 406
Name: ANKITA BEHERA .(2021B2A83133H) 407
PS-II Station : Metal Coatings India Limited, Ballabgarh 408
Faculty 408
Name: Benu Madhab Gedam 408
Student 408
Name: VANSH RAJ S .(2022A4PS1852H) 408
PS-II Station : MIPS Embedded Technologies Pvt. Ltd,, Bengaluru 409
Faculty 409
Name: Manoj Subhash Kakade 409
Student 409
Name: SANIYA SHAHI .(2022A8PS0810H) 409
PS-II Station : Morgan Stanley - IAD Data Analytics role, Mumbai 410
Faculty 410
Name: Ambatipudi Vamsidhar 410
Student 410
Name: HRIDAY NITIN GADIA(2021B4AA2794H) 410
PS-II Station : Morgan Stanley - IED GMG FE role, Mumbai 412
Faculty 412
Name: Ambatipudi Vamsidhar 412

Student 412
Name: ABHINAV SRIVASTAVA .(2021B3AA1608H) 412
PS-II Station : Morgan Stanley FID Research roles, Mumbai 413
Faculty 413
Name: Ambatipudi Vamsidhar 413
Student 413
Name: RUPESH YARLAGADDA(2021B3A70839G) 413
Name: TANISHKA PARTH SUGANDHI(2021B3A72143G) 414
Name: ISHAN DEEPAK WANI(2021B3A72772P) 415
PS-II Station : Morgan Stanley IED GMG – QIS Strats role, Mumbai 416
Faculty 416
Name: Ambatipudi Vamsidhar 416
Student 416
Name: AARJAV JAIN(2021B3A71178P) 416
PS-II Station : Morgan Stanley MRM role, Mumbai 417
Faculty 417
Name: Ambatipudi Vamsidhar 417
Student 417
Name: ANMOL AGGARWAL(2021B3AA1056P) 417
Name: SUJAL SHAILESH PIMPALE(2021B4A41067G) 418
PS-II Station : Morgan Stanley Portfolio Analytics, Mumbai 419
Faculty 419
Name: Swarna Chaudhary 419
Student 419
Name: SIDHANT BHAT .(2021B3A73036H) 419
PS-II Station : Morgan Stanley Primary Market Research role, Mumbai 420
Faculty 420
Name: Ambatipudi Vamsidhar 420
Student 420
Name: AMOGH RAVI JOSHI .(2021B3A30605H) 420
PS-II Station : Morgan Stanley Research - Data Strats, Mumbai 422
Faculty 422

Name: Ambatipudi Vamsidhar . 422
Student 422
Name: ANUSHKA AGGARWAL(2021B1A32269P) 422
Name: RAJUL BANGANI(2021B1A32739P) 423
Name: KUSHAGRA MALANI .(2021B5AA2274H) 424
PS-II Station : MSCI Services Pvt. Ltd. - NPD - , Mumbai 425
Faculty 425
Name: Krishnamurthy Bindumadhavan . 425
Student 425
Name: ANIRUDH JAIMINI(2021B3A21192P) 425
Name: ANANYAGOMATHI R .(2021B4AA1626H) 427
PS-II Station : Multi Sales Pvt Ltd, Mumbai 428
Faculty 428
Name: Sameer Gupta . 428
Student 428
Name: SHAH KRISH BRIJESH(2022A3PS0377P) 428
PS-II Station : Munchable.tv - Non Tech, Bengaluru 429
Faculty 429
Name: Arindam Roy . 429
Student 429
Name: AYUSH SHANKAR MANDWAR(2022ABPS1048P) 429
PS-II Station : MyHQ - Non Tech, Gurugram, Gurgaon 430
Faculty 430
Name: Gaurav Nagpal . 430
Student 430
Name: SHASHWAT PANDEY(2021B1A12297P) 430
Name: SAUMYA KHANUJA(2021B2A43063G) 431
PS-II Station : Myntra Designs Pvt. Ltd, Bengaluru 432
Faculty 432
Name: Akanksha Bharadwaj . 432
Student 432
Name: SURAZ KUMAR(2021B2A71602G) 432

Name: CHAHAK RAKESH PUNAMIYA(2021B2A72355G) 433
Name: PURU GUPTA(2021B5A71748P) 433
Name: BIBHU KALYAN SAHOO(2022A7PS0138P) 435
PS-II Station : National Institute of Science Communication and Policy Research (NIScPR), New Delhi. 436
Faculty 436
Name: Rajesh Kumar Tiwary 436
Student 436
Name: TANISHQ AGARWAL(2022A4PS1465G) 436
PS-II Station : NAVATA ROAD TRANSPORT, Hyderabad 438
Faculty 438
Name: Sandeep Kayastha 438
Student 438
Name: SARTHAK GUPTA(2022A4PS0615P) 438
Name: PRABHAV SRIVASTAVA(2022A4PS1523G) 439
PS-II Station : Necessa Security & Integrated Services Pvt Ltd - Non Tech, Gurgaon 441
Faculty 441
Name: Sandeep Kayastha 442
Student 442
Name: JYOTIRADITYA VAISH(2021B1A42280P) 442
Name: PIYAAL CHAUDHARY(2022ABPS1035P) 444
PS-II Station : Necessa Security & Integrated Services Pvt Ltd - Tech, Gurgaon 446
Faculty 446
Name: Gaurav Nagpal 446
Student 446
Name: ROHAN RAN VIJAY(2022A7PS0067P) 446
Name: PARUL SRIVASTAVA(2022A7PS0185P) 448
PS-II Station : NetApp India Pvt ltd, Bengaluru 450
Faculty 450
Name: Chennupati Rakesh Prasanna 450
Student 450
Name: MANGLE SOHAM SUHAS(2021B3A71068H) 451
Name: AVIRAL AGARWAL(2021B3A71285P) 452

Name: BURAD PARAM MAHAVIR(2021B3A72113H) 453
Name: GUDIPUDI VENKATA SURYASHASHANK(2021B3AA0866H) 455
PS-II Station : NetNet Fintech Pvt Ltd - Non Tech, Bengaluru 457
Faculty 457
Name: Perumal Jayakumar 457
Student 457
Name: SUPARSHAV JAIN(2022A8PS1249P) 457
PS-II Station : Nexstem Pvt Ltd, Bengaluru 458
Faculty 458
Name: Mohammad Saleem Bagewadi 458
Student 458
Name: ABHISHEK TIWARI(2020B2A42118G) 458
PS-II Station : Nielsen - , Bengaluru 460
Faculty 460
Name: A Michael Alphonse 460
Student 460
Name: ASTIK GAUR(2021B2A82286P) 460
Name: KABRA AADITYA BHARAT(2021B3AA2773P) 462
Name: AARYA NIREN PAI(2021B4A30046G) 464
Name: ABHINAY AGARWAL(2021B5A82953G) 464
PS-II Station : Nielsen - , Hyderabad 465
Faculty 465
Name: Venkateswara Rao Thunuguntla 465
Student 466
Name: ADITYA JAISWAL .(2022A3PS0410H) 466
PS-II Station : Nielsen - Gurgaon, Gurgaon 467
Faculty 467
Name: Harish Kumar Aggarwal 467
Student 467
Name: BIDWAI VARAD LAXMIKANT(2021B5A72345P) 467
Name: MOHD ABDULLAH WASIF(2022A4PS1279P) 469
Name: SAARTH CHAHAL(2022A4PS1296P) 470

PS-II Station : Nirmaan Organization - Tech, Hyderabad 471
Faculty 471
Name: Perumal Jayakumar 471
Student 471
Name: ENNAM NAVYA SRI .(2022A7PS0001H) 471
PS-II Station : Nomura Finance Division, Mumbai 473
Faculty 473
Name: Ambatipudi Vamsidhar 473
Student 473
Name: KHUSHI SONI(2022A1PS0903P) 473
PS-II Station : Nomura Fintech - India Innovation Office, Mumbai 474
Faculty 474
Name: Ambatipudi Vamsidhar 474
Student 474
Name: PRANAY SANDEEP JALAN(2022A8PS1719P) 474
PS-II Station : Nomura Global Markets Analyst Internship, Mumbai 475
Faculty 475
Name: Ambatipudi Vamsidhar 476
Student 476
Name: RIYA RAJESH AGRAWAL(2021B3A70996H) 476
Name: LADDHA MANAV HARISH(2021B3A71053G) 476
Name: HURSH SANDEEP SETHIYA(2021B3A71878G) 478
PS-II Station : Nomura Global Wholesale Strategy, Mumbai 479
Faculty 479
Name: Ambatipudi Vamsidhar 479
Student 479
Name: MALU AKSHAY PRAMOD(2021B3A71721P) 479
PS-II Station : Nomura ITD International Wealth Management (IWM) division, Mumbai 480
Faculty 480
Name: Ambatipudi Vamsidhar 480
Student 480
Name: SAMAAHITH G OKKUNDA(2021B4A72431G) 480

Name: RUSHI PATEL .(2022A7PS1382H) 481
PS-II Station : Nomura Market Risk, Mumbai 482
Faculty 482
Name: Ambatipudi Vamsidhar 482
Student 482
Name: SONIT SRIVASTAVA .(2022A2PS1716H) 482
PS-II Station : Nomura Regional CEO Office, Mumbai 483
Faculty 483
Name: Ambatipudi Vamsidhar 483
Student 483
Name: RUDRAKSH GULHATI(2021B3AA1580G) 483
PS-II Station : Nomura Risk Management - CEM, Mumbai 484
Faculty 484
Name: Ambatipudi Vamsidhar 485
Student 485
Name: HARSH BHATIA(2021B3AA1060P) 485
PS-II Station : Nomura Risk Management - Risk Infrastructure, Mumbai 485
Faculty 486
Name: Ambatipudi Vamsidhar 486
Student 486
Name: AMAN JAISWAL .(2022A4PS0742H) 486
Name: ARNAV GUPTA .(2022A7PS0063H) 487
PS-II Station : NOMURA RISK MANAGEMENT - STRESS TESTING, Mumbai 488
Faculty 488
Name: Ambatipudi Vamsidhar 488
Student 488
Name: KEYA NEHAL SHAH(2022ABPS1080P) 488
PS-II Station : Nurix Labs Private Limited - Growth- , Bengaluru 489
Faculty 489
Name: Seetha Parameswaran 489
Student 489
Name: TANU SINGH BHUEE .(2022A1PS1723H) 489

PS-II Station : Nurix Labs Private Limited - Tech, Bengaluru 490
Faculty 490
Name: Seetha Parameswaran 491
Student 491
Name: JAYANT AGGARWAL(2021B4AA2324P) 491
PS-II Station : Nutanix, Bengaluru 492
Faculty 492
Name: Chandra Shekar R K 492
Student 492
Name: SARTHAK SOMANI .(2021B1A70793H) 492
Name: AKHIL KUMAR MISHRA .(2021B3A70929H) 493
Name: SWAPNIL YADAV(2021B3A72770P) 494
Name: SIDDHARTH YOHAN CERI .(2021B4A73145H) 495
Name: MANAV PAHWA(2021B5A72796P) 496
Name: VUDUMULA DATTA SAI SHASHANK REDDY(2021B5A72951G) 498
Name: RIA KHATONIAR(2021B5A73028G) 499
Name: RANA KASHYAP CHITRANG(2022A3PS0448P) 500
Name: SAMARTH SANJAY LANDE(2022A7PS0096P) 501
PS-II Station : Nykaa - Analytics, Bengaluru 502
Faculty 502
Name: Swarna Chaudhary 503
Student 503
Name: HARSH SRISRIMAL(2022A8PS0577G) 503
PS-II Station : Nykaa - Data Science, Bengaluru 504
Faculty 504
Name: Swarna Chaudhary 504
Student 504
Name: EKANSH ARYAN SINHA .(2021B3AA3038H) 504
PS-II Station : Nykaa - Engineering, Bengaluru 505
Faculty 505
Name: Swarna Chaudhary 505
Student 506

Name: DEVANSH NANDWANI(2021B4AA1937G) 506
Name: ARYA KULKARNI(2022A8PS0557G) 507
PS-II Station : Nykaa - Product, Gurgaon 507
Faculty 507
Name: Swarna Chaudhary 507
Student 508
Name: MUMUKSHU AGRAWAL(2022AAPS0271G) 508
PS-II Station : OfBusiness,Gurugram, Gurgaon 509
Faculty 509
Name: Ashish Narang 509
Student 509
Name: TANISHA GUPTA(2022AAPS0194P) 510
PS-II Station : Oracle, Bangalore, Bengaluru 510
Faculty 510
Name: Srinath R.Naidu 510
Student 510
Name: AADI SWAPNIL NESARKAR(2021B3A70967G) 511
Name: PRATHIK S SHETTY(2021B3A71317G) 512
Name: ANSHUL GOEL(2021B3A72863G) 513
PS-II Station : 514
Name: PRATYAKSH KANSAL(2021B4A72783P) 514
Name: AAROSHI R RAO(2021B5A72952G) 515
Name: ANGAD BAWA .(2021B5A73171H) 516
PS-II Station : Orange Health Labs, Bengaluru 516
Faculty 516
Name: Bharathi R 516
Student 517
Name: YAMANA SAI MAHESH .(2022A4PS1527H) 517
PS-II Station : Perfect Pack, Mumbai 518
Faculty 518
Name: Benu Madhab Gedam 518
Student 518

Name: DESAI ISHAAN ANUJ(2021A1PS2095P) 518
PS-II Station : Pfizer Healthcare India Pvt.Ltd, Chennai 519
Faculty 519
Name: Vijayalakshmi Anand 519
Student 519
Name: PRIANSHU BANERJEE(2022A3PS0741G) 519
Name: AAYUSH VIJ(2022AAPS0566G) 520
PS-II Station : PIEDS - Pilani, Pilani 521
Faculty 521
Name: Anjani Srikanth Koka 521
Student 521
Name: OM SONKUSARE .(2022A2PS1703H) 521
Name: SHASHWAT PANDEY .(2022A7PS1299H) 522
Name: RUCHI NEHRA(2022B2PS1538P) 523
Name: RAJKUMAR(2022B4PS1526P) 524
Name: BHAWANA TANWAR(2022D2PS1545P) 526
Name: DEVAASHISH BHOMIA(2022D2PS1556P) 528
PS-II Station : Piramal Group - BIU, Bengaluru 529
Faculty 529
Name: Ankur Pachauri 529
Student 529
Name: ANIRUDH(2021B4A82579G) 530
Name: YASH KHANNA(2021B4A82948G) 531
Name: SATYAM SHUKLA(2022A3PS1158G) 532
Name: VIPIN KUMAR(2022A3PS1208P) 533
Name: SAMAR JALIL SIDDIQUI(2022A7PS1135G) 535
Name: VASU ARORA(2022A8PS1112G) 537
PS-II Station : Piramal Pharma Limited, Mumbai 538
Faculty 538
Name: Ankur Pachauri 538
Student 538
Name: SATYA SHREYAS KUSUMANCHI .(2021B3A70723H) 538

Name: HARSH SINGH(2022A8PS1263P) 539
Name: KUNAL JOHRI(2022AAPS0243P) 539
PS-II Station : Pocket FM Private Limited - Content Performance, Bengaluru 541
Faculty 541
Name: Jyotsana Grover 541
Student 541
Name: ADITYA AGRAWAL .(2022A4PS0716H) 541
Name: PRAKHAR MITTAL(2022A4PS0965G) 542
PS-II Station : Pocket FM Private Limited - Market Expansion, Bengaluru 543
Faculty 543
Name: Reddy Rani Vangimalla 543
Student 543
Name: SAMEER KUMAR(2022A1PS1482G) 543
Name: KARAN VIR SINGH RANA(2022A1PS1512G) 544
PS-II Station : Pocket FM Private Limited - Monetization Strategies, Bengaluru 545
Faculty 545
Name: Reddy Rani Vangimalla 545
Student 545
Name: ANIRUDH SINGH RATHOR(2022A1PS1099P) 545
Name: KRISHNA GARG(2022A1PS1729P) 546
PS-II Station : Pocket FM Private Limited - Retention Analysis, Bengaluru 547
Faculty 547
Name: Jyotsana Grover 547
Student 547
Name: ARYAN SRIVASTAVA(2022A1PS1279G) 547
Name: PRATIK GHOSH(2022A4PS0148G) 548
Name: ADITYA AGARWAL(2022A4PS1207G) 549
PS-II Station : Porter - Business - Growth (Retention & GTM Strategy), Bengaluru 551
Faculty 551
Name: Monali Tushar Mavani 551
Student 551
Name: ONKAR M DESHMUKH(2022A4PS1563P) 551

PS-II Station : Porter - Business Operations, Bengaluru 552
Faculty 552
Name: Monali Tushar Mavani 552
Student 552
Name: RISHI RAJ SHEKHAWAT(2020A5PS2042P) 553
PS-II Station : Porter - SDE (Backend), Bengaluru 555
Faculty 555
Name: Monali Tushar Mavani 555
Student 555
Name: GYANESH ROY BHOWMIK(2022A7PS0035P) 555
PS-II Station : Porter Marketing Operations, Bengaluru 556
Faculty 556
Name: Monali Tushar Mavani 556
Student 556
Name: PRANAY VAJRAPU .(2022A4PS1000H) 556
PS-II Station : Porter Non Tech - ROI - Jaipur, Jaipur 558
Faculty 558
Name: Monali Tushar Mavani 558
Student 558
Name: GURSIMAR SINGH KALRA(2022A2PS1714P) 558
PS-II Station : Porter Non Tech - ROI - Surat, Surat 559
Faculty 559
Name: Monali Tushar Mavani 559
Student 559
Name: RISHIT SAKILAM(2022A4PS1118G) 559
PS-II Station : Praj Industries Ltd - CoE Execution, Pune 561
Faculty 561
Name: Sudeep Kumar Pradhan 561
Student 561
Name: ASHISH KUMAR JHA(2022A4PS1232G) 561
PS-II Station : Praj Industries Ltd - CoE Innovation / R&D, Pune 562
Faculty 562

Name: Sudeep Kumar Pradhan . 562
Student 563
Name: ANSHUL DAS .(2022A1PS1683H) 563
Name: NAYONIKA SREE VIDHYA SEELAMSETTY(2022A1PS1693H) 564
PS-II Station : Prashanu Hospital - Data Analysis, Palghar 566
Faculty 566
Name: Sandeep Kayastha 566
Student 566
Name: NANAVATY AKASH ANISH(2021B4A72322P) 566
Name: SUBIT SHEKHAR PANDA(2021B4A72325P) 568
PS-II Station : Prashanu Hospital - Management, Palghar 569
Faculty 569
Name: Sandeep Kayastha 569
Student 569
Name: PRANAV PRASHANT KOTI(2021B1AB1289P) 569
PS-II Station : Prashanu Hospital - Supply Chain, Palghar 570
Faculty 570
Name: Sandeep Kayastha 570
Student 570
Name: BANSAL HARSHVARDHAN RAJENDRA KUMAR(2021B5A30896P) 570
PS-II Station : ProteanTecs - Infrastructure Automation, Bengaluru 572
Faculty 572
Name: Swapna S Kulkarni 572
Student 572
Name: AMANAGANTI ROHAN REDDY(2021B4A32377H) 572
PS-II Station : ProteanTecs - Physical Design RTL2GDSII, Bengaluru 573
Faculty 573
Name: Swapna S Kulkarni 573
Student 573
Name: ADVAIT SHUKLA(2022A8PS0586P) 573
PS-II Station : PwC India, PAN India 574
Faculty 574

Name: Parag Rastogi 574
Student 574
Name: SHREYASI BHARATIYA(2021B1A40793P) 574
Name: AVIRAL AMAR(2022A4PS0748P) 576
PS-II Station : Qbeats, Hyderabad 576
Faculty 577
Name: Kranthi Kumar Palavalasa 577
Student 577
Name: MARRI THANVITA REDDY .(2021B2A43134H) 577
PS-II Station : Quadeye, Gurgaon 579
Faculty 579
Name: Nishit Narang 579
Student 579
Name: ABHAY GUPTA .(2021B3A70971H) 579
Name: KARTIK CHAUHAN(2022A7PS1255G) 580
PS-II Station : Questt .ai, Bengaluru 581
Faculty 581
Name: A Michael Alphonse 581
Student 581
Name: SHASHWAT AGRAWAL(2021B1A30811P) 581
PS-II Station : Rail-IT, USA, Minneapolis 582
Faculty 582
Name: Gopalakrishnan Venkiteswaran 582
Student 582
Name: JEREMY KARRA .(2022A7PS2008H) 582
PS-II Station : Ratham - Tech, Hyderabad 583
Faculty 583
Name: Lucy J. Gudino 583
Student 583
Name: SHUBAN KAMATH(2022AAPS0339P) 584
PS-II Station : Recur Club, Gurgaon 585
Faculty 585

Name: Neha Vinayak . 585
Student 585
Name: YASH SHARMA(2022A7PS0155P) 585
Name: AYUSHMAN KUMAR(2022A7PS0600G) 587
Name: MEHAK GARG(2022A7PS0803G) 588
PS-II Station : Resollect - Backend Developer, Bengaluru 590
Faculty 590
Name: Pradheep Kumar K . 590
Student 590
Name: ABHINAV MISHRA(2021A8PS0833G) 590
PS-II Station : RISA Labs, Inc - Healthcare -Product, Bengaluru 591
Faculty 591
Name: Ramesh Venkatraman . 591
Student 591
Name: PARV ABHIJEET SINGHANIA(2021B1A43004G) 592
Name: ANISH PAWAR(2022A4PS0307G) 593
PS-II Station : RiseUpp.com (Educorn Learning Pvt. Ltd.), Bengaluru 594
Faculty 594
Name: Perumal Jayakumar 594
Student 594
Name: JISHNU BALAJI(2021A4PS2500G) 594
PS-II Station : Rusk Media Pvt. Ltd - Business Analyst, , Mumbai 595
Faculty 595
Name: Pravin Yashwant Pawar . 595
Student 595
Name: HASAN ZAREB(2021B3A80951P) 595
PS-II Station : Sairajsri Business Solutions Private Limited - Data Science, Hyderabad 597
Faculty 597
Name: Vineet Kumar Garg . 597
Student 597
Name: ANKIT SINGH .(2022A4PS1433H) 597
PS-II Station : Sairajsri Business Solutions Private Limited - IT, Hyderabad 599

Faculty 599
Name: Venkateswara Rao Thunuguntla 599
Student 599
Name: GANNAVARAPU VENKATA AVINASH(2022A3PS1095G) 599
PS-II Station : SAMEER, Mumbai 601
Faculty 601
Name: Kranthi Kumar Palavalasa 601
Student 601
Name: SIDDHARTH GANESH .(2022A3PS1316H) 601
Name: RUSHIL V BANGERA(2022A8PS1183G) 602
Name: ANGAD SINGH GULATI(2022AAPS0252P) 604
PS-II Station : Sanas.AI - Machine Learning, Bengaluru 604
Faculty 604
Name: Sugata Ghosal 605
Student 605
Name: SAKSHAM GARG(2021A7PS2083G) 605
PS-II Station : Sarda Metals & Alloys Ltd, Vizianagaram 606
Faculty 606
Name: Panchagnula Jayaprakash Sharma 606
Student 606
Name: ARPIT KAPOOR .(2022A4PS1526H) 606
PS-II Station : Securonix - Developer, Bengaluru 607
Faculty 607
Name: Sai Kishor Jangiti 607
Student 607
Name: ADITYA SHRIVASTAVA(2022A8PS1732P) 608
Name: RAJAT JAIN .(2022AAPS0266H) 609
PS-II Station : SeedlingLabs private Limited, Bengaluru 610
Faculty 610
Name: Lucy J. Gudino 611
Student 611
Name: RISHABH JANGID .(2022A3PS0485H) 611

PS-II Station : SG Analytics, , Bengaluru 612
Faculty 612
Name: Arindam Roy 612
Student 612
Name: SHLOK DHARESHWAR(2022A3PS0540G) 612
PS-II Station : Shell India Markets Pvt. Ltd.,, Bengaluru 613
Faculty 613
Name: Santosh Sopanrao Khandgave 613
Student 613
Name: MAJJI SAI SNIGDHA .(2022A2PS1427H) 613
Name: VAGISHA CHAUDHARY(2022A2PS1670P) 615
PS-II Station : Shipon Group - Non Tech, Bengaluru 616
Faculty 616
Name: Arindam Roy 616
Student 616
Name: SHAKYADEEP MUKHERJEE(2022A4PS0970G) 616
Name: HARITHA AKELLA .(2022A5PS1270H) 618
PS-II Station : Siemens Energy, Bengaluru 618
Faculty 618
Name: Shashank Mohan Tiwari 619
Student 619
Name: SUMIT KUMAR JHA(2022A4PS0795P) 619
PS-II Station : Siemens PLM, , Pune 620
Faculty 620
Name: Pawan Sharma 620
Student 620
Name: VATSAL GOYAL .(2021B1A32325H) 620
Name: KEVIN GEORGE MATHEW .(2022A7PS0238H) 621
PS-II Station : SiFive India Pvt Ltd, Bengaluru 622
Faculty 622
Name: A Rekha 622
Student 622

Name: C VARUN .(2021B3AA3031H) 622
Name: GANDHALE PARTH SOPAN .(2021B4A32365H) 623
PS-II Station : Simply Vyapar Apps Pvt. Ltd - Marketing, Bengaluru 624
Faculty 625
Name: Vineet Kumar Garg 625
Student 625
Name: PRATYAKSH PRADEEV(2021B1A42808G) 625
PS-II Station : Singlestore India Pvt Ltd, Hyderabad 626
Faculty 626
Name: Sai Kishor Jangiti 626
Student 626
Name: UNMESH SANDIPANI BHOLE(2021B1A71949G) 626
Name: OMKAR SHASHANK SATHE(2021B1A72280G) 627
Name: OM JIGNESH JOSHI(2021B3A70958G) 628
Name: MEHUL KOCHAR .(2021B3A73032H) 630
Name: SNEHAL YUTIKA .(2021B4A72322H) 631
Name: AIMAN .(2021B5A73177H) 632
PS-II Station : SmalBlu - Product, Ahmedabad 634
Faculty 634
Name: Pawan Sharma 634
Student 634
Name: ANURAG THAKAN(2022A4PS0955P) 634
Name: S PARIMESH(2022A4PS0962P) 635
PS-II Station : Snitch Apparels Private Limited - Growth Analyst, Bengaluru 636
Faculty 636
Name: Perumal Jayakumar 636
Student 637
Name: PAARTH CHANDNA(2021B1A22731P) 637
PS-II Station : Snitch Apparels Private Limited - Special Projects_Supply Chain Ops, Bengaluru 638
Faculty 638
Name: Perumal Jayakumar 638
Student 638

Name: ANCHIT MAHESHWARI(2021B5A42452G) 638
Name: DHRUV PATIL(2022A1PS0960G) 639
PS-II Station : Spanda.AI, , Hyderabad 641
Faculty 641
Name: Y V K Ravi Kumar 641
Student 641
Name: ARYAN POLA .(2022A4PS1099H) 641
Name: SAKSHAM GUPTA .(2022A4PS1195H) 642
PS-II Station : Spinny's, Gurgaon 642
Faculty 642
Name: Gaurav Nagpal 642
Student 643
Name: ARNAVA RANE(2022A1PS0865G) 643
PS-II Station : SRTD ISRO - Ahmedabad, Ahmedabad 643
Faculty 643
Name: Vijayalakshmi Anand 644
Student 644
Name: DEVANGI CHAUDHARY(2021B2A82309P) 644
PS-II Station : ST Microelectronics, Noida 645
Faculty 645
Name: Pawan Sharma 646
Student 646
Name: ROHAN ARORA(2021B1A31693P) 646
PS-II Station : Standard Chartered - Data Engineer, Bengaluru 647
Faculty 647
Name: Gaurav Nagpal 647
Student 647
Name: SASWAT SUMAN DWIBEDI(2021B1A42293P) 647
Name: SATYAM KUMAR(2021B1A42813G) 649
PS-II Station : Standard Chartered - Data Engineer, Bengaluru 650
Faculty 650
Name: Gaurav Nagpal 650

Student 650
Name: YATHARTH AGARWAL(2021B1A82299P) 651
PS-II Station : Standard Chartered - Data Science, Bengaluru 652
Faculty 652
Name: Gaurav Nagpal 652
Student 652
Name: NETI SRUTI DARSHINI(2021B1A33212H) 652
Name: SHAANTANU JAIN .(2021B5A82926H) 653
Name: HARSHAL BHAMBHANI .(2022A3PS1809H) 654
PS-II Station : Steer Advisors, Mumbai 656
Faculty 656
Name: Uma Nagarajan 656
Student 656
Name: VEDANT VIVEK SHENDE(2021B3A72136G) 656
PS-II Station : STMicroelectronics - Analog / Mixed Signal, Noida 657
Faculty 657
Name: Pawan Sharma 657
Student 657
Name: VAIBHAV VIVEK(2021B2A82747P) 657
PS-II Station : STMicroelectronics - Digital Design & Verification, Noida 658
Faculty 658
Name: Pawan Sharma 658
Student 658
Name: KARTHIKEYA KUCHIBHATLA .(2021B3A31024H) 658
Name: VASHISHTH PATEL(2021B4A82781G) 659
PS-II Station : STN 10xscale Technology Private Limited - AI Tools, Hyderabad 660
Faculty 660
Name: Mrityunjay Kumar 660
Student 660
Name: DINESH KUMAR(2022B4PS1516P) 660
PS-II Station : STN 10xscale Technology Private Limited - Healthcare, Hyderabad 661
Faculty 661

Name: Mrityunjay Kumar 662
Student 662
Name: ARUN KARTHIK B.T .(2022A3PS0635H) 662
PS-II Station : STN 10xscale Technology Private Limited - Marketing and Business growth, Hyderabad 664
Faculty 664
Name: Bhamidipati Vaishali 664
Student 664
Name: JIYA SHARMA(2022B5PS1529P) 664
PS-II Station : STN 10xscale Technology Private Limited - Next Gen, Hyderabad 665
Faculty 666
Name: Mrityunjay Kumar 666
Student 666
Name: ARHAN S D(2022A8PS0595G) 666
PS-II Station : Supra Sciences Private Llmited, , Hyderabad 667
Faculty 667
Name: Bharathi R 667
Student 667
Name: MANAV B .(2022A5PS1278H) 667
PS-II Station : SV INVESTMENT COMPANY, Ahmedabad 669
Faculty 669
Name: Perumal Jayakumar 669
Student 669
Name: DHYEY DESAI(2022AAPS0809G) 669
PS-II Station : Swiss Re Global Business Solutions India Private Limited, Bengaluru 670
Faculty 670
Name: Perumal Jayakumar 670
Student 670
Name: MANAS ABHINAV PATEL(2021B2A42565P) 670
Name: SHREERAM VERMA(2021B3A31049P) 671
PS-II Station : Synchrony, , Hyderabad 672
Faculty 672
Name: Y V K Ravi Kumar 672

Student 672
Name: SAYAN BANERJEE(2021B5A71516P) 672
Name: DHRUV GUPTA .(2022A7PS0104H) 673
Name: YUVRAJ CHAUHAN .(2022A7PS0135H) 674
Name: SAURAV SAHOO(2022A7PS0217G) 676
PS-II Station : Tablespace Technologies - Corporate Finance, Bengaluru 677
Faculty 677
Name: Parag Rastogi 677
Student 677
Name: KHUSHI SATRAWLA(2022A2PS1103P) 677
PS-II Station : Tablespace Technologies, Bangalore 679
Faculty 679
Name: Parag Rastogi 679
Student 679
Name: YASH GOYAL(2021B2A12764P) 679
Name: AAYUSH AASHISH MAHESHWARI(2022A1PS0593P) 680
PS-II Station : Tata Institute of Fundamental Research, Hyderabad 681
Faculty 682
Name: Bhamidipati Vaishali 682
Student 682
Name: ADITYA RAJ SRIVASTAVA(2022A1PS1572P) 682
Name: ASOORI ROHINI .(2022A5PS1262H) 684
Name: PRAKRITI(2022A5PS1417P) 685
Name: SOMYA GUPTA(2022A5PS1431P) 686
Name: ROHAN VARMA PENUMETCHA .(2022A7PS2016H) 687
PS-II Station : Tavant, Bengaluru 689
Faculty 689
Name: Preethi N. G 689
Student 689
Name: THIRUMALA SAI VARDHAN ELDURTHI .(2022A7PS0017H) 689
PS-II Station : Techture Structures, Indore 691
Faculty 691

Name: Mahesh Kumar Hamirwasia 691
Student 691
Name: SHREERAM JITENDRA PETKAR .(2020B3A21966P) 691
Name: ARUSH MANGRULKAR(2022A3PS1272G) 692
PS-II Station : Tectonic Technologies Inc - Software Engineering, Bengaluru 694
Faculty 694
Name: Pradheep Kumar K 694
Student 694
Name: PRATHAM PRATEEK MOHANTY(2022A7PS1733P) 694
PS-II Station : Tega Industries - Samali, Samali 695
Faculty 695
Name: Rakesha Chandra Dash 695
Student 695
Name: ANSHUMAN PATHAK(2022A4PS1522G) 695
PS-II Station : Telus AI - Solution Engineering, Bengaluru 696
Faculty 696
Name: S.P.Vimal 697
Student 697
Name: SHREYAS GHOSH(2021B4A72502P) 697
PS-II Station : Telus AI - Machine Learning, Bengaluru 698
Faculty 698
Name: S.P.Vimal 698
Student 698
Name: RAGHUVANSH S(2020B5A70335G) 698
PS-II Station : Telus International - Software Engineering, Bengaluru 699
Faculty 699
Name: S.P.Vimal 699
Student 699
Name: ALI KAUSAR KAAMRAN(2021B3A72246G) 700
Name: AYUSH SRIVASTAVA(2021B3A72462G) 701
Name: ANURAG SINGH(2021B5A72874G) 703
PS-II Station : Tenstorrent, Bengaluru 705

Faculty 705
Name: Shree Prasad M 705
Student 705
Name: HARSHIT SARAF(2021B1A32742P) 705
Name: NIKHIL MAHESH TAMBOLI(2021B2AA1603G) 706
Name: RISHAV BHOWMICK .(2021B4AA2788H) 706
Name: SIDDHARTH R .(2021B5AA2382H) 707
Name: ARYAMAN KUSHWAHA .(2021B5AA2412H) 708
PS-II Station : Texas Instruments - AI/ML, Bengaluru 709
Faculty 709
Name: Sathisha Shet K 709
Student 709
Name: SAIKRISHNA SUDHARSHAN(2021B5A71645G) 709
PS-II Station : Texas Instruments - Analog, Bengaluru 711
Faculty 711
Name: Sathisha Shet K 711
Student 711
Name: AMBAR BRAHMACHARI(2021B1A82811G) 711
Name: ABHIRAM SISTLA .(2021B3AA0612H) 712
Name: MALPANI GOVIND NANDKISHOR(2021B5A32280H) 713
PS-II Station : Texas Instruments - Embedded Software, Bengaluru 715
Faculty 715
Name: Sathisha Shet K 715
Student 715
Name: KARTIK VERMA .(2021B3AA0554H) 715
Name: SHASHANK KUMAR .(2021B3AA0776H) 716
Name: ARPIT VARAHMIHIR(2021B4AA1499P) 717
Name: LALITH REDDY TEKULAPALLI .(2022A3PS0638H) 719
Name: KHUSH JAIN(2022A8PS0490G) 720
PS-II Station : The Affordable Organic Store, Hyderabad 721
Faculty 721
Name: Parag Rastogi 722

Student 722
Name: THAMATANI VISHAL .(2020B4A42364H) 722
Name: YASH KUMAR .(2022A4PS1732H) 723
PS-II Station : THINKBYTE TECHNOLOGIES PRIVATE LIMITED, Vijayawada 724
Faculty 724
Name: Anjani Srikanth Koka 724
Student 724
Name: DAMERLA TARUN SAI(2021B1A12741P) 724
PS-II Station : Tidy Rabbit, Coimbatore 725
Faculty 725
Name: Garima Jindal 725
Student 725
Name: ADLA SUJIT NEEL .(2022A4PS1110H) 725
PS-II Station : Times Internet Limited, Noida 726
Faculty 726
Name: Harish Kumar Aggarwal 726
Student 726
Name: SAKSHAM JAIN .(2021B4A82925H) 726
PS-II Station : TKIL Industries Pvt. Ltd (formerly known as thyssenkrupp Industries India Pvt. Ltd.), Pune 728
Faculty 728
Name: Ravi Shrikrishna Reosekar 728
Student 728
Name: RINISHA BARMAN(2022A1PS1340P) 728
PS-II Station : Tyfone CDI - Tech, Hyderabad 729
Faculty 729
Name: Perumal Jayakumar 730
Student 730
Name: SAMARTH SAHU(2021B4A41539P) 730
Name: VIVIAN PYARRY JOHN .(2021B4A43149H) 731
Name: THATHAPUDI HARSHITH(2021B5A83165H) 732
PS-II Station : UBER - Data Analytics, Hyderabad 733

Faculty 733
Name: Ashish Narang 733
Student 733
Name: ARYAN PARAG PHANSE(2021B2A32284G) 733
PS-II Station : UBER - Data Science, Hyderabad 735
Faculty 735
Name: Ashish Narang 735
Student 735
Name: OJAS PUNGALIA(2021B4A71552P) 735
Name: MS. AKSHATA KHANDELWAL(2021B4A71700P) 736
PS-II Station : UBER - Software Engineer, , Hyderabad 738
Faculty 738
Name: Akshaya G 738
Student 738
Name: GOURA SINGH .(2021B1A43129H) 738
Name: PALAK SEERVI(2021B2A42752P) 740
Name: WALEED IQBAL SHAIKH .(2021B3A70559H) 741
Name: ANIRUDH JAYAKISHAN(2021B3A70979G) 742
Name: SHREYANSHI GARG .(2021B5A41891H) 743
Name: RITABRATA CHAKRABORTY(2022A4PS0843P) 744
Name: IKSHITA KUMAR .(2022A4PS1030H) 744
Name: MD TANAIM SHAREEB .(2022A4PS1147H) 745
Name: SAKSHAM KUMAR GUPTA(2022AAPS0816G) 746
PS-II Station : UBS - RAS Executive Treasury, Pune 748
Faculty 748
Name: Niranjan Swain 748
Student 748
Name: VANDAN SHEETALKUMAR DOSHI(2022A7PS0369G) 748
PS-II Station : UBS - RAS One AIM, Pune 750
Faculty 750
Name: Niranjan Swain 750
Student 750

Name: CHAITANYA KRISHNA .(2022A7PS0231H) 750
PS-II Station : UBS- Global Quantitative Risk Modelling, Mumbai 751
Faculty 751
Name: Niranjan Swain 751
Student 751
Name: SHOBHIT RATHI(2021B3A30980P) 751
Name: DAGGUMALLI MANISH(2021B3A31900H) 753
Name: CHINTA KARTHIK(2021B3A82150G) 754
Name: UMANG AGARWAL(2021B5A40848P) 755
PS-II Station : UBS- Group Risk Control Data Intelligence, Hyderabad 756
Faculty 756
Name: Niranjan Swain 756
Student 756
Name: ADITYA KUMAR GHOSH .(2021B5A33176H) 756
PS-II Station : UBS- RAS Executive Treasury, Pune 758
Faculty 758
Name: Niranjan Swain 758
Student 758
Name: ATHARVA NATANI(2022A3PS1196P) 758
PS-II Station : UBS-RC MRR, Pune 759
Faculty 759
Name: Niranjan Swain 759
Student 759
Name: VISHAKHA MOHANTA(2022B3PS1520P) 760
PS-II Station : Universal Software, Ahmedabad 761
Faculty 761
Name: Eht E Sham 761
Student 761
Name: MAHIN PATEL(2021B3A41086P) 761
Name: KUSHAGRA SANDEEP SINGHVI(2021B4A21718P) 762
PS-II Station : Urjacart Energy Labs Private Limited, Lucknow 762
Faculty 762

Name: Rakesha Chandra Dash . 762
Student 762
Name: JATIN DHINGRA(2022A4PS0254P) 763
PS-II Station : UST Global, Thiruvananthapuram 763
Faculty 763
Name: Sindhu S . 764
Student 764
Name: ATHARVA SINGH RATHORE(2022A7PS1203G) 764
PS-II Station : UST- Infinity Labs Trivandrum, Thiruvananthapuram 765
Faculty 765
Name: Sindhu S . 766
Student 766
Name: MARUVADA POORNA SAI VENU DEEP(2021B5A43160H) 766
Name: RISHI DESHMUKH(2022A3PS1131G) 767
Name: DEVANG MAHESHWARI .(2022A3PS1473H) 769
PS-II Station : UST- SI Digital Transform, Thiruvananthapuram 770
Faculty 770
Name: Sindhu S . 770
Student 770
Name: KAUSTUBH SHARMA(2022A1PS1126P) 770
Name: AADRISH GUHA MAJUMDAR(2022A3PS1147G) 771
PS-II Station : Varaha ClimateAg Private Limited, Gurgaon 772
Faculty 772
Name: Gaurav Nagpal . 772
Student 772
Name: ICY TRISHA(2022A2PS1655P) 773
PS-II Station : VICCO Laboratories, Nagpur 774
Faculty 774
Name: Pavan Kumar Potdar . 774
Student 774
Name: NARENDRA NAIK(2022A1PS1555G) 774

PS-II Station : VIDVANCONNECT SOFTWARE AND SOLUTIONS PRIVATE LIMITED - (Wadhwani Foundation), Bengaluru 775
Faculty 776
Name: Sanjay Vidhyadharan 776
Student 776
Name: SHRUTI SOUMYA ROUT(2022AAPS1144G) 776
PS-II Station : Virgio - UI Engineering, Bengaluru 777
Faculty 777
Name: Mohammad Saleem Bagewadi 777
Student 777
Name: MIT SHETH(2022A4PS0079G) 777
PS-II Station : Viridium.AI India Private Limited, Pune 779
Faculty 779
Name: Chetana Anoop Gavankar 779
Student 779
Name: KAVISH CHANDRA(2022A3PS0523P) 779
PS-II Station : Virtuoso Optoelectronics Ltd - Manufacturing, Nashik 780
Faculty 780
Name: Samata Satish Mujumdar 780
Student 780
Name: PRASOON CHATUPHALE(2022A4PS1320G) 781
PS-II Station : Virtuoso Optoelectronics Ltd - Supply Chain & Analytics, Nashik 782
Faculty 782
Name: Samata Satish Mujumdar 783
Student 783
Name: RUCHIT ABROL(2022A4PS0925P) 783
PS-II Station : Vishnu Stores, Jodhpur 784
Faculty 784
Name: Atul Kumar Arora 785
Student 785
Name: HIMADRI MATHUR .(2022A5PS1448P) 785
PS-II Station : Visit Health - Non Tech, Mumbai 786

Faculty 786
Name: Atul Kumar Arora 786
Student 786
Name: KABRA ROHAN SANJAY(2022A1PS1040P) 786
PS-II Station : Visit Health - Tech, Mumbai 788
Faculty 788
Name: Swarna Chaudhary 788
Student 788
Name: DEVAAMSH RAJESH(2020B2A31349G) 788
PS-II Station : Voicegain (Resolvity, Inc), Bengaluru 789
Faculty 789
Name: Monali Tushar Mavani 789
Student 789
Name: RAHUL PRASATH(2022A7PS0016G) 789
Name: MOKSHITH REDDY VURIBINDI(2022A7PS0763G) 791
PS-II Station : WCB Robotics India Pvt Ltd - Mechanical, Hyderabad 791
Faculty 792
Name: Rakesha Chandra Dash 792
Student 792
Name: ABHI KUMAR(2022A4PS0558P) 792
PS-II Station : WestRock India Private Limited, Valsad 793
Faculty 793
Name: Raghuraman S 793
Student 793
Name: DHRUV VERMA(2022A4PS1281P) 793
PS-II Station : WILP - AR/VR, Hyderabad 794
Faculty 794
Name: Naga Vamsi Krishna Jasti 794
Student 794
Name: ANKIT SAINI(2022B2PS1534P) 795
Name: MS.EKTA(2022B5PS1532P) 796
Name: MS.MANSI(2022D2PS1553P) 798

PS-II Station : WILP - Electric and Hybrid Vehicle (EHV) Lab, Hyderabad 800
Faculty 800
Name: Madhuri Bayya 800
Student 800
Name: PIYUSH(2021B1A32743P) 800
Name: AYUSHMAN NEERAJ(2022A8PS1357G) 801
PS-II Station : WILP- Additive Manufacturing, , Hyderabad 802
Faculty 802
Name: Panchagnula Jayaprakash Sharma 802
Student 802
Name: VEDAANT ACHUTHAN(2021B5A41173G) 803
PS-II Station : WILP- Intelligent systems Lab, Hyderabad 803
Faculty 804
Name: Rajiv Ranjan Gupta 804
Student 804
Name: ARYAN RAI .(2022A4PS1175H) 804
Name: SRIROOP GADAGOJU .(2022AAPS0439H) 804
PS-II Station : WILP Special projects- BITS-Spanda Foundation, Hyderabad 805
Faculty 805
Name: Shreyas Suresh Rao 805
Student 805
Name: RITHVIK SRIRANGA MYNAMPATI .(2022A7PS0162H) 805
Name: HARSH RAJ(2022A8PS0570P) 807
PS-II Station : WILP-IoT Lab, Bengaluru 809
Faculty 810
Name: Prakruthi Hareesh 810
Student 810
Name: KARRI KISHORE RAMACHANDRA REDDY(2022A3PS1328G) 810
PS-II Station : WILP-Vehicle security penetration testing facility in collaboration with Bosch, Hyderabad 810
Faculty 811
Name: Dr Ramya K 811

Student 811
Name: SUTIRTH RATH(2022A4PS0669P) 811
Name: GAUTHAM A NAIR .(2022A4PS1651H) 812
PS-II Station : WizLearnr, Hyderabad 813
Faculty 813
Name: Mrityunjay Kumar 813
Student 813
Name: ADITYA ATYAM .(2022AAPS2023H) 814
PS-II Station : XPT Consultancy and Software Services Pvt Ltd, Bengaluru 815
Faculty 815
Name: Neha Vinayak 815
Student 815
Name: ARCHITA AGARWAL(2022A7PS0135P) 815
PS-II Station : Yugabyte Software Pvt. Ltd., , Bengaluru 817
Faculty 817
Name: Raja Vadhana Prabhakar 817
Student 817
Name: VANKA VINAY NAIDU(2021B3A71026H) 817
Name: SHOBHIT OM KUMAR(2021B3A72155G) 818
Name: SATVIK NARULA(2021B3A72482G) 820
PS-II Station : ZIPPEE, Gurgaon 821
Faculty 821
Name: Neha Vinayak 821
Student 821
Name: MOKSH HANDA(2022A7PS0334G) 821
PS-II Station : Zomato - Generative AI technologies., Gurgaon 823
Faculty 823
Name: Chetana Anoop Gavankar 823
Student 823
Name: MAYANK KASHYAP(2022A2PS1083P) 823
PS-II Station : ZS - Tech Innovation Lab, Bengaluru 824
Faculty 825

Name: Febin A Vahab 825
Student 825
Name: ANIMESH JAWLA(2021B1A30816G) 825
Name: ENOSH RAJU DEVISETTI .(2022A8PS0808H) 825
PS-II Station : Zyduslife - Fundamental Analyst, Mumbai (Worli) 827
Faculty 827
Name: Uma Nagarajan 827
Student 828
Name: VYBHAV BADRINARAYANAN(2021B3AA2145G) 828

PS-II Station : 10X Analysts, London

Faculty

Name: Chetana Anoop Gavankar .

Student

Name: BHUMIKA AGARWAL(2022A1PS0946P)

Student Write-up

PS-II Project Title: FullStack Developer

Short Summary of work done during PS-II : Helped contributing in frontend and backend.

Tool used (Development tools - H/w, S/w) : sql, react, nextjs, python

Objectives of the project : Helped in making the product

Major Learning Outcomes : Learnt how to work in corporate

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Very comfortable environment

Academic courses relevant to the project : CP

PS-II Station : 3ktechnologies, Pune

Faculty

Name: Pravin Yashwant Pawar .

Student

Name: NIKHIL JOSHI M(2022A7PS0041P)

Student Write-up

PS-II Project Title: Automation using IBM Orchestrate

Short Summary of work done during PS-II : I made automation tools, using multiagents in IBM Watsonx Orchestrate, these tools were custom made according to the needs of the client companies and there specific usecases. Apart from this, I was also involved in some Research and Development for ongoing projects

Tool used (Development tools - H/w, S/w) : IBM watsonx, python, convlab3

Objectives of the project : Make Proof of concepts for clients

Major Learning Outcomes : not much

Details of Papers/patents : none

Brief Description of working environment, expectations from the company :

Academic courses relevant to the project : machine learning, deep learning

PS-II Station : Acuity Knowledge Partners - Data Visualization, Bengaluru

Faculty

Name: Arindam Roy .

Student

Name: SUBRAT ROY(2022AAPS0369P)

Student Write-up

PS-II Project Title: Cloud Agnostic alternative to AWS Bedrock Knowledge Base

Short Summary of work done during PS-II : Built a cloudagnostic alternative to AWS Bedrock Knowledge Base using RAGFlow as the core engine, focusing on reusable ingestion workflows instead of cloudlocked services. Designed and implemented ingestion pipelines for RAGFlow to pull and index documents (PDF, TXT, PPTX, DOCX, HTML) from S3compatible and Azurestyle object storage using MinIO and S3compatible APIs. Explored LangFlow's GitOps and MCP server capabilities, designing a nonprod→prod JSONbased flow promotion process and identifying critical flaws/limitations in LangFlow's MCP server integration for productiongrade use.

Tool used (Development tools - H/w, S/w) : Cursor,Amazon AWS,Knative,Podman

Objectives of the project : the objective of the project was to build a cloudagnostic alternative to AWS Bedrock Knowledge Base using RAGFlow as the core engine, focusing on reusable ingestion workflows instead of cloudlocked services. I helped in designing and implementing ingestion pipelines for RAGFlow to pull and index documents (PDF, TXT, PPTX, DOCX, HTML) from S3compatible and Azurestyle object storage using MinIO and S3compatible APIs.

Major Learning Outcomes : The learning I got in this PS is immense .I got to work on a new niche technology almost everyday and also worked with employees who had immense experience and were stalwarts of their fields

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The work environment was very positive and welcoming, which helped everyone learn quickly. Every senior was approachable and eager to offer guidance, answer questions, and share their experiences. Their support made it easy to ask questions without hesitation. All the team members were collaborative and supportive, fostering a strong sense of teamwork. Open communication and mutual respect within the group made daily tasks smooth and enjoyable. In short, the caring culture not only improved productivity but also greatly contributed to my professional growth and confidence.

Academic courses relevant to the project : Intro to Large Language Models

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PS-II Station : Acuity Knowledge Partners-AI & Finance, Bengaluru

Faculty

Name: Arindam Roy .

Student

Name: SHUBHAM SINGH(2022A3PS0376P)

Student Write-up

PS-II Project Title: AI and Finance

Short Summary of work done during PS-II : worked on RAG and LLM observability (langfuse)

Tool used (Development tools - H/w, S/w) : cursor,huggingface,sentence transformers

Objectives of the project : LLM observability

Major Learning Outcomes : LLM observability understanding + RAG

Details of Papers/patents : --

Brief Description of working environment, expectations from the company : normal working environment - Knowledge transfer not ideal.

Academic courses relevant to the project : ML

PS-II Station : Aditya Birla Science & Technology Company Ltd. (ABSTC) ,, Mumbai

Faculty

Name: Santosh Sopanrao Khandgave

Student

Name: VINAYAK AGARWAL(2022A4PS0827P)

Student Write-up

PS-II Project Title: CFD Simulation of copper electro-refining pilot plant

Short Summary of work done during PS-II : CFD Simulation of electro-refining in a copper pilot cell

Tool used (Development tools - H/w, S/w) : Ansys Fluent

Objectives of the project : simulation

Major Learning Outcomes : Multiphysics CFD

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Indian corporate, strict hierarchy

Academic courses relevant to the project : Fluid Mechanics

Name: JINESH CHORDIYA .(2022A4PS1019H)

Student Write-up

PS-II Project Title: Open-Source Pipeline for Finite Element Analysis

Short Summary of work done during PS-II : During the internship, I contributed to developing an open-source FEA workflow using Gmsh for geometry and mesh generation and Code-Aster for structural simulations. The work involved creating clean geometric models, generating high-quality meshes, and setting up linear and nonlinear analysis cases. I also streamlined portions of the preprocessing-to-post-processing pipeline, improving clarity and reusability. Overall, the work supported the company's FEA simulation infrastructure and strengthened its open-source analysis capability.

Tool used (Development tools - H/w, S/w) : Python,Gmsh,Code-Aster,Paraview,ABAQUS

Objectives of the project : To develop an open-source FEA pipeline for linear and nonlinear structural analysis.

Major Learning Outcomes : Finite element analysis, Gained experience in presenting the findings to senior management through review meet.

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The company provided a collaborative and supportive working environment, with easy access to guidance from mentors and a structured approach to tasks. Work was organised, communication was clear, and the technical atmosphere encouraged hands-on problem-solving and independent exploration.

Academic courses relevant to the project : Computer Aided Design (CAD)

PS-II Station : Affine Analytics, Bengaluru

Faculty

Name: Reddy Rani Vangimalla .

Student

Name: TEJAS AHUJA(2022A2PS1678P)

Student Write-up

PS-II Project Title: Financial analysis for senior management

Short Summary of work done during PS-II : During my internship at Affine Analytics, Bengaluru, I progressed through a structured journey that combined technical learning, business understanding, and hands-on project execution. The internship began with onboarding and compliance training, which provided clarity on Affine's culture, ethics, data security standards, and expectations for professional communication. I then completed extensive technical training in Excel, SQL, and Power BI. This included data cleaning, lookup and aggregation functions, pivot table analysis, relational querying, joins, window functions, data modelling, Power Query transformations, and writing DAX measures. These skills were first applied in a mock analytics project using datasets from a top stock content provider company, where I built an end-to-end dashboard to analyse revenue trends, customer behaviour, and content performance. After the mid-semester evaluation, my work focused entirely on a live project titled Financial Dashboard for Management Decisions. In this project, I collaborated with Affine's finance and HR teams to build a comprehensive Power BI solution covering revenue trends, run rate, target versus actuals, revenue leakage, client-wise performance, gross margin, gross cost, workforce deployment, utilisation, contribution margin, and cost versus budget analysis. Excel was used extensively for data transformation and validation, SQL-based reasoning guided exploratory analysis, and Power BI served as the core platform for data modelling, DAX implementation, and interactive visualisation design. Through regular stakeholder discussions and iterative development cycles, I strengthened my technical proficiency, business acumen, and ability to communicate insights in a clear, management-oriented manner. This internship significantly enhanced my analytical capabilities and provided a strong foundation for future roles in finance, data, and business intelligence.

Tool used (Development tools - H/w, S/w) : MS EXCEL,SQL,Python,Power BI,Dax,R

Objectives of the project : To derive insights out of company's financial data for the management to take strategic decisions

Major Learning Outcomes : Data visualization,business analysis,kpi dashboarding,financial analysis,forecasting

Details of Papers/patents : Na

Brief Description of working environment, expectations from the company : The working environment at Affine Analytics was structured, professional, and highly conducive to learning. The organisation emphasises a balance between independence and guidance, allowing interns to take ownership of tasks while receiving continuous support from mentors and domain experts. Collaboration is a core element of the culture, with regular interactions across teams such as Finance, HR, Delivery, and Business Intelligence. These interactions ensured clarity of objectives, alignment with business requirements, and exposure to real-world decision-making processes.

The company places strong emphasis on discipline, data confidentiality, and adherence to professional standards. Clear expectations were set from the beginning regarding timely communication, accuracy in analytical outputs, and accountability for work delivered. Interns are expected to demonstrate structured problem-solving, attention to detail, and a proactive approach to learning new tools and methodologies. Regular check-ins, feedback sessions, and review meetings formed an integral part of the internship experience, reinforcing a culture of continuous improvement.

Affine also encourages analytical thinking, documentation of assumptions, and presentation of insights in a concise, business-oriented manner. The environment motivates individuals to ask questions, seek clarification, and iterate upon their work based on stakeholder feedback. Overall, the company expects interns to operate with professionalism, integrity, and a strong sense of responsibility, while providing a supportive ecosystem for technical growth and practical exposure.

Academic courses relevant to the project : BAV,DBMS,FUNDAFIN,

PS-II Station : AlmaConnect, Gurgaon

Faculty

Name: Sidharth Mishra .

Student

Name: ANUSHK RAJ BORDIA(2021B1A82273G)

Student Write-up

PS-II Project Title: Business Operations

Short Summary of work done during PS-II : Enabled delivery of solutions to prestigious global institutions including Harvard Business School, Carnegie Mellon University and Yale University across alumni database and management fields.

Tool used (Development tools - H/w, S/w) : Google Sheets, AlmaConnect News, Data Mine

Objectives of the project : To deliver the latest updates & news about alumni from prestigious universities around the world, and to update their alumni database regularly.

Major Learning Outcomes : Understanding how an organization works. Got fair practice on how to manage time and on how to work and interact with team members.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Entire work was online for us. The work is pretty flexible, but you have to keep your WhatsApp on at all times because you might be required to do a Google Meet with your mentor(s) at any moment during the working hours. The mentors are really professional & adept at their jobs. Overall a good working experience.

Academic courses relevant to the project : None

PS-II Station : AMAZON SDE, Bengaluru

Faculty

Name: Vijayalakshmi Anand .

Student

Name: ANMOL MATHUR(2021B2A82480P)

Student Write-up

PS-II Project Title: Amazon sde

Short Summary of work done during PS-II : During my PS-II internship, I worked on backend system enhancements focused on improving scalability, configurability, and feature enablement. My work involved understanding existing service architectures, analyzing requirements, and implementing changes to support new functionalities while maintaining system stability. I contributed to modularizing components to make them easier to extend and maintain, and worked on improving validation logic and configuration handling. I was also involved in investigating and resolving issues identified during testing and deployment phases. This required diving deep into service workflows, understanding data flow across components, and collaborating with team members to identify root causes. Alongside implementation, I assisted in writing unit tests, validating edge cases, and ensuring backward compatibility. The internship provided exposure to real-world software engineering practices such as code reviews, documentation, and structured debugging. Overall, the experience strengthened my understanding of large-scale backend systems and helped me apply theoretical knowledge to practical engineering problems in a professional setting.

Tool used (Development tools - H/w, S/w) : Sw

Objectives of the project : • To contribute to the development and enhancement of backend services used in large-scale systems • To improve system reliability, configurability, and maintainability • To implement feature support driven by evolving business and

regulatory requirements • To gain hands-on experience working in an industry-grade software development environment

Major Learning Outcomes : Gained practical exposure to designing and implementing scalable backend solutions

- Improved understanding of modular system architecture and configuration-driven development
- Learned to analyze requirements, debug production-level issues, and propose

Details of Papers/patents : Na

Brief Description of working environment, expectations from the company : The working environment during PS-II was professional, collaborative, and learning-oriented. The organization followed structured development processes with clearly defined tasks and timelines. Team members were supportive and encouraged asking questions, knowledge sharing, and independent problem-solving. Regular discussions and reviews helped ensure alignment with project goals and quality standards.

The company emphasized best practices such as writing clean, maintainable code, following design guidelines, and ensuring thorough testing before deployment. Expectations included taking ownership of assigned tasks, meeting deadlines, and actively participating in team discussions. Interns were encouraged to understand the broader system context rather than working in isolation.

Overall, the environment provided a good balance of guidance and autonomy, allowing me to build technical skills while gaining insight into industry-level software development practices.

Academic courses relevant to the project : Computer programming and oops

Name: PRATHAM JAISWAL(2021B2AA3009G)

Student Write-up

PS-II Project Title: Data logging and data engineering

Short Summary of work done during PS-II : I contributed to the development and enhancement of an internal software platform designed to automate and streamline critical data workflows. My work included writing modular, reusable code to support new features, integrating APIs for data ingestion, and improving the reliability of task orchestration across distributed systems. I collaborated with senior engineers to analyze requirements, implemented enhancements to existing modules, and added logging and monitoring support to improve observability. Additionally, I participated in debugging sessions to identify and fix issues surfaced during testing and staging. I wrote unit and integration tests to ensure robustness and quality of deliverables. Throughout the internship, I worked in a structured development environment, followed agile practices for task tracking and releases, and ensured high standards of code quality through regular reviews. This project allowed me to directly apply academic knowledge to real-world problems and provided a deeper understanding of how data-driven applications are built and maintained at scale in a leading technology company.

Tool used (Development tools - H/w, S/w) : Intellij, GitHub, AWS

Objectives of the project : Have to make a logging to get the logging of teh methods executed when a particular is being called

Major Learning Outcomes : Gained hands-on experience in designing and developing scalable backend/data-processing systems used in production.
Improved software engineering skills including version control (Git), code reviews, testing, and documentation.
Learned industry-standard

Details of Papers/patents : none

Brief Description of working environment, expectations from the company : The working environment at Amazon was technically strong but highly demanding. While the team followed good engineering practices and provided exposure to large-scale systems, the work culture was often high-pressure. Tight deadlines, frequent escalations, and heavy workloads created stressful periods, and at times the environment became toxic, with limited flexibility and intense

expectations. Interns were expected to take full ownership, learn rapidly, and deliver results under pressure with minimal hand-holding. Although the experience was challenging and mentally demanding, it helped me build resilience, improve time management, and understand the realities of working in a fast-paced corporate environment.

Academic courses relevant to the project : OOP, DBMS, Computer Programming

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Name: YASH KUMAR(2021B4A32330P)

Student Write-up

PS-II Project Title: SDE

Short Summary of work done during PS-II : During my Amazon SDE1 internship, I worked on high-impact backend, platform, and AI systems used across multiple teams. I rearchitected Sandbox Management from a single-tenant service into a scalable, multi-cluster, multi-account platform with self-service onboarding and least-privilege IAM, enabling organization-wide adoption. I built critical infrastructure for end-to-end validation, observability, and cross-account metrics for internal CDK libraries, directly improving reliability and on-call visibility. I designed and implemented an AI-enhanced documentation system using a two-layer LLM architecture with precision prompting, fallback models, and KB-scoped access, improving project discovery and preventing hallucinated outputs. I productionized multiple failing systems (ingestion pipelines, RAG workflows, CI/CD), fixed Sev-1/Sev-2 incidents, and led security and operational reviews for high-risk services. I also developed a new service , Amazon Business reseller classification portal. (Test coverage improvements, bug fixes, and regression prevention were handled as part of ongoing reliability work.)

Tool used (Development tools - H/w, S/w) : Aws, Ide

Objectives of the project : Contribute to services of my team, both existing and the ones in development.

Major Learning Outcomes : Software development at scale, AWS, High level design.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The expectations on deliverables were for it to be always above the bar. Its a fast paced environment, expectations always have to be met.

Academic courses relevant to the project : DSA, OOPS, OS

Name: ADI MUKHERJEE(2021B5A70776P)

Student Write-up

PS-II Project Title: Falkon Full CI/CD

Short Summary of work done during PS-II : A lot of internal tools learnt and used to make a service Full CI/CD

Tool used (Development tools - H/w, S/w) : Internal Tools

Objectives of the project : To complete objectives stated for Full CI/CD of a tier one service in Amazon

Major Learning Outcomes : Understand how java services work in an extremely high transaction scenario.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Great working environment, very inclusive team. Office in Hyderabad is the largest Amazon Office in the world. Cafeteria is huge! Yet it would do kindly to remember that you are expected to work day and night to get your tasks completed. Hard work is the norm in this company.

Academic courses relevant to the project : OOPs, Computer Networks, DSA.

Name: ABHINAV SAI YEKKALI .(2022A7PS0012H)

Student Write-up

PS-II Project Title: HIERARCHICAL MONITORING SYSTEM AND AI BASED SELLER SUPPORT SYSTEM

Short Summary of work done during PS-II : Developed a scalable, automated hierarchical monitoring system that transformed reactive operations into proactive issue detection across multiple carriers and services. The system implements a multi-level architecture using template-based configuration management that automatically generates monitoring configurations, eliminating manual setup work and reducing configuration effort. And another project on reducing response times for user queries and implementing smart automation solutions.

Tool used (Development tools - H/w, S/w) : Aws tools, other internal tools.

Objectives of the project : Project 1: Automate alarms creation, Project 2: Instant answer to user queries

Major Learning Outcomes : First time working with production level code, code quality improved, learnt SOLID and other coding principles, unit and integration testing.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The work environment is very nice, everyone is welcoming and supportive.

Academic courses relevant to the project : OOPS, DSA, DBMS

Name: AADVIK SINGH BHATIA(2022A8PS1240P)

Student Write-up

PS-II Project Title: 1)Schedule based notification system for pending customer info claims 2) DB based localisation of claims correspondence messages

Short Summary of work done during PS-II : 1) Built an end to end notification system for claims in pending customer info status. Used Orca for workflow generation and cron based schedule triggering. Used AWS Lambdas for querying and generating notification objects and SQS for sending email and IM notifications. Ensured fault tolerance and parallel execution for workflow optimisation. 2) Localisation of claims correspondence messages to db Instead of translator tools and made corresponding ui changes to pick messages and display for different geos

Tool used (Development tools - H/w, S/w) : Lambdas, S3, SQS ,SNS, Orca.

Objectives of the project : 1) Built an end to end notification system for claims in pending customer info status. Used Orca for workflow generation and cron based schedule triggering. Used AWS Lambdas for querying and generating notification objects and SQS for sending email and IM notifications. Ensured fault tolerance and parallel execution for workflow optimisation. 2) Localisation of claims correspondence messages to db Instead of translator tools and made corresponding ui changes to pick messages and display for different geos

Major Learning Outcomes : Understood software development lifecycles in big tech. Experience with AWS Java React and other internal tools , architectural thinking for low level design.

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : Work hours will be extensive but so will be your learning outcomes. Steep learning curve but good teammates to help navigate. Amazon will treat you like a full time employee and expect you to deliver on a similar level. Expected to apply Amazon leadership principles in daily activities. Delivering within timelines is a must. Great experience working in a high pressure environment. Experience highly dependent on which team you are in. Dont worry though there are quarterly outings to let off some steam:))

Academic courses relevant to the project : DSA , OOP , DBMS

PS-II Station : American Express - AiDa, , Bengaluru

Faculty

Name: Ashish Narang .

Student

Name: NISHANT KUMAR(2022A7PS1185P)

Student Write-up

PS-II Project Title: XGBoost Based Data Pipelines

Short Summary of work done during PS-II : During my internship, I designed and built end-to-end machine learning pipelines and scalable data workflows and later benchmarked multiple ML model pipelines involving XGBoost. I also created robust preprocessing pipelines with imputation and one-hot encoding and integrated BigQuery and PySpark for large-scale data loading. Beyond

modeling, I developed dashboards for root-cause analysis of model performance, evaluated drift scenarios, and optimized model retraining strategies.

Tool used (Development tools - H/w, S/w) : Python, Google Cloud Platform, Power BI

Objectives of the project : Explore and benchmark alternative scoring platforms on GCP, Develop an Observability Dashboard for the AR & Scoring pipelines.

Major Learning Outcomes : Machine Learning, Data Analytics, Big Data, Data Orchestration

Details of Papers/patents : N.A.

Brief Description of working environment, expectations from the company : The company has healthy work environment, with accessible mentors who are supportive and instrumental in making the learning process easier. There is no micromanagement and my manager trusted me in my abilities to bring the projects to life. Office was in hybrid mode, with 3 mandatory work from office days and 2 optional office days/work from home.

Academic courses relevant to the project : Machine Learning, Artificial Intelligence

PS-II Station : American Express - Product Development & Management, Gurgaon

Faculty

Name: Atul Kumar Arora

Student

Name: NAMAN KAMRA(2022A7PS1142G)

Student Write-up

PS-II Project Title: Enhancing Model Reliability and Explainability in an Enterprise Machine Learning Platform

Short Summary of work done during PS-II : During my six-month PS-II at American Express, I worked with the AiDA (Artificial Intelligence & Data Analytics) Develop team, focusing on improving model reliability, explainability, and performance within the ML development platform. I first worked on validating model scoring consistency between JSON and PMML formats. I built a validation framework to identify metadata mismatches, precision issues, and edge cases that caused scoring discrepancies, and delivered a PoC adopted by governance and tech teams. My primary project involved accelerating Interventional SHAP for large-scale models using GPUs. I studied the algorithm in depth, debugged existing experimental GPU implementations, resolved CPU-GPU mismatches, and achieved exact result parity with up to 50× speedup. I explored row-parallel, column-parallel, and distributed GPU strategies, identifying row-parallel as the most scalable approach. Later, I extended the work to international models by building a segment-level SHAP pipeline, demonstrating how Interventional SHAP provides more intuitive explanations than path-dependent SHAP. This resulted in ~12× effective cost optimization and was highlighted as a key innovation within AiDA. I regularly presented my work to my manager, Director. The project is planned for presentation to the Executive VP (Global Decision Sciences). I documented the full PoC and handed over the codebase to the team.

Tool used (Development tools - H/w, S/w) : Hardware: NVIDIA GPUs (T4, A100), GCP GPU clusters Software: Python, CUDA Toolkit, NVCC, SHAP, XGBoost, Pandas, NumPy, Dask Platforms: GCP Dataproc, Jupyter Notebook, Virtual Environments Other: PMML, JSON, CSV/Parquet, PowerPoint, Confluence, Data Int

Objectives of the project : Improve reliability and correctness of ML model scoring across formats (JSON and PMML). Enhance scalability and performance of model explainability using GPU acceleration. Integrate advanced explainability methods (Interventional SHAP) into a production-oriented ML platform. Support productization of explainability features for global modelling teams.

Major Learning Outcomes : Deep understanding of Interventional SHAP and TreeSHAP algorithms.
Hands-on experience in GPU programming and parallelization strategies.
Ability to debug large-scale ML pipelines and numerical discrepancies.
Experience in converting research PoCs into

Details of Papers/patents : Not applicable. (Work was internal and proprietary to American Express.)

Brief Description of working environment, expectations from the company : American Express provides a highly professional, collaborative, and technically rigorous working environment. The AiDA team operates at the intersection of product, platform, and advanced machine learning, with strong emphasis on correctness, governance, and scalability.
Expectations from interns are high but well-structured. I was expected to take ownership of tasks, understand problems deeply, propose solutions, and communicate progress clearly. Regular discussions with my manager and leadership ensured alignment, while autonomy allowed me to explore complex technical problems independently.
The culture encourages asking questions, documenting work, and engaging across teams. Senior leaders were approachable and receptive to technical deep dives, which helped in refining ideas and aligning them with business goals. Overall, the environment fostered both technical growth and professional maturity.

Academic courses relevant to the project : Machine Learning
Data Mining
Probability and Statistics
Algorithms and Data Structures
Linear Algebra
Operating Systems (parallelism concepts)

PS-II Station : American Tech Vision Solutions LLC, Hyderabad

Faculty

Name: Gopalakrishnan Venkiteswaran .

Student

Name: SNIGDHA KAIPA .(2022A7PS2014H)

Student Write-up

PS-II Project Title: Building A Banking Platform

Short Summary of work done during PS-II : During my Practice School-II at American Tech Vision Solutions LLC, I worked as a Product Manager on the development of a digital banking platform aimed at delivering modular and scalable banking services to financial institutions across multiple geographies. The platform was designed to support core functionalities such as KYC onboarding, Loans, Payments, Standing Instructions, and Statement Generation.My primary responsibility was to translate business and stakeholder requirements into clear, structured documentation. I prepared detailed Business Requirement Documents (BRDs) and Implementation Documents for key modules including Loans, Payments, Statement Generation, and Standing Instructions, covering workflows, functional specifications, and system interactions. I worked closely with UI/UX designers, backend developers, and QA teams to ensure accurate implementation of requirements and smooth integration across system layers.In addition to documentation and coordination, I supported sprint planning, milestone tracking, and module-wise delivery, ensuring alignment between product vision and technical execution. I also conducted research on AI-driven automation opportunities to improve operational efficiency and decision-making within the platform.This internship provided hands-on exposure to fintech product development, requirement engineering, cross-functional collaboration, and managing complex, multi-module systems in an enterprise environment.

Tool used (Development tools - H/w, S/w) : Microsoft Word, Google Docs, Microsoft Excel, PowerPoint,Jira, Confluence (for sprint planning, requirement tracking, and documentation),REST APIs, Backend Services, Database Systems

Objectives of the project : To design and develop a modular and scalable digital banking platform capable of supporting core banking services such as KYC onboarding, Loans, Payments, Standing Instructions, and Statement Generation. To ensure secure, efficient, and seamless integration between the user interface, backend services, and database layers of the system. To create comprehensive business requirement and implementation documentation that clearly translates stakeholder needs into technical specifications. To support structured development through sprint planning, milestone tracking, and cross-functional coordination. To explore the potential use of AI-driven automation to improve operational efficiency and decision-making within the platform.

Major Learning Outcomes : Gained practical exposure to fintech product development and the architecture of core banking systems.
Developed strong skills in requirement analysis, business requirement documentation (BRDs), and implementation documentation.
Learned to work effectively.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment at American Tech Vision Solutions LLC was professional, collaborative, and learning-oriented. The organization followed a structured yet flexible approach to project execution, encouraging open communication between product, design, and technical teams. Regular meetings, reviews, and feedback sessions ensured clarity of goals and alignment across stakeholders. As a Practice School student, I was treated as an integral part of the project team and entrusted with meaningful responsibilities rather than observational tasks. The company provided strong mentorship and access to real-world fintech product development practices. Industrial mentors were approachable and actively involved in guiding requirement analysis, documentation standards, and decision-making processes. The environment encouraged independent thinking while offering support whenever required. My expectations from the company were to gain practical exposure to large-scale software systems, understand how business requirements are translated into technical implementations, and develop product management skills in an industry setting. These expectations were met through hands-on involvement in creating business requirement documents, implementation documents, sprint

coordination, and cross-functional collaboration. Overall, the internship offered a valuable balance of guidance, responsibility, and professional growth, contributing significantly to my understanding of enterprise-level product development.

Academic courses relevant to the project : Management Courses

PS-II Station : Anand Rathi Global Finance Limited, Mumbai

Faculty

Name: Niranjan Swain .

Student

Name: ANSH BHARGAVA(2022A3PS1091G)

Student Write-up

PS-II Project Title: Fixed Income Research and Analysis

Short Summary of work done during PS-II : The US Treasury Auction Analysis was completed as a detailed report.The report analyzed key auction metrics (Bid-to-Cover Ratio, Tail) against historical benchmarks, concluding the auction was generally normal. This provided insights into investor demand for sovereign debt and short-term yield forecasts. A comparative Macro Dashboard for Japan, US, Korea, and China was developed using Tableau for advanced data visualization. This dashboard tracked and presented key economic data (GDP, CPI, Policy Rates, Trade Balance) with deep insights into cross-country policy divergence and economic spillovers. The RBI Primer Report was researched and compiled, detailing the evolution of the Reserve Bank of India's monetary policy framework, analyzing liquidity management techniques, and explaining the fundamental dynamics and trading structure of the Indian Government Securities (G-Sec)

market. Finally, the Inflation Predictor was developed using an Excel-based time series approach (e.g., ARIMA or regression analysis) to forecast the Consumer Price Index (CPI). This project utilized lagged CPI values and key economic indicators within Excel's data analysis tools for a transparent and reproducible forecast.

Tool used (Development tools - H/w, S/w) : Tableau,Advanced Excel,Bloomberg

Objectives of the project : To study research and analyse major economies and their debt market and key drivers

Major Learning Outcomes : My PS2 internship focused on four analytical projects, primarily leveraging Excel and Tableau. I first compiled a detailed US Treasury Auction Analysis Report, assessing investor demand by examining metrics like the Bid-to-Cover Ratio. Next, I built a com

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The environment at Anand Rathi Global Finance (ARGFL) felt both professional and highly supportive, embodying a true client-centric focus. My experience was characterized by an entrepreneurial culture where taking ownership and initiative was highly valued. Expectations were clear: maintain strict ethical standards, uphold the firm's reputation for integrity, and contribute actively to growth by delivering tailored, high-quality financial solutions. I was expected to be results-driven and adaptable, quickly integrating learning, and utilizing data and expert analysis to support the Treasury Department of its NBFC arm all within a collaborative and transparent team setting.

Academic courses relevant to the project : Finance Minor

PS-II Station : APPCAIR, Goa

Faculty

Name: Lucy J. Gudino

Student

Name: NAMOJU SATHWIK SAI(2022B3PS2053H)

Student Write-up

PS-II Project Title: BEHAVIORAL ANALYSIS OF ANDROID MALWARE USING PERMISSION-BASED FEATURES

Short Summary of work done during PS-II : During my Practice School – II at APPCAIR, Goa, I undertook the project “Behavioral Analysis of Android Malware using Permission-Based Features.” The work focused on building an explainable, data-driven framework for malware detection. I began by preparing a dataset of 11,198 Android applications, encoding their declared permissions into binary feature vectors. A structured preprocessing pipeline was implemented, including data cleaning, normalization, and feature engineering for risk scoring. Exploratory Data Analysis (EDA) revealed clear behavioral differences between benign and malicious apps, notably the phenomenon of “Permission Hunger,” where malware consistently requested more sensitive permissions such as READ_PHONE_STATE, SEND_SMS, and RECEIVE_BOOT_COMPLETED. To visualize latent structures, I applied Principal Component Analysis (PCA) and non-linear transformations, which highlighted distinct clustering between benign and malicious samples. I also designed a continuous Risk Score (0–1) by weighting high-risk permissions, enabling interpretable and efficient threat assessment. Multiple machine learning models were implemented and compared, including Logistic Regression, Decision Tree, SVM, Naive Bayes, Random Forest, AdaBoost, XGBoost, and MLP. Among these, Random Forest achieved 95.15% accuracy, outperforming others in precision, recall, and F1-score. Overall, the project provided hands-on experience in cybersecurity, mobile security, and explainable AI, bridging theoretical knowledge with practical application. It strengthened my ability to handle large datasets, design interpretable models, and translate technical findings into actionable insights for malware detection.

Tool used (Development tools - H/w, S/w) : 1.Python-Scikit learn,Pandas,NumPy 2.Tableau 3.Excel

Objectives of the project : Exploratory Data Analysis,Dimensionality Reduction & Visualization

Major Learning Outcomes : Understanding Permission-Based Detection,Data Handling & Preprocessing,Machine Learning Model Evaluation

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company :

Academic courses relevant to the project : Machine Learning

PS-II Station : Argenbright Innovation Lab, Bengaluru

Faculty

Name: Srinivas Kota .

Student

Name: VISWAS GUTHA .(2022A3PS0576H)

Student Write-up

PS-II Project Title: Ai chatbot Development

Short Summary of work done during PS-II : Developed a chatbot using MCP and developed a customer management portal with javascript.

Tool used (Development tools - H/w, S/w) : RAG, NEXTJS

Objectives of the project : Develop a chatbot that can understand the company database and answer accordingly

Major Learning Outcomes : Frontend development, model context protocol

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The employees are very friendly and the work is good.

Academic courses relevant to the project : Object oriented programming, natural language processing

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Name: ABHINAV GANTA .(2022A7PS0151H)

Student Write-up

PS-II Project Title: AI chatbot SQL generator for UI Page Configuration

Short Summary of work done during PS-II : Your work must be precise and that needs to leads to the goal of the project and think broad.

Tool used (Development tools - H/w, S/w) : Next.js, HTML,FastAPI,MCP,LangChain,LangGraph

Objectives of the project : To do an AI assistant for the developers of the company that generates INSERT SQL statements for the UI Pages they have for their products.

Major Learning Outcomes : Your work must be precise and that needs to leads to the goal of the project and think broad.

Details of Papers/patents : Nothing

Brief Description of working environment, expectations from the company : It is a startup so work is huge, but in your survival lies your potential deep within you.

Academic courses relevant to the project : NLP, ML, GenAI, OS, OOP, DSA

Name: AKHIL JACOB .(2022A8PS0814H)

Student Write-up

PS-II Project Title: AI Chatbot for Automated Meeting Transcription and Query

Short Summary of work done during PS-II : During this internship, I developed "ArgenBot," an AI-powered meeting assistant designed to unlock knowledge trapped in virtual meetings. The system automates the lifecycle of Google Meet sessions: it autonomously joins meetings using Playwright and an EC2 instance, records them using ffmpeg, and processes the data through a sophisticated pipeline. Initially prototyped locally, I migrated the system to a robust, cloud-native architecture on AWS. I implemented an event-driven workflow where AWS Lambda scans calendars and pushes events to an SQS queue, triggering Auto Scaling Group to launch EC2 instances. This ensures a 1:1 scaling ratio for concurrent meetings while minimizing costs. The processing pipeline extracts audio for transcription via AssemblyAI and converts text into semantic embeddings using sentence-transformers, stored in ChromaDB. I built a RAG-based chatbot interface allowing employees to query past meetings with high accuracy. Additionally, I delivered two side Projects: a "Learning Bot" for internal document Q&A and an automated profile sync tool for the company website using Gemini 3 Pro.

Tool used (Development tools - H/w, S/w) : Languages/Frameworks: Python, Node.js, FastAPI/Flask, Playwright. Cloud Services (AWS): Lambda, SQS, Auto Scaling Groups (ASG), EC2, S3, CloudWatch. AI/ML: AssemblyAI (ASR), Sentence-transformers (Embeddings), OpenAI Whisper (Prototyping), Nano Bana

Objectives of the project : To develop "ArgenBot," a system that automates joining Google Meet sessions and recording audio/video. To implement AI-based transcription using AssemblyAI and generate semantic vector embeddings using sentence-transformers. To design a cloud-native, event-driven architecture on AWS (Lambda, SQS, Auto Scaling Groups) for scalable processing. To build a Retrieval-Augmented Generation (RAG) chatbot that allows employees to query meeting content in natural language. To ensure robustness against edge cases like waiting rooms, host denials, and mid-meeting removals

Major Learning Outcomes : Mastery of Cloud-Native Architecture: Designing scalable, event-driven systems using AWS Lambda, SQS, and Auto Scaling Groups.
AI Integration: Practical experience with ASR (AssemblyAI) and Vector Search/RAG pipelines (ChromaDB, Sentence-Transformers).

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : They give us freedom and expect results.

Academic courses relevant to the project : Artificial Intelligence, Natural Language Processing (NLP), Database Systems, Object-Oriented Programming

PS-II Station : ARKS Ventures - Tech, San Fransisco

Faculty

Name: Arindam Roy .

Student

Name: JAMPANI SANJAY CHOWDARY(2022A7PS1178P)

Student Write-up

PS-II Project Title: Frontend Development of cross border payments app

Short Summary of work done during PS-II : I developed a mobile app right from scratch because there is no frontend for the app before i join by using ai tools and which be live in coming few months.

Tool used (Development tools - H/w, S/w) : Google Cloud Console, GitHub, Git, Google Play Console, Gemini, Chatgpt, Figma, App Store Connect, Plaid, CleverTap, Sardine, Flutter, Docker, Cursor, Firebase, Aws Console, Jira

Objectives of the project : Development of a mobile app for both android and ios using flutter. Which should match the figma for ui and the give prd for working flows.

Major Learning Outcomes : I got to learn all the tools I mentioned below, and I got to learn what a software developer lifecycle is going to be. Got the opportunity to talk with the third-party people relating to the tools and all.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The environment is pretty cool; there is no such timing window each day, as it is work from home. We can work at any time, day or night—that's up to us—and we need to make sure that we are able to deliver what they expect in time. They gave me time in the starting days to get used to the work and all, which helped me to grasp and improve my pace by the middle of my internship time. Expectations are the need to deliver quality output in a given time, and we should use our own

intelligence and not rely too much on the senior developers (but they are ready to help if we need it).

Academic courses relevant to the project : None

PS-II Station : ASBL, Hyderabad

Faculty

Name: Bhamidipati Vaishali .

Student

Name: HARSHIT RUNTHALA(2022B2PS1536P)

Student Write-up

PS-II Project Title: Optimisation of requirements by Growth and Sales Team

Short Summary of work done during PS-II : I was working in Product Team of ASBL and was handling the requirements by Growth&Sales Team.

Tool used (Development tools - H/w, S/w) : JIRA, n8n, SQL, Metabase, Co-Home, Figma

Objectives of the project : I was working in Leads Team of the Product Team and our main objective was to understand the requirements pushed up by Growth and Sales Team that can help us to optimise our lead journey.

Major Learning Outcomes : After completing the internship, I am able to effectively apply the principles of product management. I have become stronger in structured thinking, analysis, and problem-solving.
Working in the product team helped me gain hands-on knowledge of dashboard

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The company's work atmosphere is very positive and supportive. Employees are given full opportunities to work on projects with complete ownership, which is exactly what a product manager seeks.
I worked in the Product team, specifically within the Leads team. Our responsibility was to optimize and design the most effective pathways for the Growth and Sales teams so that customer acquisition and retention became easier, more automated, and seamless.
My mentor and manager were highly supportive throughout the internship. They consistently helped me understand problem statements, resolve challenges, and build confidence in my work.

Academic courses relevant to the project : Essentials of Strategic Management
In Product Management there is not any course that is directly inclined towards it.

PS-II Station : ASHAR VENTURES, Thane

Faculty

Name: Naga Vamsi Krishna Jasti .

Student

Name: BHAVYA SONU SEHGAL(2021B3A82862G)

Student Write-up

PS-II Project Title: Business Strategy, Market Expansion & Growth Operations at Ashar Ventures

Short Summary of work done during PS-II : During my PS-II internship at Ashar Ventures, I worked closely with the leadership and strategy teams on business strategy, market research, and growth initiatives. My responsibilities included analyzing new market opportunities, studying competitive landscapes, and supporting strategic planning for expansion. I contributed to research-driven decision-making by collecting, structuring, and interpreting market data to evaluate business feasibility and growth potential. I was actively involved in business development activities such as identifying potential partnerships, assisting in proposal creation, and supporting investor and client-facing documentation. I also worked on operational strategy, helping align business objectives with execution plans across different verticals of the organization. The internship provided hands-on exposure to real estate venture operations, strategic execution, and startup-style working culture, where I learned how high-level strategy translates into day-to-day business decisions. This experience strengthened my understanding of business growth models, strategic thinking, and execution frameworks in a real-world corporate environment.

Tool used (Development tools - H/w, S/w) : Software: MS Excel, Google Sheets, PowerPoint, Google Slides, Google Docs Research tools: Market research platforms, online databases, competitor analysis tools Communication: Email, WhatsApp, Zoom, Google Meet Hardware: Laptop, mobile device

Objectives of the project : To support strategic business expansion initiatives at Ashar Ventures To analyze market opportunities and competitive positioning To assist in business development, partnerships, and growth planning To contribute to operational efficiency and strategic decision-making To gain hands-on exposure to real estate investment, venture operations, and startup-style execution

Major Learning Outcomes : Learning real-world strategy formulation and execution
Understanding business scaling in real estate ventures
Market analysis and opportunity identification
Startup-style decision-making and execution
Strategic thinking and operational alignment

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Ashar Ventures provided a highly professional, fast-paced, and strategy-driven working environment that encouraged ownership, responsibility, and independent thinking. The organization follows a collaborative culture where interns are treated as contributors rather than observers. I was expected to take initiative, think critically, and deliver high-quality work within deadlines.
The work culture promoted learning through real responsibilities, exposure to leadership, and direct involvement in strategic decision-making. Expectations included discipline, accountability, adaptability, and professionalism in execution. The organization emphasized clarity of thought, structured problem-solving, and business-oriented thinking. This environment helped me develop confidence, maturity, and a deeper understanding of how businesses operate in real-world settings.

Academic courses relevant to the project : Principles of Management
Entrepreneurship
Business Communication
Financial Management
Marketing Management
Strategic Management
Organizational Behavior
Economics

PS-II Station : Astera Labs, Bengaluru

Faculty

Name: Kranthi Kumar Palavalasa

Student

Name: AVRAJIT SARKAR(2020B2A31920G)

Student Write-up

PS-II Project Title: Internship @ at astera lab

Short Summary of work done during PS-II : During my six-month internship at Astera Labs as a Digital Design Intern, I gained hands-on experience in RTL design and verification for high-speed digital systems. I worked closely with senior engineers to understand real-world hardware design flows, including specification analysis, micro-architecture development, coding in Verilog/SystemVerilog, and functional verification. My work involved debugging complex design issues, reviewing simulation results, and improving design quality through iterative refinement. I was also exposed to industry-standard tools and methodologies used in large-scale silicon development, such as version control, code reviews, and structured design documentation. The internship helped me strengthen my understanding of digital logic, on-chip interfaces, and timing-aware design practices, while also developing problem-solving and collaboration skills. Overall, the experience provided valuable insight into professional semiconductor design workflows and prepared me for more advanced roles in digital and SoC design.

Tool used (Development tools - H/w, S/w) : Synopsys tool chain

Objectives of the project : Design

Major Learning Outcomes : Data Movement

Details of Papers/patents : 0

Brief Description of working environment, expectations from the company : Good

Academic courses relevant to the project : Nil

Name: V SAMSKRUTHI(2021B4A32922H)

Student Write-up

PS-II Project Title: Design For Testability: Techniques and Implementation

Short Summary of work done during PS-II : Work primarily involved generating test patterns using ATPG, running functional ad fault simulations to validate coverage, and performing MBIST simulations for memory testing. Also created python scripts to make the workflow of running tests more efficient.

Tool used (Development tools - H/w, S/w) : Slurm VNC, Python, Microsoft 365, Synopsys TetraMax, Synopsys Verdi

Objectives of the project : Design For Testability

Major Learning Outcomes : Gained hands-on experience in DFT methodologies, such as scan insertion, ATPG and simulations. Also improved understanding of industry workflows for chip testing.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The company provides a collaborative and professional working environment with a strong focus on learning and innovation.

Academic courses relevant to the project : ADVD, Computer Architecture

PS-II Station : ATI MOTORS, Bengaluru

Faculty

Name: Srinivas Kota .

Student

Name: KRISHNENDU MATHUR .(2021B5AA2475H)

Student Write-up

PS-II Project Title: Development and Integration of Automotive Sensors and Communication Systems for Autonomous Vehicle Applications

Short Summary of work done during PS-II : During my PS-II internship, I worked on the development, evaluation, and integration of automotive-grade sensors and communication systems for autonomous vehicle applications. The work involved interfacing and validating multiple sensors including Time-of-Flight (ToF) sensors, inductive position sensors, IMUs, and optical communication sensors on STM32-based embedded platforms. A significant part of the work focused on acquiring reliable sensor data under real-world conditions. This included optimizing ToF sensor performance using confidence-based filtering, spatial filtering, and extensive field testing on vehicle platforms. Sensor outputs were prepared for integration into vehicle autonomy and control systems. Inductive position sensing was implemented using differential sine–cosine signals with both external and internal ADC approaches, followed by normalization and absolute position computation. In parallel, I explored and implemented automotive communication protocols such as CAN, CAN-over-Powerline (DCAN), Ethernet, and Automotive Ethernet to support high-bandwidth sensor data transfer. DMA-based communication and Ethernet experiments were carried out to overcome CAN bandwidth limitations. Hardware design tasks included schematic development, PCB design, isolated CAN interfaces, opto-isolated circuits, and evaluation boards for alternate sensor components. Additional work involved developing embedded diagnostic tools, including a custom CAN bus monitor with a

Python-based GUI for message visualization and transmission. Throughout the internship, I performed extensive debugging, signal integrity analysis, EMI pre-compliance checks, and cross-sensor data validation. The internship provided comprehensive exposure to embedded hardware–software co-design, automotive communication systems, and real-world vehicle integration challenges.

Tool used (Development tools - H/w, S/w) : Hardware Tools STM32 Microcontrollers (STM32L4, STM32F4 series) Time-of-Flight Sensors (VL53L5CX, VL53L8CX, VL53L8CH) Inductive Position Sensor (Microchip LX34070) IMU Sensors (ASM330LHH, IAM20680) Toyo SOT-NP801S Optical Communication Sensor CAN Tr

Objectives of the project : To evaluate, interface, and integrate multiple automotive-grade sensors (ToF, IMU, inductive position sensors, and optical sensors) for use in autonomous vehicle applications. To design and implement reliable embedded firmware and hardware interfaces for sensor data acquisition, conditioning, and real-time processing. To study, compare, and implement automotive and industrial communication protocols (CAN, CAN-over-Powerline, Ethernet, Automotive Ethernet) suitable for high-bandwidth sensor data transfer. To develop high-speed and robust communication solutions for transmitting large volumes of sensor data from vehicle-mounted sensor arrays to compute platforms. To design and prototype supporting hardware including PCBs, isolation circuits, and interface boards for safe and reliable vehicle deployment. To validate sensor performance and communication reliability through real-world testing under varying environmental and operational conditions. To provide processed and validated sensor data interfaces for integration with vehicle autonomy and control systems.

Major Learning Outcomes : Gained strong hands-on experience in interfacing and validating automotive-grade sensors including Time-of-Flight sensors, IMUs, inductive position sensors, and optical communication sensors.
Developed a deep understanding of embedded firmware developmen

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment during PS-II was highly positive, collaborative, and conducive to learning. Team members were approachable, supportive, and always willing to help. Whenever guidance was

required, senior engineers and colleagues took the time to explain concepts clearly, which greatly enhanced the learning experience and enabled effective problem-solving.

The organization encouraged open communication and knowledge sharing across teams, creating a comfortable atmosphere for asking questions and discussing technical challenges. This supportive culture helped in gaining confidence while working on complex hardware and software systems.

The workplace infrastructure was well maintained, with essential facilities such as a canteen available within the office premises. The office location was easily accessible via metro, which made daily commuting convenient and stress-free. Additionally, the company followed flexible working hours, allowing employees to manage their time efficiently while maintaining productivity.

The primary expectation from the company was active engagement, responsibility, and a willingness to learn. Interns were encouraged to take ownership of assigned tasks, explore solutions independently, and seek help when required. Overall, the environment promoted professional growth, technical learning, and work–life balance, making PS-II a valuable and rewarding experience.

Academic courses relevant to the project : Embedded Systems Design – Provided foundational knowledge of microcontroller architecture, peripheral interfacing, and embedded firmware development used extensively with STM32 platforms.

Microprocessors & Interfacing – Relevant for understanding low-lev

PS-II Station : Auriga IT Consulting Pvt Ltd, Jaipur

Faculty

Name: Ramesh Venkatraman .

Student

Name: SAHIL VISHNANI(2024B1A15001P)

Student Write-up

PS-II Project Title: Frontend Web Development- for a consulting Firm

Short Summary of work done during PS-II : during my five-month internship at Auriga IT Consulting, I worked as a Front-End Developer across 3 structured phases 1) Foundation and Training : i began with intersice trainging to master a modern tech stack , inclduing React, TypeScript , Redux Tookit , Javascript, CSS , HTML , libraries like Material UI , tailwindCSS, developed a strong theoretical base for professional developement. 2) enterprise Project (YES Bank) i conntributed to an internal project for YES Bank by desinging and implementing a caching mechanim useing Redux Toolkit , This feacture optimmized the application performance by sotring frequently accessed data and signiifincantly reducing redudant API calls, and made the application more responsive and quick for reloads 3) Production Deployment (B-lal Laboratory) , in the last 2 months I was intergrated into a production tea to anage UI/UX upgrades for a legacy Javascript Codebas . To modernize the interface without disruptin gthe legacy architecture , I rapidly adopted the Vue,js framework (since it has similarities to react) for incremental component adoption and visual refinement.

Tool used (Development tools - H/w, S/w) : VS Code editor, Postman , firebase , google clound functions , react , MUI (Library)

Objectives of the project : over the time period of the internship i have contributed on multiple project within auriga IT and for its client , majot outcomes can be categories in learning tools, language and tech Stack used in developing the modern web application frontend , acquiring deep theoretical and working knowledge on utilizing these tools. worked on real project like YES Bank ui/ux adding new capabilities to optimise old legacy code base, learn to adopt with the requirement of legacy code to maintain the application , and intergrated modern methods to imporove application responsiveness

Major Learning Outcomes : 1. Technical mastery: gained deep proficiency in a mmodern stack including React, TypeScript, Redux Toolkit and Firebase services , APIs

2.State Managment & optimization : Learned to design and implement caching mechanism , authentication , and routing p

Details of Papers/patents : there were no papers or patents that followed the work it was a enterprise work

Brief Description of working environment, expectations from the company : Working Environment : Auriga IT Consulting have a dynamics and highly collabrative atmosphere, which is reflected in how the work space is set up where senior engineers and interns and everyone in the team shares common spaces which eliminates physical and social barriers between team member. The enviroment is jovial and supportive, its flat organizational structure: the absence of rigid hierrarchy makes it fascnatnnlgy easy to pitch ideas and offer suggestions directly to leardership. This openness extends to mentorship, where interns have effortless access to senior software develpoers for guidance and feedback, during my time at auriga I teamed up with senior developers to take part in hackathon which was a very interesting experience and made it much easier and comfortable to have accessed to senior developers and i have learned alot
Expectations : The company expects interns to transition quickly from foudational training to contrbuting to live (real life) projects. Beyond technical execution ,there is a strong expectation of professional auntonomy. interns are trusted with direct exposures to clients ,requiring them to learn how to manage and interpret client requests effectiverly. This unique opportunity demands not just technical proficiency, but also the nurture soft skills necessary to navigate real world business requierments within a professional setting.

Academic courses relevant to the project : NO, there were no course as such which are related to developement or coding among academic courses, might be course on C(during first year of college) which introduced me to coding world and since then i have worked to learn more technology.

PS-II Station : Aurigo Software Technologies Pvt Ltd, Bengaluru

Faculty

Name: Mohammad Saleem Bagewadi .

Student

Name: SPARSH JHANWAR(2022AAPS0360P)

Student Write-up

PS-II Project Title: Sde-1

Short Summary of work done during PS-II : Worked on enterprise-level software development at Aurigo, contributing to backend modules, REST API integration, and database operations. Collaborated in an Agile environment to implement features, fix bugs, and improve application performance while following industry best practices.

Tool used (Development tools - H/w, S/w) : Software Tools: Java / JavaScript REST APIs SQL Database Git (Version Control) IDEs (IntelliJ IDEA / VS Code) Hardware Tools: Development Laptop / Workstation

Objectives of the project : To gain hands-on experience in enterprise software development by working on real-world, large-scale applications. To understand and apply the software development lifecycle and Agile practices in a professional environment. To enhance my technical and professional skills by solving practical problems while collaborating with cross-functional teams.

Major Learning Outcomes : Gained practical experience in enterprise-level software development and real-world problem solving.
Developed a strong understanding of the software development lifecycle and Agile methodologies.
Improved skills in backend development, APIs, and databa

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment at Aurigo was highly professional, collaborative, and structured, providing exposure to real-world enterprise software development. The organization follows Agile practices, encouraging regular communication through stand-ups, sprint planning, and reviews, which helped maintain transparency and steady progress. Team members were approachable and supportive, fostering a culture of learning and continuous improvement.

As an intern, the expectations from the company included gaining practical exposure to industry-standard tools and technologies, understanding the complete software development lifecycle, and learning best practices in coding, testing, and version control. The company emphasized quality, scalability, and reliability, motivating interns to write clean, maintainable code and take ownership of assigned tasks. Guidance from mentors and regular feedback sessions helped bridge the gap between academic knowledge and professional application.

Overall, the environment promoted technical growth, teamwork, and professional discipline, preparing interns to contribute effectively in a corporate software development setting.

Academic courses relevant to the project : Data Structures and Algorithms
Object-Oriented Programming
Database Management Systems
Software Engineering
Operating Systems

PS-II Station : Axis Capital Ltd - Institutional Equities Research, Mumbai

Faculty

Name: Ankur Pachauri

Student

Name: ATHARVA PANKAJ DESHPANDE(2021B4A82309G)

Student Write-up

PS-II Project Title: Tracking and maintaining coverage of telecom, internet and media sector companies

Short Summary of work done during PS-II : 1. Annual Report Analysis of companies 2. Updating financial models and building charts 3. Attending quarterly financial updates conference calls and making notes 4. Tracking prices of products across different e-commerce and quick commerce platforms 5. Writing PDIE reports and making Presentations for Physics Wallah and Meesho 6. Analyzed total test takers in India 7. Continued on Tracking discounts across different e-commerce and quick commerce platforms - made presentations based on the same. 8. Attended conference calls for the quarterly results and made reports 9. Helped the sales team in managing the Tech and Consumer-Services conference 10. Analysis of evolving technologies in the telecom industry. 11. Wrote reports on the Indian logistics industry - to be released in 2026

Tool used (Development tools - H/w, S/w) : Word, Excel, Powerpoint

Objectives of the project : This project involved doing a detailed analysis of companies in the sectors allotted. The focus was on key financial and operational metrics to understand market trends, competitive landscapes, and future growth trajectories. Using this, we developed financial and strategic analysis of companies within the mentioned sectors from quarterly financial reports, conference calls, and industry news to provide a view of company performance to investors.

Major Learning Outcomes : My project work provided insights across several key sectors, beginning with the education and e-commerce industries. The PDIE report helped in identifying major market players, their revenue models, and future growth strategies for securing investment. I

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The mentors are helpful, friendly and approachable. The overall working ethics and working environment is also very nice. You get all the necessary help and guidance from the mentors and they are supporting and kind.
But you will have to dedicate enough number of hours apart from the standard working hours. Sometimes, I had to login on weekends as well to complete the tasks assigned. There are no fixed working hours and compared to other finance companies, the stipend given here is very less. So please choose accordingly. However, the experience and tasks assigned are of high quality and directly impact market scenarios on a daily basis. So there is a lot of quality work comparable to what may be assigned to a full-time employee working at the company.

Academic courses relevant to the project : ECON F212 - Fundamentals of Finance and Accounting

PS-II Station : Axitrust India Pvt. Ltd, Gurgaon

Faculty

Name: Perumal Jayakumar

Student

Name: VIDHI JAIN(2022A1PS1353P)

Student Write-up

PS-II Project Title: Founder's Office - Risk

Short Summary of work done during PS-II : Risk Underwriting and Automation

Tool used (Development tools - H/w, S/w) : Gen AI

Objectives of the project : Credit underwriting

Major Learning Outcomes : Credit Risk Assessment

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Work environment is good and so are the colleagues. But the company size is very small.

Academic courses relevant to the project : FundaFin, BAV

PS-II Station : Bank of Baroda, Vadodara

Faculty

Name: Gaurav Nagpal .

Student

Name: AMARTYA SOM .(2022A4PS1511H)

Student Write-up

PS-II Project Title: Activation of Accounts at BC Points and DEAF Accounts Claim Portal

Short Summary of work done during PS-II : I worked with the Operations & ServicesDepartment. This internship gave hands on experience of working in a fi nancial institution and introduced me to the core banking functionsand services. I was assigned two

projects - The Activation of Inoperative Accounts at BC points, Development of DEAF Accounts Claim Portal. Iwas tasked with the development of SOPs, Process Flows, Portals and User Acceptance Testing. This was followed by compiling the BusinessRequirement Documents for both of these projects.

Tool used (Development tools - H/w, S/w) : Excel, Core Banking Solution, MS Office Tools

Objectives of the project : Utilization of authorized Business Correspondent (BC) of the bank for activation of inoperative accounts

Major Learning Outcomes : Process Analysis and Documentation, Risk Assessment and Management
Business Requirement Documentation (BRD)
Professional Communication and Collaboration
Practical Understanding of Banking Operations

Details of Papers/patents : Helped in the BRD compilation of the projects

Brief Description of working environment, expectations from the company : During my internship at Bank of Baroda (Head Office), I experienced a professional, structured, and compliance-driven working environment typical of a large public sector bank. The culture emphasized discipline, punctuality, clear documentation, and adherence to established procedures, with strong importance given to confidentiality and ethical conduct. Teams functioned within a clear hierarchy, but senior officials were supportive and approachable when initiative and seriousness were shown. The organization expected interns to be detail-oriented, reliable, and adaptable, prioritizing accuracy and consistency over speed. Overall, the internship fostered a disciplined work ethic and provided valuable exposure to real-world banking operations, regulatory sensitivity, and process-oriented decision-making.

Academic courses relevant to the project : Financial Management, FRAM, POE

PS-II Station : Beetexting Software Pvt Ltd, Hyderabad

Faculty

Name: Venkateswara Rao Thunuguntla .

Student

Name: ARCHITA GANESH SINDIGI(2022A7PS0021G)

Student Write-up

PS-II Project Title: Full Stack Development

Short Summary of work done during PS-II : During my time at Beetexting Hyd,I worked as a full Stack developer contributing to the frontend as wel as backend.Every morning,we had a StandUp call with our team.And throughout the internship we directly communicated with Qa team regarding the requirements.I learnt SpringBoot,Angular,testing and Agile workflow

Tool used (Development tools - H/w, S/w) : VS Code,IntelliJ IDE,Java with SpringBoot,Angular,BitBucket,Jira,Jenkins,Kafka,Docker,Redis

Objectives of the project : Contribute actively to Beetexting application while learning the tech stack used by them

Major Learning Outcomes : Successfully learnt Java and Angular implementation on an enterprise level.Learnt cross-domain communication skills,Agile workflow.

Details of Papers/patents : na

Brief Description of working environment, expectations from the company : The work environment wasn't the best,there were a lot of off paper unhealthy expectations.The work hours

seemed like just a suggestion and we were expected to put in extra hours to seem like we are working hard. Even the PPO discussion was far from expectations.

Academic courses relevant to the project : OOPS,DSA,DAA,DBMS

Name: ANKUR MUDUGU(2022A7PS0054G)

Student Write-up

PS-II Project Title: Full stack developer intern

Short Summary of work done during PS-II : During my PS-II at BeeTexting, I worked as a backend-focused software developer, contributing to the development, enhancement, and maintenance of enterprise-level communication services. My work primarily involved Java and Spring Boot–based microservices, where I implemented REST APIs, fixed production and staging issues, and enhanced existing business logic to improve system reliability and performance.

Tool used (Development tools - H/w, S/w) : Java, SpringBoot, Maven, Angular, Docker, web sockets, APIs

Objectives of the project : Write clean, readable, production ready code for the Beetexting application, including unit testing, deployment and testing the changes.

Major Learning Outcomes : Learned how teams work in a professional environment, good practices for writing code in a collaborative setting, how to deploy and test changes made after discussion with members from different teams.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment at BeeTexting is fast-paced, collaborative, and driven by real-world impact. Teams

work closely across engineering, product, and business functions, fostering open communication, ownership, and accountability. The culture encourages problem-solving, continuous learning, and adapting to evolving technologies, especially in building scalable communication platforms. Employees are expected to be proactive, technically sound, and comfortable working in an agile setup where quality and reliability are critical.

From the company, I expect a transparent and supportive environment that values innovation, technical excellence, and professional growth. Clear goals, constructive feedback, and mentorship are essential to help individuals improve both technically and professionally. I also expect BeeTexting to promote best practices in software development, maintain high coding standards, and encourage collaboration rather than siloed work.

Academic courses relevant to the project : Object oriented programming, Computer Programming, Computer Networks, Database Management System

Name: VADLAMUDI DARAHAAS .(2022A7PS0058H)

Student Write-up

PS-II Project Title: Creation of a portable Chat Widget for partners. Migration of angular14 to19. Creation of Admin UI login page in angular19.

Short Summary of work done during PS-II : During the internship, the work primarily focused on the design and implementation of a secure Chat Widget and the upgrade and enhancement of the login page from Angular 14 to Angular 19 within a production-grade application. The Chat Widget was developed as a lightweight, embeddable component to enable secure communication between website visitors and businesses in a multi-tenant environment. A robust cross-origin architecture was implemented using Content Security Policy (CSP), controlled iframe embedding, HttpOnly temporary cookies, and short-lived JWTs to ensure secure authentication, tenant isolation, and protection against common web vulnerabilities. End-to-end API workflows were designed for widget initialization, handshake validation, session creation, message submission, and site discovery. Supporting database schemas, indexing strategies, rate limiting, and security

mitigations were incorporated to make the widget scalable, reliable, and production-ready. In parallel, the login system was migrated and enhanced during the Angular 14 to Angular 19 upgrade, ensuring compatibility with modern Angular standards and improved performance. A partner-specific login page was implemented with dynamic component loading, environment-based configuration, and enhanced authentication flows. Features such as session handling, MFA support, password reset, and improved routing were integrated to deliver a smoother and more secure user experience. Overall, the work strengthened skills in modern Angular development, secure frontend architecture, and building scalable, real-world web applications.

Tool used (Development tools - H/w, S/w) : Cursor, Angular, TypeScript,Javascript,HTML,CSS, BitBucket, Node, npm, Git.

Objectives of the project : - Securely allow only authorised tenant domains to embed and use the widget. - Minimise integration friction for tenant engineers. - Ensure messages are authenticated, non-replayable, and auditable. - Provide a responsive user experience with low UI latency. - Make the system scalable, observable, and maintainable.

Major Learning Outcomes : Learned to design and implement partner-specific authentication and onboarding flows within a multi-tenant Angular application.
Gained hands-on experience in building secure cross-origin systems using CSP, iframes, HttpOnly cookies, and short-lived JWTs.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Decent working environment and the company had basic expectations which were not too high.

Academic courses relevant to the project : NA

Name: ABHINAV CHITTURI .(2022A7PS0064H)

Student Write-up

PS-II Project Title: AIC, TCR, CSA, ITR

Short Summary of work done during PS-II : • Improved AI Compliance (AIC) by enabling full conversational-context analysis, correcting rule logic, and reducing manual review overhead. • Upgraded the TCR Application with Selenium, Golang scrapers, and GPT extraction to automate policy/form scraping and internal onboarding flows, while adding full OpenTelemetry tracing and migrating 15–20 APIs to Java Spring Boot. • Built an internal AI Consulting Assistant using LLM tool-calling to generate broadcasts, tags, templates, and automations from natural-language instructions, accelerating workflow setup.

Tool used (Development tools - H/w, S/w) : Python, Java, C/C++, Go, JavaScript, SQL, React.js, FastAPI, Spring Boot, Docker, MongoDB, OpenAI API, Groq, RAG, NLP, Solidity, AWS, OpenTelemetry, Git.

Objectives of the project : Implementing AI for the application

Major Learning Outcomes : AI, Jenkins, Git, Groq, Python, AWS, OpenTelemetry

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : • Improved AI Compliance (AIC) by enabling full conversational-context analysis, correcting rule logic, and reducing manual review overhead. • Upgraded the TCR Application with Selenium, Golang scrapers, and GPT extraction to automate policy/form scraping and internal onboarding flows, while adding full OpenTelemetry tracing and migrating 15–20 APIs to Java Spring Boot. • Built an internal AI Consulting Assistant using LLM tool-calling to generate broadcasts, tags, templates, and automations from natural-language instructions, accelerating workflow setup.

Academic courses relevant to the project : AI, ML, OOPS, OS

Name: MADHURIKA BHATT(2022A7PS0079P)

Student Write-up

PS-II Project Title: Full Stack Development of beetexting application

Short Summary of work done during PS-II : During PS-II at Beetexting Software Pvt Ltd, the work primarily focused on full-stack development for the BeeTexting business communication platform, covering backend APIs, frontend interfaces, testing, and deployment. Backend responsibilities included designing and implementing Spring Boot REST APIs with model–repository–service–controller layers, integrating with MongoDB, adding validation and exception handling, and optimizing queries to reduce server load for group-level operations. On the frontend side, Angular-based UI components were developed and refined to support new features while maintaining consistency across multiple partner themes and improving usability

Tool used (Development tools - H/w, S/w) : Java, Spring Boot, IntelliJ IDEA, Maven, Docker, MongoDB, MongoDB Compass, Postman, JUnit, Angular 19, TypeScript, HTML, VS Code, Cursor, Notepad, Jira, Bitbucket, MS Teams,Jenkins

Objectives of the project : fix bugs, implement new features/functionalities in beetexting web Application

Major Learning Outcomes : full stack development, Spring Boot Java, git, deployment

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at Beetexting Software Pvt Ltd was fast-paced and collaborative, with regular stand-ups, feature meetings, and agile sprint cycles driving the development process. The team used tools like Jira for task management, Bitbucket for version control, and MS Teams for communication, ensuring transparency and efficient coordination across departments.

Developers worked closely with product managers, QA heads, and senior engineers to triage issues, clarify requirements, and deploy features rapidly to meet production timelines.

Academic courses relevant to the project : OOP (java) was relevant, DSA, DBMS

Name: ARYAN JAIN(2022A7PS0120P)

Student Write-up

PS-II Project Title: Backend Modernisation

Short Summary of work done during PS-II : Built a JMETER Stress admin load testing application and ideated, developed and eelivered a completely new feature to the beetexting application

Tool used (Development tools - H/w, S/w) : S/w - JAVA springboot, mongodb, docker, kafka.

Objectives of the project : Backend development

Major Learning Outcomes : Java development, team collaboration

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment was okayish, the senior director used to ask us to stay till late even though it was clearly defined that the working hours were till 7. It was a very early-stage startup. People mostly talked in their local language and it was very hard to comprehed them for me as a north indian.

Academic courses relevant to the project : OOPS, DSA

Name: B.VAISHNAVI .(2022A7PS1357H)

Student Write-up

PS-II Project Title: Software Intern

Short Summary of work done during PS-II : Fixed bugs, solved console log errors to reduce load, made a new login page for spectrum partner

Tool used (Development tools - H/w, S/w) : Cursor, angular 19

Objectives of the project : Fix bugs, migration of the application, and modify the application according to requirements of partners

Major Learning Outcomes : Full satck

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : I was assigned work and the expected to contact the qa team if I'm assigned the bug fixing else finish up the work and then submit within the deadline.

Academic courses relevant to the project : Oops

PS-II Station : BigLook, Waterford

Faculty

Name: Sugata Ghosal .

Student

Name: SAMARTH JAIN(2022A7PS0054P)

Student Write-up

PS-II Project Title: Ai agent development

Short Summary of work done during PS-II : We created multiple agentic pipelines and frameworks to automate various tasks for art galleries

Tool used (Development tools - H/w, S/w) : Google adk

Objectives of the project : Development of agentic ai frameworks and workflows to bring in automation for the clients

Major Learning Outcomes : GitHub and Google adk

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : It was a good and professional environment. The work culture was great and the team was very supportive and friendly.

Academic courses relevant to the project : Intro to LLM

PS-II Station : Birla Polyfibers, Harihar

Faculty

Name: Arun Maity .

Student

Name: HAARDIK SINGH HADA(2022A1PS1351P)

Student Write-up

PS-II Project Title: Improvement in Viscose Quality by Variation Reduction in Pulp

Short Summary of work done during PS-II : During my PS-II internship at Birla Polyfibres, Harihar, I worked on reducing moisture variation in loose pulp and studying its impact on viscose quality. I analysed moisture data from the online analyzer and HPF and GRD laboratories, identified causes of measurement discrepancies, and correlated moisture behaviour with environmental conditions. Based on the findings, corrective actions such as sampling standardisation, SOP alignment, and calibration checks were implemented. The work improved moisture measurement consistency and supported better control of viscose preparation, while providing hands-on experience in industrial process analysis and application of chemical engineering principles.

Tool used (Development tools - H/w, S/w) : MS Excel , Power BI , Python.

Objectives of the project : The objective of this project was to study the impact of pulp moisture on viscose quality, analyse variations between different moisture measurement methods, and implement corrective actions to reduce discrepancies and improve measurement consistency for stable viscose production.

Major Learning Outcomes : This project enhanced understanding of the role of pulp moisture in viscose manufacturing, strengthened application of chemical engineering principles to real plant data, and developed skills in data analysis, root cause identification, and process standa

Details of Papers/patents : none

Brief Description of working environment, expectations from the company : The working environment at Birla Polyfibres, Harihar was professional, safety-focused, and process-oriented, with strong coordination between different departments. The company expected interns to follow safety protocols, understand plant operations, apply chemical engineering concepts to real problems, and contribute through data analysis, disciplined work practices, and clear communication.

Academic courses relevant to the project : All Chemical Engineering CDCs.

Name: VADALI V G S HARSHITH(2022ABPS1612P)

Student Write-up

PS-II Project Title: Lubrication Management Optimisation

Short Summary of work done during PS-II : I worked in the GRD department and did the lubrication analysis of the 4 departments in the GRD. I went to all the departments collected the data analyses last year's data and made the excel analysis understood the lubrication process and found better methods to lubricate and found out the wastes and found solutions to reduce the waste and introduced the concept of just in time and found alternatives for the oils used which are less costly

Tool used (Development tools - H/w, S/w) : Excel, word

Objectives of the project : To reduce the lubrication cost and to improve the management and handling process

Major Learning Outcomes : I learned about lubricants and how lubrication works and how is the lubrication process carried out and what are the factors to be taken dare and what are the standards and what are the wastes that are quite common that could be avoided

Details of Papers/patents : Lubrication analysis

Brief Description of working environment, expectations from the company : The working environment was good language was an issue rest everything was good and everyone was helpful and its a chemical based plant so good for chemical students and has many mechanical machines also. The room and cab were provided and the timings were 8:30 to 5:30.

Academic courses relevant to the project : Operations and research, lean manufacturing

PS-II Station : Bisquare Systems Private Limited, Noida

Faculty

Name: Sindhu S .

Student

Name: YATHARTH JANI(2022A8PS0587P)

Student Write-up

PS-II Project Title: Development of IoT Module for Smart-AC using ESP32

Short Summary of work done during PS-II : My work was to create the entire IoT architecture for the ESP WiFi module to be installed in the Smart-AC (and later other products) at the company. I first created a flowchart architecture to lay down how the data will flow and what processes will

occur. In the implementation, I followed the flow and designed the system by programming the IoT module and using several protocols and APIs. In brief, the data was received from the IDU controller using UART, compressed to binary and stored in a FreeRTOS queue. Then the timestamping and backward timestamping algorithm was created and another level of compressino was done, and the data was stored in the next buffer. Then the UDP transmission was done after the base64 conversion. A lot of testing was also done to check data validity, for which I wrote Python scripts. After this, the data was further compressed to be sent to AWS cloud as well.

Tool used (Development tools - H/w, S/w) : ESP32, Embedded C, ESP-IDF, draw.io, Python, FreeRTOS

Objectives of the project : Develop efficient and optimized real time embedded systems, Design system architecture, documentation

Major Learning Outcomes : Embedded System design, embedded/networking protocols like UART, S/NTP, WiFi, BLE, Mesh, HTTP/S, UDP

Details of Papers/patents : N.A.

Brief Description of working environment, expectations from the company : The working environment of this company is far from suitable by any means.

Academic courses relevant to the project : Computer Programming, Microprocessors & Interfacing

PS-II Station : BITS Pilani, Leadership CoE, Gurgaon

Faculty

Name: Parag Rastogi

Student

Name: UTKARSH DUTTA(2022A3PS0507P)

Student Write-up

PS-II Project Title: LEAD-Industry Marketing

Short Summary of work done during PS-II : Designed marketing materials for the program, conducted outreach once registrations opened. Updated website for LEAD-Industry and designed materials for LEAD-Academics website as well. Created LinkedIn posts, updated and reformatted course content. Designed and completed brochure for the program, and drafted mails for speaker invites.

Tool used (Development tools - H/w, S/w) : Adobe After Effects, Photoshop, Da Vinci Resolve, MS Office, Figma

Objectives of the project : To design and proceed with the marketing campaign for achieving required registrations in LEAD-Industry program.

Major Learning Outcomes : Learnt about marketing campaigns and how data from campaign can be used to tailor it.
Learnt about new software (Da Vinci Resolve) for video editing.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Working environment was relaxed, no issues.

Academic courses relevant to the project : NA

PS-II Station : BMW, India

Faculty

Name: Srinivas Kota .

Student

Name: PRANJAL KAUR .(2022A4PS1499H)

Student Write-up

PS-II Project Title: Project Management Intern

Short Summary of work done during PS-II : I was given various projects related to procurement of automotive parts for BMW. I ran RFI/RFQs with suppliers with constant follow-ups to ensure timely delivery of quotations. Alanalysed the quotations received quotations to identify areas of cost reduction and cost benchmarking the most commercially viable supplier for BMW. I also initiated a logistics consolidation project wherein consolidation across all BMW suppliers transportation, freight and warehousing. I also headed the Innovation project to understand, analyze and evaluate the Indian startup ecosystem to shortlist top 20 to potentially collaborate with BMW.

Tool used (Development tools - H/w, S/w) : MS Excel, PowerPoint, PowerBI

Objectives of the project : Assist team with procurement projects by doing market research, preparing presentations, procurement processes and supplier relationship management.

Major Learning Outcomes : 1. Developed soft skills like communication and supplier handling.
2. Time management while working on various projects simultaneously.

3. Innovation and startup ecosystem in India.
4. Driving key founder interactions.
5. Learning about the logostics pro

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Working environment of the company is really good with everyone being super warm and friendly. IPO team is extremely co-operative in case of personal issues. No work after working hours and managable amount of work.

Academic courses relevant to the project : Supply Chain Mangement

PS-II Station : Botanic Healthcare, , Hyderabad

Faculty

Name: Bharathi R .

Student

Name: LAKSHMI LAASYA PRIYA KUNDURTHI .(2022A5PS1268H)

Student Write-up

PS-II Project Title: Liposomal extraction techniques and quality control analysis

Short Summary of work done during PS-II : Prepared a new product named liposomal pyroquinoline quinone which can be useful in the pharmaceutical indutry for drug delivery and learnt quality control analysis for the product

Tool used (Development tools - H/w, S/w) : Homogenizer, spray dryer used to make liposomal products

Objectives of the project : To prepare new product

Major Learning Outcomes : Proper industrial experience

Details of Papers/patents : No

Brief Description of working environment, expectations from the company : Can improve their professional behavior.

Academic courses relevant to the project : PMQC

PS-II Station : Bread Financial - Model Dev, Bengaluru

Faculty

Name: Anjani Srikanth Koka .

Student

Name: VATSAL CHOWDHARY(2021B4A11523G)

Student Write-up

PS-II Project Title: Model Development

Short Summary of work done during PS-II : During my internship at Bread Financial, I worked as a Model Development Intern with a primary focus on forecasting credit-card late fee revenue to support FP&A, budgeting, and risk-planning processes. I developed medium- to long-term forecasting models for different customer delinquency segments, including customers who were marginally late as well as those with more extended payment delays. To achieve this, I explored and benchmarked multiple time-series approaches such as Simple Moving Averages (SMA), Exponentially Weighted Moving Averages (EWMA), and Holt-Winters methods, and evaluated their performance using both in-sample and out-of-time error metrics, with a strong emphasis on stability and business interpretability. Beyond model development, I conducted detailed exploratory data analysis to understand payment behavior patterns and how they varied across credit-card products, which helped contextualize revenue trends and informed modeling assumptions. A key part of my work involved modernizing a legacy Excel-based forecasting tool by rebuilding it end-to-end in Python. This significantly improved reliability, enabled automated refresh cycles, and reduced manual effort during month-end closes. Throughout the project, I closely collaborated with finance and risk stakeholders to validate assumptions, align methodologies with business needs, and communicate insights in a clear and actionable manner.

Tool used (Development tools - H/w, S/w) : The project was executed on standard enterprise computing infrastructure using a personal workstation. Software tools included Databricks for data processing and model development, WinSQL for database querying, and Python for time-series modeling, automat

Objectives of the project : The primary objective of my project at Bread Financial was to improve the accuracy, stability, and business usability of credit-card late fee revenue forecasts to support FP&A, budgeting, and risk-planning decisions. This involved developing and benchmarking multiple time-series forecasting approaches across customer delinquency segments to identify models that delivered consistent out-of-time performance while remaining interpretable for business stakeholders. A parallel objective was to modernize and automate legacy Excel-based forecasting workflows by rebuilding them in Python, enabling scalable refresh cycles, reducing manual intervention, and improving the timeliness and reliability of management reporting.

Major Learning Outcomes : The major learning outcomes from this project were a strong practical understanding of how to translate statistical forecasting techniques into business-ready financial models. I learned how to evaluate and compare time-series models not only on accuracy

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment at Bread Financial was highly professional, collaborative, and analytically driven, with a strong emphasis on using data to support financial and risk-related decision-making. I worked closely with team members from model development, risk, and finance functions, which provided consistent exposure to cross-functional perspectives and real-world business constraints. The culture encouraged structured problem solving, clear documentation, and open communication, allowing me to ask questions, validate assumptions, and iteratively refine my work based on feedback.

The expectations from the company were clearly defined from the outset. I was expected to take ownership of assigned projects, develop models that were not only statistically sound but also stable and interpretable for business use, and adhere to timelines aligned with planning and reporting cycles. There was a strong focus on accuracy, reproducibility, and scalability, particularly when transitioning legacy processes into modern analytical workflows. Additionally, I was expected to communicate my findings effectively to non-technical stakeholders and ensure alignment with broader FP&A and risk objectives. Overall, the environment fostered accountability, learning, and professional rigor, while providing the support needed to deliver production-ready analytical solutions.

Academic courses relevant to the project : Time Series and Forecasting, CP course in first year, Mathematical Modelling

PS-II Station : Bread Financial - Model Validation, Bengaluru

Faculty

Name: Anjani Srikanth Koka .

Student

Name: P CHINMAYEE(2021B4A82327H)

Student Write-up

PS-II Project Title: Design and Implementation of an Automated Dashboard for Model Performance and Compliance Monitoring

Short Summary of work done during PS-II : During PS-II at Bread Financial, the project focused on automating the Monitoring & Maintenance (M&M) reporting process for financial models spanning capital, operational, financial, and credit risk domains. The existing manual process was time-consuming and error-prone. An automated data pipeline was designed using SQL, Python, and Databricks to extract, validate, and compute model performance metrics. These outputs were visualized through an interactive dashboard that provided real-time insights, historical trend analysis, threshold-based breach detection, and standardized reporting. The solution significantly improved efficiency, accuracy, scalability, and governance while ensuring compliance with internal and regulatory standards.

Tool used (Development tools - H/w, S/w) : Programming & Analytics: Python, SQL, SAS, R Data & ML Platforms: Databricks, Dataiku Reporting & Validation: Excel Governance & Compliance: Archer GRC Visualization: Automated dashboard framework

Objectives of the project : To design and implement an automated Monitoring & Maintenance (M&M) framework that replaces manual reporting for financial models by providing accurate, scalable, and compliance-ready performance monitoring through a centralized dashboard. The objective was to reduce manual effort, eliminate errors, embed governance checks, and enable real-time visibility into model health across multiple risk domains.

Major Learning Outcomes : Gained strong understanding of model validation principles and the model risk management lifecycle
Applied statistical tests (t-test, p-value, F-test, PSI, KS, Gini) in real-world validation scenarios
Learned how machine learning models are monitored an

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at Bread Financial during PS-II was highly supportive, professional, and conducive to learning. The team fostered a healthy culture where questions were encouraged, feedback was constructive, and learning was treated as a priority rather than a side activity. From the beginning, there was a clear emphasis on knowledge sharing, documentation, and best practices, which helped create confidence and clarity in day-to-day work.

Expectations from the company were well-defined and realistic. Interns were expected to be proactive, detail-oriented, and accountable for their deliverables, while also being open to feedback and continuous improvement. There was a strong focus on quality, accuracy, and compliance, reflecting the critical nature of work in financial services. At the same time, the team was understanding of the learning curve associated with complex domains like model risk management and validation.

Managers and mentors were approachable and consistently made time to explain concepts, review work, and provide guidance. Cross-functional collaboration was encouraged, allowing exposure to different perspectives from model owners, monitoring teams, and governance stakeholders. Overall, the environment balanced high professional standards with genuine support, enabling both technical growth and confidence building while contributing meaningfully to organizational goals.

Academic courses relevant to the project : NA

PS-II Station : Bread Financial - Risk Reporting, Bengaluru

Faculty

Name: Anjani Srikanth Koka .

Student

Name: SAMYA .(2022A4PS1142H)

Student Write-up

PS-II Project Title: Project 1: Client Scorecard dashboard. Project 2: Deep Risk Analysis into Victoria's Secret brand.

Short Summary of work done during PS-II : During my internship as a Risk Reporting Intern at Bread Financial, I worked on applying data analytics and risk management concepts to real-world business problems within a large consumer finance organization. The primary focus of my role was to support credit risk reporting and portfolio analysis by working with enterprise-level financial and customer data. A key part of my internship involved developing and enhancing a client scorecard dashboard that tracked critical performance and risk metrics. This required understanding business requirements, extracting and transforming data using SAS and SQL, and validating results through Excel to ensure accuracy and consistency. The dashboard was designed to provide stakeholders with clear, actionable insights into portfolio health and client performance, supporting data-driven decision-making. In addition, I conducted a detailed risk analysis on Victoria's Secret, where I examined credit exposure, performance trends, and risk drivers at a granular level. This project helped me develop a deeper understanding of consumer credit risk, segmentation, and trend analysis. The findings were integrated into automated reports using MicroStrategy, improving reporting efficiency and accessibility for business users. Throughout the internship, I collaborated with cross-functional teams, responded to stakeholder feedback, and learned to communicate complex analytical insights in a concise and business-focused manner. Overall, the internship strengthened my technical skills in SAS, SQL, Excel, and MicroStrategy, while also enhancing my understanding of risk reporting, data validation, and the role of analytics in financial decision-making.

Tool used (Development tools - H/w, S/w) : SAS, SQL, MicroStrategy, Excel, Dataiku.

Objectives of the project : Risk & Analytics

Major Learning Outcomes : During my internship, I gained hands-on experience in credit and portfolio risk analysis by working with real-world financial datasets and developing end-to-end risk reporting dashboards. I strengthened my technical skills in SAS and SQL for data extracti

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The work environment during my internship was professional, collaborative, and learning-oriented. I worked closely with experienced analysts and stakeholders who provided regular feedback and guidance, encouraging questions and knowledge sharing. The team emphasized accuracy, structured processes, and data-driven decision-making, which helped me adapt to corporate workflows while developing both technical and professional skills.

Academic courses relevant to the project : Fundamentals of Finance and Accounting, Financial Risk Analysis Management.

PS-II Station : C5i, Bengaluru

Faculty

Name: Shreyas Suresh Rao .

Student

Name: ASHUTOSH SWAIN(2022A7PS1223G)

Student Write-up

PS-II Project Title: RAG Based Semantic Search

Short Summary of work done during PS-II : During my PS-II at Course5 Intelligence (C5i), I worked on designing and implementing an enterprise-grade RAG-based semantic search system to support large-scale document discovery for the Pre-Sales team. The solution processed over 600GB of enterprise data and was deployed for more than 5,000 users. I was involved end-to-end, starting from LLM benchmarking and embedding selection to retrieval optimization and response generation. A key contribution was optimizing system cost by introducing a hybrid LLM architecture that leveraged both proprietary and open-source models, reducing monthly operational costs from approximately ₹200,000 to ₹17,500 while improving accuracy from 49% to 97%. I implemented vector search and keyword-based retrieval using FAISS and Pinecone, integrated reranking techniques, and improved response quality through advanced prompt engineering. I also collaborated with cross-functional teams including AI, IT, and business stakeholders to ensure secure access, scalability, and enterprise readiness of the solution. This experience provided practical exposure to deploying Generative AI systems in real production environments.

Tool used (Development tools - H/w, S/w) : Python, LangChain, LlamaIndex, Hugging Face, OpenAI API, Azure AI Studio, FAISS, Pinecone, Flask, FastAPI, Streamlit, Docker, Git, Pandas, NumPy, Scikit-learn, TensorFlow, VS Code

Objectives of the project : To design and develop an enterprise-grade Retrieval-Augmented Generation (RAG) based semantic search system. To enable secure, scalable, and accurate document discovery across large volumes of unstructured enterprise data. To optimize LLM inference cost while maintaining high retrieval and response accuracy for real-world production usage.

Major Learning Outcomes : Gained hands-on experience in building and deploying production-grade RAG systems at enterprise scale.
Learned cost optimization strategies involving hybrid use of proprietary and open-source LLMs.
Developed deep understanding of embedding strategies, r

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment at Course5 Intelligence was highly collaborative and research-driven, with strong

emphasis on solving real-world enterprise problems using AI. I worked closely with experienced AI engineers, technical leads, and business stakeholders, which provided valuable exposure to enterprise decision-making and deployment workflows. The organization encouraged ownership, experimentation, and continuous learning, allowing me to independently drive key components of the project.

The expectations from the company included delivering scalable and reliable AI solutions, maintaining code quality, and optimizing systems for both performance and cost. Regular reviews, technical discussions, and feedback sessions helped in aligning development with business impact. Overall, the environment fostered professional growth, technical depth, and a strong understanding of how AI solutions are built and operated at scale.

Academic courses relevant to the project : Artificial Intelligence, Machine Learning, Natural Language Processing, Data Science, Data Structures and Algorithms, Operating Systems, Database Systems

PS-II Station : Cactus Partners, Gurgaon

Faculty

Name: Uma Nagarajan .

Student

Name: AMAL VIJAY PACHAKIL(2021B3AA2154G)

Student Write-up

PS-II Project Title: VC Intern

Short Summary of work done during PS-II : During my PS-II at Cactus Partners as a VC Intern, I worked closely with the investment and portfolio teams to support various stages of the venture capital lifecycle. My responsibilities included conducting market and sector research, analyzing startup business models, and evaluating financial metrics such as revenue growth, unit economics, and scalability potential. I assisted in preparing investment memos and comparative analyses for potential deals, helping the team assess risks and opportunities. Additionally, I contributed to portfolio monitoring by tracking key performance indicators of existing investments and preparing periodic updates. The role required synthesizing large amounts of qualitative and quantitative information into concise insights for internal discussions. Through this experience, I gained practical exposure to how early-stage investment decisions are made and how VC firms balance data-driven analysis with strategic judgment.

Tool used (Development tools - H/w, S/w) : Microsoft Excel, Google Sheets, PowerPoint, Online Market Research Platforms, Financial Databases

Objectives of the project : The primary objective of the PS-II project was to gain hands-on exposure to the venture capital ecosystem by supporting investment research, startup evaluation, and portfolio analysis. The project aimed to develop analytical rigor in assessing early-stage startups, understanding market dynamics, business models, and financial performance, while also learning how investment theses are formed and validated in a VC firm.

Major Learning Outcomes : 1. Developed a structured approach to evaluating startups across sectors
2. Improved financial and qualitative analysis skills
3.Gained exposure to VC deal flow and investment decision-making
4.Learned to synthesize insights into clear investor-ready outp

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Cactus Partners provided a professional, fast-paced, and intellectually stimulating working environment. The culture emphasized ownership, independent thinking, and attention to detail. Interns were expected to be proactive, meet tight deadlines, and present well-reasoned insights supported by data. The team encouraged open discussions, critical questioning, and continuous learning.

Exposure to real investment scenarios helped bridge the gap between academic knowledge and practical application.

Academic courses relevant to the project : BAAV , Finman , FOFA , and other Msc. economics courses

PS-II Station : Carbon Reduction Capital, LLC , , Mumbai

Faculty

Name: Uma Nagarajan .

Student

Name: TANMAY SHARMA .(2021B3A72966H)

Student Write-up

PS-II Project Title: Renewable Project Finance

Short Summary of work done during PS-II : Financial modelling

Tool used (Development tools - H/w, S/w) : Microsoft suite

Objectives of the project : Financial Modelling in Project Finance

Major Learning Outcomes : Financial Modelling

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Great team

Academic courses relevant to the project : Finance courses

PS-II Station : CIRT- CENTRAL INSTITUTE OF ROAD TRANSPORT, , Pune

Faculty

Name: Samata Satish Mujumdar .

Student

Name: SHIVAM VIJ(2022A3PS1213P)

Student Write-up

PS-II Project Title: Lifecycle cost analysis and fleet replacement optimization in STUs

Short Summary of work done during PS-II : Developed a fleet replacement model which would take the data of a particular fleet in inputs and determine a proper replacement schedule according to one's requirements

Tool used (Development tools - H/w, S/w) : Python, excel, word, VS Code, anaconda

Objectives of the project : To determine an optimal model for fleet replacement for state transport undertakings which would save them money

Major Learning Outcomes : Learnt coding, new concepts of finance

Details of Papers/patents : Submitted but may not be eligible due to lack of input data with the STUs. I had to present it with sample data

Brief Description of working environment, expectations from the company : Fine working environment. Not a ton of expectations

Academic courses relevant to the project : FundaFin, FinMan, BAV, SAPM

Name: UTSAV BHARDWAJ .(2022A4PS1047H)

Student Write-up

PS-II Project Title: Hydrogen fuel cell and prosthetic hand

Short Summary of work done during PS-II : During my PS-II, I worked across fuel cell research, heavy-vehicle retrofit studies, and mechanical design projects. At CIRT, I focused on understanding how a fuel cell actually operates inside a vehicle. I studied the basic electrochemical process where hydrogen reacts with oxygen, the function of catalysts in speeding up the reaction, and how the right membrane is selected to allow efficient proton exchange. I also explored what makes a fuel cell suitable for automotive use, including factors like power output, durability, and ease of integration with existing vehicle systems. Along with this theoretical understanding, I worked on optimizing fuel cell configurations by reviewing system layouts and identifying ways to improve energy efficiency. I also researched retrofit technologies for heavy-duty vehicles, going through recent studies on converting diesel trucks and buses to hydrogen or electric power. This helped me understand both the engineering challenges and the practical considerations involved in real-world retrofitting. On the mechanical design side, I gained hands-on experience with material selection, design refinement, and mechanical improvement. I worked on modelling finger and palm structures for a bionic hand using SolidWorks, studying linkage mechanisms and ergonomic movement to make the design function realistically. I used MATLAB simulations to analyze system behaviour and support my design decisions. Throughout the internship, I read multiple research papers on fuel cells, membrane technologies, vehicle retrofits,

and prosthetic mechanisms, which helped me strengthen my technical understanding and apply new ideas to my work. Overall, PS-II gave me a valuable blend of research exposure, design experience, and real engineering problem-solving.

Tool used (Development tools - H/w, S/w) : Hardware (H/W)- Drilling machine, Tapping and dies, Dremel machine, Assembly toolkit& Software (S/W): 1) SolidWorks (3D modelling and assembly design), MATLAB (simulation and analysis), MS Excel and Word (data analysis and documentation)

Objectives of the project : Optimization of hydrogen fuel cell and assembly of prosthetic hand

Major Learning Outcomes : I strengthened my understanding of material selection, design improvement, and optimization, while also gaining practical experience in MATLAB simulations to support mechanical analysis.
I also learned the basics of prosthetic and bionic hand mechanism d

Details of Papers/patents : 1) Fuel Cell Systems and BOP Optimization
Papers on fuel cell working principle, catalyst function, membrane selection, and vehicle integration.
Focus on improving energy efficiency, durability, and system performance.
2) Heavy Vehicle Retrofit Technol

Brief Description of working environment, expectations from the company : During my PS-II, I experienced two very different working environments. At CIRT, the atmosphere was structured, supportive, and well-organized. The team encouraged learning, discussions, and technical exploration, which made it easier to clarify doubts and work on fuel cell systems, BOP components, and heavy-vehicle retrofit research. The availability of seniors and subject experts created a positive environment for guidance and steady skill development.
In contrast, my experience at Exobot Dynamics was more challenging. The mechanical team was extremely small, and there were no senior engineers available for regular technical support. This limited the pace of learning and often required me to work independently without direct mentorship. Although the environment was tough, it taught me how to adapt, work independently, and find solutions on my own when support was limited.

Academic courses relevant to the project : 1) Computer-Aided Design (CAD) – SolidWorks
2) Manufacturing Processes
3) Thermodynamics & Heat Transfer

Name: RUTVIK YOGESH HATE(2022AAPS0011G)

Student Write-up

PS-II Project Title: Cybersecurity Intern

Short Summary of work done during PS-II : Helped organise India's first SUMS workshop in collaboration with CIRT and AutoSifu. Helped create an open source governance risk and compliance tool.

Tool used (Development tools - H/w, S/w) : Python, Docker, GitHub, Gitbash, VSCode, Dbeaver, Canva

Objectives of the project : Create a governance risk compliance tool

Major Learning Outcomes : Front end

Details of Papers/patents : na

Brief Description of working environment, expectations from the company : Laissez-faire company culture, you have to be active in asking for work and getting it verified/approaching the relevant authorities for permission/feedback. No spoonfeeding here

Academic courses relevant to the project : na

PS-II Station : Cisco - , Gurgaon

Faculty

Name: Harish Kumar Aggarwal .

Student

Name: AVIKSHIT JHA(2022A3PS0479P)

Student Write-up

PS-II Project Title: Agentic AI Driven Network Troubleshooting

Short Summary of work done during PS-II : Built ai agents for network fault detection and remediation using Python and other GenAI tools listed above.

Tool used (Development tools - H/w, S/w) : Python, Langgraph, Kafka, Qdrant, MCP, Docker, Kubernetes

Objectives of the project : Building usecase specific ai agent software

Major Learning Outcomes : Learnt GenAI tools like langchain, langgraph, MCP and rag

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Working environment is quite flexible. However, we had daily standups so you need to have some progress everyday.

Academic courses relevant to the project : Object Oriented Programming, Computer Programming, Computer Networks, Generative AI, Artificial Intelligence

PS-II Station : CNH Industrial (India) Pvt. Ltd, Noida

Faculty

Name: Srinivas Kota .

Student

Name: ASHISH RANJAN(2021B5A42135G)

Student Write-up

PS-II Project Title: DevOps

Short Summary of work done during PS-II : During my Practice School-II internship at CNH Industrial ITC, I worked as a DevOps and Platform Engineering intern, focusing on building a unified SQL Server observability stack using Prometheus, Grafana, and SQL Exporter, with custom metrics, dashboards, and alerts to improve performance visibility and incident response. I also contributed to Kubernetes platform engineering by deploying and managing the Backstage Developer Portal on Azure Kubernetes Service (AKS) using Helm, PostgreSQL, secrets/configuration management, and Azure DevOps CI/CD pipelines, enabling centralized service catalogs and documentation. In addition, I worked on an AI-powered RAG Knowledge Assistant to support semantic search and intelligent retrieval of internal engineering documentation, gaining hands-on experience in cloud-native DevOps, observability engineering, and applied AI systems.

Tool used (Development tools - H/w, S/w) : K8s, Azure DevOps, Sql, DBMS

Objectives of the project : migrations

Major Learning Outcomes : K8s

Details of Papers/patents : No research papers or patents were published during the Practice School-II internship. However, the work involved applied engineering contributions in DevOps, observability, Kubernetes platform engineering, and AI-assisted knowledge systems, focusing on p

Brief Description of working environment, expectations from the company : All good, and only 4 day working and 4 WFH

Academic courses relevant to the project : Not any

Name: MANYA AGARWAL .(2022A4PS1668H)

Student Write-up

PS-II Project Title: Meeting room booking powerapps application

Short Summary of work done during PS-II : Created a new app from scratch using powerapps automated it using powerautomate so it could be interactive with other applications such as teams and outlook learned basic knowledge of ai tools and SharePoint was majorly used for saving data

Tool used (Development tools - H/w, S/w) : Microsoft Powerapps Power automate SharePoint copilot

Objectives of the project : Creating a new visually appealing and interactive application using powerapps for seamless meeting rooms bookings

Major Learning Outcomes : Learned about company functionality real life corporate experience interacted with senior managers and had an in hand knowledge of how deadlines are

Worked on some software tools such as microsoft powerapps and powerautomate
SharePoint and copilot usage

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The environment was very professional yet comfortable we were assigned projects according to our interests

Academic courses relevant to the project : Dsa and dbms

PS-II Station : CommerceIQ, Bengaluru

Faculty

Name: Mohammad Saleem Bagewadi .

Student

Name: AKASH THONSE SHETTY(2021A7PS1457G)

Student Write-up

PS-II Project Title: Machine Learning Intern

Short Summary of work done during PS-II : During my internship, I worked on AI systems, developer tooling, and ecommerce analytics, with a strong focus on evaluation, observability, and agent-based workflows. A major part of my work involved designing and implementing LLM evaluation pipelines, including batch and real-time evaluations. I explored strategies such as sampling a fixed percentage of production queries, or continuous quality monitoring, defining rule-

based and model-based checks, and integrating these evaluations into FastAPI services and Langsmith. I contributed to building agent instructions and reasoning frameworks for research agents, especially around ecommerce metrics like Share of Voice. This included root-cause analysis logic across dimensions such as product availability, pricing competitiveness, content quality, and sentiment, and translating raw signals into actionable insights and alerts. Integrated Databricks Genie as a tool in Langgraph DeepResearch Agent which converts NLP to SQL queries. On the tooling side, I explored observability integrations (e.g., Groundcover and OpenTelemetry) to enable production monitoring for AI services, and assessed how these could be wired into existing systems with minimal setup. I also evaluated and compared developer productivity tools like Cursor and Goose, focusing on agentic coding, MCP-based automation, CI/CD use cases, and scheduled workflows. I created demo narratives, identified gaps in demos, and articulated the strategic value of these tools to engineering teams. Overall, my internship focused on making AI systems more reliable, observable, and actionable in a real-world production environment.

Tool used (Development tools - H/w, S/w) : Hardware- MacBook (macOS), Software / Development Tools - Python FastAPI Git & GitHub (Enterprise) Cursor (AI-powered IDE) Goose (agent-based automation, MCP) OpenTelemetry (OTEL) Groundcover (observability & monitoring) LangSmith (LLM evaluation

Objectives of the project : Observability and Evaluation of AI agents, Agentic Workflows

Major Learning Outcomes : Gained hands-on experience designing LLM evaluation frameworks for both batch and real-time production systems using Langsmith
Learned how to implement sampling-based quality monitoring and define actionable evaluation metrics.
Developed skills in buildin

Details of Papers/patents : No research papers or patents were published or filed during the internship

Brief Description of working environment, expectations from the company : The working environment during my internship was really comfortable and positive. The company followed a

hybrid setup, where we worked from home 3 days and came to the office twice a week. Lunch was provided on office days.

The people were one of the best parts of the internship. Everyone was friendly, approachable, and genuinely smart, which made it easy to ask questions and learn. No one made you feel out of place for not knowing something, and discussions were open and helpful. It felt like a space where learning was encouraged rather than rushed.

The managers and mentors were also very supportive. They weren't bossy or micromanaging, and they gave enough time to understand tasks properly. I was given meaningful work and enough freedom to explore ideas, make mistakes, and improve. There were regular check-ins, but they felt more like guidance than pressure.

Overall, the environment was flexible, respectful, and motivating. The combination of work-from-home flexibility, supportive leadership, and a friendly team made the internship enjoyable and helped me grow both technically and professionally.

Academic courses relevant to the project : DBMS, OS, OOPS, CN

Name: VISHESH KUMAR KASLIWAL(2021B3A71933G)

Student Write-up

PS-II Project Title: Data Science Intern

Short Summary of work done during PS-II : Developed machine learning models to estimate online and in-store sales performance of competitors, providing actionable insights for strategic decision-making. • Fine-tuned Google's Flan-T5 model to enhance product attribute extraction and generate optimized title recommendations for Amazon listings, improving accuracy and relevance.

Tool used (Development tools - H/w, S/w) : AWS, Machine Learning , Python

Objectives of the project : Finetuning LLMs

Major Learning Outcomes : Machine Learning, Neural Networks

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Good environment, good work

Academic courses relevant to the project : Machine Learning, Neural Networks

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Name: SRIYA GUDIPATI .(2021B4A73151H)

Student Write-up

PS-II Project Title: ENTERPRISE AGENTIC WORKFLOW AUTOMATION & LLM ENGINEERING

Short Summary of work done during PS-II : This project, titled Enterprise Workflow Automation and LLM Engineering, focuses on developing intelligent AI agents designed to streamline analytical and operational workflows for e-commerce enterprises. By leveraging the capabilities of large language models (LLMs) and frameworks such as LangGraph, the system automates key functions including report generation, performance analysis, and goal forecasting. The objective is to create an adaptive, modular agent infrastructure capable of understanding business data, generating insights, and recommending data-driven actions, thereby reducing manual intervention and enhancing decision-making efficiency across enterprise operations. As part of the engineering team, my primary contribution currently lies in building and refining evaluation frameworks that assess the performance, reliability, and coherence of these AI agents. This involves developing evaluators for individual components as well as end-to-end agent workflows, ensuring the system maintains consistency, accuracy, and contextual understanding throughout its operations. The project integrates advanced Python-based tooling and structured agent

orchestration via LangGraph, forming a robust foundation for scalable and interpretable enterprise automation powered by LLMs.

Tool used (Development tools - H/w, S/w) : LangGraph, LangSmith, LangChain, VS Code, Git, Cursor, DataBricks

Objectives of the project : To automate Agentic workflows via LLM engineering and develop new, intelligent LLM based projects to suit the company and client requirements.

Major Learning Outcomes : I learnt how to work with LLMs, what AI agents are and how to work with them.

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The work culture is very comfortable. 5 day a week work-weeks but only 2-3 days are at office, rest are at home. Everyone is very friendly and supportive. The role is also very niche, offering exposure into a new and upcoming filed that not many have experienced. It's an opportunity to learn lots of new things about LLMs. and Agentic AI, to experiment with new ideas and solution while still in a fun, stress-free environment

Academic courses relevant to the project : AI, Machine Learning, NLP, FODS

PS-II Station : CSIR - Central Road Research Institute (CRRI) - DATA ANALYTICS, New Delhi

Faculty

Name: Mahesh Kumar Hamirwasia .

Student

Name: ISHITV SHARMA(2021B5A11521P)

Student Write-up

PS-II Project Title: Design of Floating Chambers

Short Summary of work done during PS-II : I developed a data-driven framework to inform the design of earthquake-resistant infrastructure. I implemented a robust Python pipeline to process extensive USGS seismic data and tested several Machine Learning architectures, including Linear Regression, Support Vector Machines, and Random Forest ensembles, to model magnitude patterns. Upon discovering the limitations of deterministic regression for seismic events, I engineered a modular simulation system. This involved partitioning the subcontinent into a spatial grid to calculate localized risk indices and using Poisson-driven Monte-Carlo sampling to generate synthetic catalogs for the 2026–2036 horizon. This analysis provides the critical frequency and energy-release spectra needed to optimize the damping and stiffness of floating-chamber isolators.

Tool used (Development tools - H/w, S/w) : Development was conducted using Python, specifically the pandas and NumPy libraries for data manipulation, scikit-learn for Machine Learning implementations, and Matplotlib for visual analytics.

Objectives of the project : The project focused on utilizing data science to optimize the design parameters of floating-chamber vibration isolators. The main objective was to apply predictive modeling and statistical analysis to global seismic catalogs to derive the precise frequency and magnitude distributions required for high-precision engineering isolation.

Major Learning Outcomes : I gained significant experience in the end-to-end data science pipeline, from cleaning skewed geophysical datasets to evaluating supervised learning models like SVR and Random Forest. I learned to transition from deterministic modeling to probabilistic Mo

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The environment was professional and offered a unique opportunity to apply data science skills to complex, real-world research problems. While the station's core focus was structural, I successfully demonstrated how advanced analytical modeling and stochastic simulations can solve traditional engineering challenges. This experience highlighted the value of interdisciplinary adaptability, allowing me to contribute specialized data science expertise to a broader engineering context.

Academic courses relevant to the project : Machine Learning for Chemical Engineers

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Name: VIJAY KUMAR UDHANI(2021B5AB1697P)

Student Write-up

PS-II Project Title: Design of Earthquake-Resistant Vibration Control in Buildings

Short Summary of work done during PS-II : During the PS-II internship at CSIR-CRRI, the project focused on the design and analysis of vibration control techniques for earthquake-resistant buildings. A comprehensive literature review was conducted on passive, active, semi-active, and hybrid seismic control systems, including base isolation, energy dissipation devices, tuned mass dampers, and emerging metamaterial-based solutions. Quantitative performance comparisons were carried out using published experimental data, case studies from major earthquakes, and standardized evaluation metrics such as acceleration reduction, inter-story drift control, and energy dissipation capacity. The study demonstrated that advanced vibration control systems can achieve 45–80% improvement in seismic response compared to conventional fixed-base structures. In addition, machine learning techniques were explored to analyze seismic catalog data and assess the feasibility of earthquake magnitude prediction using event-level metadata. Multiple models were implemented and evaluated, highlighting the limitations of purely data-driven approaches without physical parameters. The project concluded with recommendations for

hybrid control strategies, intelligent monitoring systems, and future research directions aimed at improving seismic resilience and sustainability of building infrastructure.

Tool used (Development tools - H/w, S/w) : Software: MATLAB, Python (Scikit-learn), MS Excel, PowerPoint, LaTeX Databases & Resources: IEEE, Springer, Scopus, Web of Science, seismic catalog datasets Hardware: Standard workstation systems at CSIR-CRRI

Objectives of the project : To study and analyze advanced vibration control techniques used in earthquake-resistant buildings. To evaluate the performance of base isolation, energy dissipation devices, tuned mass dampers, and hybrid control systems. To compare passive, semi-active, active, and hybrid vibration control strategies using quantitative performance metrics. To investigate the role of modern materials, smart systems, and machine learning techniques in seismic response mitigation, To assess the economic feasibility and life-cycle benefits of vibration control systems in real-world buildings.

Major Learning Outcomes : Developed a strong understanding of earthquake-resistant structural design principles.
Gained practical knowledge of vibration control devices such as base isolators, viscous dampers, and tuned mass dampers.
Learned to critically analyze and compare sei

Details of Papers/patents : No patents filed during the PS-II tenure.
Extensive review and analysis of peer-reviewed international journal papers and conference proceedings related to vibration control and earthquake engineering.

Brief Description of working environment, expectations from the company : The working environment at CSIR-CRRI was highly research-oriented and professionally structured, providing exposure to real-world infrastructure and seismic engineering challenges. The institute emphasized rigorous analysis, technical accuracy, and independent problem-solving while maintaining strong mentorship support from domain experts.
Expectations from the organization included conducting in-depth literature reviews, applying analytical reasoning to engineering problems, and delivering well-documented technical outputs within defined timelines. Regular discussions with supervisors helped refine technical understanding and align research objectives with practical engineering applications.

The collaborative atmosphere encouraged interdisciplinary learning, critical thinking, and adherence to research ethics. Access to high-quality technical resources and databases enabled comprehensive exploration of global best practices in earthquake-resistant design. Overall, the PS-II experience provided valuable exposure to applied research, professional documentation standards, and the integration of academic knowledge with national-level R&D objectives.

Academic courses relevant to the project : Structural Dynamics
Vibrations
Earthquake Engineering
Solid Mechanics
Computational Methods
Probability and Statistics
Machine Learning / Data Analysis

Name: ATUL AJAY SINGH(2022A2PS1715P)

Student Write-up

PS-II Project Title: Study of Freight characteristics in the city of Ajmer

Short Summary of work done during PS-II : Conducted field surveys to collect data on freight vehicles, commodity types, trip patterns, and loading–unloading activities across major roads and markets in Ajmer city. Assisted in traffic volume counts and freight classification surveys at key locations. Compiled and analyzed survey data to identify freight movement trends, peak hours, and congestion-prone corridors. Prepared maps, tables, and charts to present freight characteristics and study findings. Supported the team in report writing and documentation of the urban freight characteristics study.

Tool used (Development tools - H/w, S/w) : Excel

Objectives of the project : To study the freight characteristics of ajmer and give suggestions to mitigate the negative impact associated with it.

Major Learning Outcomes : Gained an understanding of urban freight characteristics in Ajmer, including types of goods, vehicle composition, delivery patterns, and peak movement hours. Learned to collect and analyze primary data through traffic surveys, stakeholder interactions, an

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment at CSIR–Central Road Research Institute (CRRI), New Delhi, was highly professional, research-oriented, and collaborative. As an intern, I was exposed to a structured research culture with guidance from experienced scientists and technical staff. The institute provided access to well-equipped laboratories, field studies, and technical resources, fostering practical learning and skill development. Regular discussions, reviews, and interdisciplinary interaction created a supportive environment that encouraged learning, innovation, and professional growth over the six-month internship period.

Academic courses relevant to the project : Highway engineering

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Name: AGRIM KUMAR(2022A4PS0907G)

Student Write-up

PS-II Project Title: A Proactive Sensing Framework for Pedestrian Risk Mitigation Using ADAS Telemetry

Short Summary of work done during PS-II : Conducted field surveys to collect data on freight vehicles, commodity types, trip patterns, and loading–unloading activities across major roads and markets in Ajmer city. Assisted in traffic volume counts and freight classification surveys at key locations. Compiled and analyzed survey data to identify freight movement trends, peak hours,

and congestion-prone corridors. Prepared maps, tables, and charts to present freight characteristics and study findings. Supported the team in report writing and documentation of the urban freight characteristics study.

Tool used (Development tools - H/w, S/w) : Python

Objectives of the project : ADAS

Major Learning Outcomes : Data Analysis

Details of Papers/patents : Cannot be disclosed

Brief Description of working environment, expectations from the company : The working environment at CSIR–Central Road Research Institute (CRRI), New Delhi, was highly professional, research-oriented, and collaborative. As an intern, I was exposed to a structured research culture with guidance from experienced scientists and technical staff. The institute provided access to well-equipped laboratories, field studies, and technical resources, fostering practical learning and skill development. Regular discussions, reviews, and interdisciplinary interaction created a supportive environment that encouraged learning, innovation, and professional growth over the six-month internship period.

Academic courses relevant to the project : Data analysis

Name: PARTH KASHYAP(2022A8PS0133G)

Student Write-up

PS-II Project Title: Development of Administrative Portal for ILT Division, CRRI

Short Summary of work done during PS-II : Developed for the ILT division, the portal has been designed to streamline internal administrative processes, supported by improved data tracking

and enhanced operational efficiency. Equipped with Staff Management, Publications, RTI, ISO, and Training modules, the system has been structured to reduce manual effort, strengthen coordination, and enable informed decision-making across the division.

Tool used (Development tools - H/w, S/w) : Html, CSS, Javascript, React js, Node js, Express, Mongo DB, PDFkit, Multer, Render

Objectives of the project : Developing a portal for ILT division for internal administrative processes, keeping track of data and improving efficiency. Staff Management, Publications, RTI, ISO and Training modules were required.

Major Learning Outcomes : Full Stack Web Development, React js, Node js, Express, Mongo DB, Render for deployment

Details of Papers/patents : Developed a usable and scalable product for CRRI

Brief Description of working environment, expectations from the company : The working environment was relaxed and chill, creating a comfortable space to focus and collaborate. Expectations for each task were clearly presented on a weekly basis, helping maintain clarity and direction. Overall, the company offered a great work–life balance, making the experience both productive and enjoyable.

Academic courses relevant to the project : Computer Programming, Technical Report Writing (most of the project is javascript based web development and there aren't any courses related to that in Bits that I know of)

Name: ADITYA NEMA(2022A8PS0540P)

Student Write-up

PS-II Project Title: Stock price prediction and web app

Short Summary of work done during PS-II : Created an algorithm using k-NN for price prediction of stock for next day. Further created a website to access the algorithm and keep track of top gainers and losers in market for a given day

Tool used (Development tools - H/w, S/w) : Python

Objectives of the project : To create a stock price prediction model using k-NN and creating a web app for same purpose

Major Learning Outcomes : Python

Details of Papers/patents : Na

Brief Description of working environment, expectations from the company : Na

Academic courses relevant to the project : Na

PS-II Station : CSIR - Central Road Research Institute (CRRI) - FINANCE, New Delhi

Faculty

Name: Uma Nagarajan .

Student

Name: BONTHALA YASHWANTH KUMAR(2022B3PS2051H)

Student Write-up

PS-II Project Title: Sustainability Insights Through Data Analysis

Short Summary of work done during PS-II : The work involved understanding the institutional financial structure of CRRI and examining how funds are organised, allocated, and utilised across its different divisions. The workflow began with a detailed explanation of the funding framework, including the categorisation of recurring and non-recurring components and the distribution of resources among divisions based on operational requirements. Following this structural overview, the next stage focused on studying the internal revenue model, with particular emphasis on external earnings generated by CRRI. The objective was to analyse whether these earnings could sustain institutional activities independent of CSIR support. Data relating to divisional expenditure, internal receipts, and resource utilisation patterns was consolidated and organised for comparison. The workflow continued with analytical evaluation, where trends, variations, and sustainability indicators were examined to understand long-term viability. Comparative assessments were carried out to determine how external earnings contribute to overall stability and which divisions show stronger or weaker dependence patterns. The final stage of work involved summarising key insights, identifying areas requiring further analysis, and preparing the data for review and discussion with the guide. The process maintained a structured approach, moving from system understanding to data organisation, analysis, and interpretation.

Tool used (Development tools - H/w, S/w) : Microsoft Excel

Objectives of the project : To utilise analytical techniques to assess project progress and sustainability.

Major Learning Outcomes : Learned how to interpret data to assess project sustainability and performance,
Improved skills in comparing project metrics to identify trends and variations,
Improved ability to summarize findings in a clear and structured format.

Details of Papers/patents : There are no papers all the data is confidential and provided by the company itself.

Brief Description of working environment, expectations from the company : The working environment at the organization was structured, supportive, and easy to learn in. Daily tasks

included reporting progress to my guide, discussing completed tasks, and getting direction for upcoming activities. Regular meetings reviewed our ongoing analysis, clarified doubts, and kept the workflow organized. This atmosphere encouraged open communication and steady progress, making it simple to contribute effectively. The organization expected the completion of assigned analysis within the set timelines. Since it is a government institution, the expectations were clear and direct, without the pressure often found in private-sector companies. The focus was on thoroughness, accuracy, and maintaining work quality rather than hitting aggressive targets. Overall, the environment supported professional growth, and the expectations were reasonable. This allowed me to work systematically and make meaningful contributions to the tasks assigned

Academic courses relevant to the project : Fundamentals of Finance & Accounting, Financial Management, Business Analysis & Valuation.

PS-II Station : CSIR - Central Road Research Institute (CRRI) - IT, New Delhi

Faculty

Name: Mahesh Kumar Hamirwasia .

Student

Name: ABHISHEK BISHT(2021B2A12485P)

Student Write-up

PS-II Project Title: CRRI RAG Chatbot

Short Summary of work done during PS-II : The CRRI Chatbot is an AI-powered conversational assistant designed for the Central Road Research Institute (CRRI) Delhi. Built using RAG (Retrieval Augmented Generation) architecture, it provides intelligent responses to queries about

CRRI's staff, research equipment, divisions, tenders, and general institutional information. Key Technologies: Backend: FastAPI, LangChain, Google Gemini 2.5 Flash LLM, Pinecone vector database, Sentence Transformers for embeddings Frontend: React 19 with Vite, featuring a modern, responsive UI with rich Markdown rendering Data Pipeline: Automated Scrapy-based web scraping, data processing, embedding generation, and vector database updates Core Features: Natural language Q&A about CRRI Delhi Staff directory with contact information and divisional affiliations Equipment database for research facilities Active tender tracking with automatic expiration filtering Conversation context memory for follow-up queries Premium UI with interactive cards and formatted outputs Infrastructure: The project includes production-grade automation with scheduled data refresh pipelines, comprehensive Windows/Linux compatibility, Docker deployment support, and is hosted on Hugging Face Spaces. All data is ethically sourced from CRRI's official website, ensuring accuracy while maintaining privacy standards.

Tool used (Development tools - H/w, S/w) : VS code, python , Langchain ,docker, Gemini flash API, react , Javascript

Objectives of the project : deliver a fullstack application of chatbot that use RAG based approach to answer queries

Major Learning Outcomes : learnt how to build a Gen AI app

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The Central Road Research Institute provided a structured research environment with access to specialized laboratories and computational resources. The workspace was primarily office-based with standard working hours, though flexibility was offered for project deadlines. The IT infrastructure was adequate, with stable internet connectivity and access to necessary software tools. Communication channels were formal, typically through email and scheduled meetings with supervisors.

The institute follows traditional government organization protocols, which means processes can be methodical and documentation-heavy. Colleagues were generally helpful when approached, though there was an initial learning curve in understanding the hierarchical structure. The pace of

work varied - some days were intensive during project milestones, while others allowed for independent study and research.

Company Expectations:

CRRI expected interns to maintain professional conduct and adhere to institutional guidelines. Punctuality and regular reporting were emphasized. The primary expectation was delivering the assigned project with proper documentation. They valued initiative in problem-solving but preferred consultation before making significant technical decisions.

Regular progress updates were required, typically weekly or bi-weekly depending on the supervisor. The institute expected familiarity with relevant technologies and willingness to learn their specific workflows. While independent work was encouraged, staying aligned with the project scope was important.

Overall, CRRI provided a learning-oriented environment suitable for gaining exposure to research methodologies and developing technical skills, though it required adaptability to the formal organizational culture typical of government research institutions.

Academic courses relevant to the project : None

Name: RUSHIL JOSHI(2022A1PS1342P)

Student Write-up

PS-II Project Title: Road Accident data analysis of city of udaipur

Short Summary of work done during PS-II : Conducted field surveys to collect data on freight vehicles, commodity types, trip patterns, and loading–unloading activities across major roads and markets in Ajmer city. Assisted in traffic volume counts and freight classification surveys at key locations. Compiled and analyzed survey data to identify freight movement trends, peak hours, and congestion-prone corridors. Prepared maps, tables, and charts to present freight characteristics and study findings. Supported the team in report writing and documentation of the urban freight characteristics study.

Tool used (Development tools - H/w, S/w) : Python

Objectives of the project : Crri report

Major Learning Outcomes : Data analysis

Details of Papers/patents : Cannot be disclosed

Brief Description of working environment, expectations from the company : The working environment at CSIR–Central Road Research Institute (CRRI), New Delhi, was highly professional, research-oriented, and collaborative. As an intern, I was exposed to a structured research culture with guidance from experienced scientists and technical staff. The institute provided access to well-equipped laboratories, field studies, and technical resources, fostering practical learning and skill development. Regular discussions, reviews, and interdisciplinary interaction created a supportive environment that encouraged learning, innovation, and professional growth over the six-month internship period.

Academic courses relevant to the project : Machine learning for Chemical engineers

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Name: ARYAN GOYAL(2022A7PS1526G)

Student Write-up

PS-II Project Title: A real time text editor

Short Summary of work done during PS-II : Build a real time text editor

Tool used (Development tools - H/w, S/w) : React.js

Objectives of the project : People can connect and can make the file really fast

Major Learning Outcomes : Learned about next.js

Details of Papers/patents : No paper

Brief Description of working environment, expectations from the company : A real time text editor where we can Collab and user can work on a single file simultaneously

Academic courses relevant to the project : Not that much

PS-II Station : CSIR - Central Road Research Institute (CRRI)- INFRA, New Delhi

Faculty

Name: Mahesh Kumar Hamirwasia .

Student

Name: ABHAAS SRIVASTAVA(2022A2PS1663P)

Student Write-up

PS-II Project Title: Freight Characteristics of Udaipur City

Short Summary of work done during PS-II : My internship focused on analyzing Freight Characteristics of Traffic in Udaipur City. The initial phase involved extensive skill development, where I achieved proficiency in Advanced Excel, SQL, and Python (including advanced functions and data analysis libraries), supported by multiple professional certifications. I also began learning AI/ML models in preparation for advanced analysis. The core project work involved the successful execution of primary data collection through a field survey in Udaipur (Week 7). Upon receiving the survey dataset (Week 19), I immediately transitioned into the analysis phase. Under the

guidance of a senior, I cleaned and analyzed two distinct data files (inner city and outer cordon) using advanced Excel functions like Pivot Tables and VLOOKUP. I replicated the analysis process using a pre-established template (Bharatpur data) for consistency and efficiency. Finally, I compiled all research, analysis, and visualizations, demonstrating my ability to synthesize complex findings into professional documents. The entire project culminated in the finalization and submission of comprehensive reports to both CRRI and BITS, along with the preparation of the end-term seminar presentation.

Tool used (Development tools - H/w, S/w) : Microsoft Excel , Microsoft Word , Powerpoint presentation

Objectives of the project : To characterize freight traffic (commodities, vehicles, trips) in Udaipur, map its supply chain and traffic impact, and provide data-driven recommendations for urban freight management policy.

Major Learning Outcomes : I achieved strong proficiency in core data analysis tools, including Advanced Excel, SQL, and Python (completing multiple Coursera/Meta certifications), while proactively starting to learn AI/ML models. I successfully executed the end-to-end project lifec

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment at CRRI (Central Road Research Institute) was structured and research-focused, providing a professional setting dedicated to solving real-world transportation challenges. It operated as a specialized research hub, requiring interns to be self-driven in their learning and execution. The environment fostered independence, especially during initial skill acquisition (Python, SQL, Excel), but also included essential guidance, notably the weekly supervision and the close mentorship received from the assigned senior Master's student during the critical data analysis phase. This structure encouraged both foundational knowledge building and practical application.

The primary expectations from the company centered on delivering a robust, data-driven final project. Specifically, the institute expected:

Skill Acquisition: Proactive and successful completion of necessary technical training (Excel, Python, SQL) to handle the complex traffic datasets.

Diligent Execution: Meticulous execution of all project phases, including accurate fieldwork documentation, thorough data cleaning, and consistent analysis (e.g., replicating the analysis template).
Professional Output: The compilation of all research and findings into a high-quality, professional final report that adhered to the institute's standards, providing clear, actionable insights into the Freight Characteristics of Traffic in Udaipur City that could inform transport planning policy.
Time Management: Demonstrating responsibility by meeting deadlines (e.g., mid-sem and final report submissions) and utilizing time proactively during unexpected delays (e.g., learning AI/ML models while awaiting data).

Academic courses relevant to the project : N/A

Name: MEHAR DEVNANI(2022A2PS1675P)

Student Write-up

PS-II Project Title: Estimating the Travel Demand for Tourist in Udaipur City

Short Summary of work done during PS-II : This project presents an analysis of external travel behaviour in Udaipur using data from the Outer Cordon Survey conducted as part of the Comprehensive Mobility Plan (CMP) prepared by CSIR–Central Road Research Institute. The study aims to understand how regional, intercity, and tourism-driven travel contributes to overall mobility demand within the city. The Outer Cordon Survey served as the primary dataset, capturing information on trip origin–destination, travel distance, travel time, mode choice, vehicle occupancy, and trip frequency. Supporting insights were drawn from additional traffic surveys to strengthen the interpretation of results. Exploratory data analysis revealed that Udaipur experiences a significant share of long-distance and non-regular trips, reflecting its role as a major tourist destination and regional activity centre. The findings highlight the importance of accounting for external and tourism-related travel in urban mobility planning. This project also provided practical exposure to transport data analysis and survey methodologies, contributing to a deeper understanding of real-world transportation planning challenges.

Tool used (Development tools - H/w, S/w) : Excel, Powerpoint, Word

Objectives of the project : Estimating the Travel Demand for Tourist in Udaipur City

Major Learning Outcomes : Data Analysis, Travel Demand Estimation

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Good

Academic courses relevant to the project : NA

PS-II Station : CSIR - Central Road Research Institute (CRRI)- INFRA, New Delhi

Faculty

Name: Mahesh Kumar Hamirwasia .

Student

Name: HIMANSHU(2022A2PS1713P)

Student Write-up

PS-II Project Title: Vulnerability index

Short Summary of work done during PS-II : Worked in preparation of vulnerability index

Tool used (Development tools - H/w, S/w) : Excel, python, R

Objectives of the project : Research paper

Major Learning Outcomes : Machine learning, research work

Details of Papers/patents : Vulnerability index

Brief Description of working environment, expectations from the company : Work environment was good. Mentor was very helpful

Academic courses relevant to the project : Highway engineering

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Name: SPARSH MATHUR(2022A2PS1717P)

Student Write-up

PS-II Project Title: Traffic volume characteristics

Short Summary of work done during PS-II : Conducted field surveys to collect data on freight vehicles, commodity types, trip patterns, and loading–unloading activities across major roads and markets in Ajmer city. Assisted in traffic volume counts and freight classification surveys at key locations. Compiled and analyzed survey data to identify freight movement trends, peak hours, and congestion-prone corridors. Prepared maps, tables, and charts to present freight characteristics and study findings. Supported the team in report writing and documentation of the urban freight characteristics study.

Tool used (Development tools - H/w, S/w) : Python excel

Objectives of the project : Studying the traffic volume characteristics of Udaipur city

Major Learning Outcomes : Leared how the corporate works

Details of Papers/patents : Cannot be disclosed

Brief Description of working environment, expectations from the company : The working environment at CSIR–Central Road Research Institute (CRRI), New Delhi, was highly professional, research-oriented, and collaborative. As an intern, I was exposed to a structured research culture with guidance from experienced scientists and technical staff. The institute provided access to well-equipped laboratories, field studies, and technical resources, fostering practical learning and skill development. Regular discussions, reviews, and interdisciplinary interaction created a supportive environment that encouraged learning, innovation, and professional growth over the six-month internship period.

Academic courses relevant to the project : Highway

Name: DEVANSH(2022A2PS1718P)

Student Write-up

PS-II Project Title: Study the parking Characterstics of Udaipur City

Short Summary of work done during PS-II : The project involved end-to-end analysis of a survey-based dataset, starting from data validation and preprocessing to exploratory and statistical analysis. Python and Excel were used extensively to clean data, generate visualizations, and extract meaningful insights. The findings were systematically documented and compiled into a structured final report, concluding the project successfully.

Tool used (Development tools - H/w, S/w) : Python,excel,ppt

Objectives of the project : Develop solutions for parking congestion in the city

Major Learning Outcomes : Gained hands-on experience in handling real-world survey data, including delays, inconsistencies, and missing values.
Learned end-to-end data analysis workflow: data cleaning, exploratory analysis, statistical evaluation, and result interpretation.
Stre

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The working environment at CSIR–Central Road Research Institute (CRRI) was professional, research-oriented, and collaborative. The institute provided access to experienced researchers, structured guidance, and adequate technical resources. The atmosphere encouraged learning, analytical thinking, and adherence to research ethics, enabling effective execution of the project work.

Academic courses relevant to the project : Probability and Statistics
Mathematics (Linear Algebra & Statistical Methods)
Computer Programming

Name: NARIKADAMILLI B S S N M KRISHNA PRASAD(2022A2PS1857H)

Student Write-up

PS-II Project Title: Failure prediction of RE wall using ML teqchnics

Short Summary of work done during PS-II : Using ANN AND FPA Prediction of RE walls

Tool used (Development tools - H/w, S/w) : Vs code, python

Objectives of the project : Prediction failure of Reinforced earth wall

Major Learning Outcomes : RE walls models and it failure points

Details of Papers/patents : No

Brief Description of working environment, expectations from the company : I am working in CSIR CRRi it's government institute. Institute is mainly focused on road construction domain in that I am working in geotechnical engineering division we work on Reinforced earth walls and types of soil in roads construction place .

Academic courses relevant to the project : Foundation engineering

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PS-II Station : CSIR- BISAG -Bhaskaracharya National Institute for Space Applications and Geo-informatics, Gandhinagar

Faculty

Name: Eht E Sham

Student

Name: HARSH(2021AAPS1652P)

Student Write-up

PS-II Project Title: Transformation-Aware Facial Recognition and Temporal Face Matching using AI/ML

Short Summary of work done during PS-II : During my PS-II internship at BISAG-N, I worked on the design and implementation of a fully offline forensic face recognition system using AI and machine learning techniques. The system follows a two-stage workflow inspired by real investigative practices. In the first stage, human-readable facial metadata such as gender, age

range, race, and appearance attributes are used to filter a large image database using SQL queries, significantly reducing the search space. In the second stage, deep-learning-based recognition is performed only on the shortlisted candidates using interchangeable FaceNet and ArcFace pipelines. The system stores metadata and facial embeddings in separate SQLite databases to improve scalability and performance, with embeddings being generated lazily and cached for reuse. A desktop GUI built using Tkinter and ttkbootstrap allows users to manage facial records, capture or import images, select recognition models, configure thresholds, and view ranked results with transparent similarity scores. The complete application runs locally within a conda environment with support for both CPU and GPU inference, ensuring privacy and ease of deployment.

Tool used (Development tools - H/w, S/w) : The project was developed using Python 3.10 within a conda environment, with libraries such as PyTorch, InsightFace, facenet-pytorch, OpenCV, Pillow, NumPy, and SQLite. Tkinter and ttkbootstrap were used to develop the graphical user interface. The system

Objectives of the project : The objective of this project was to design and implement a fully offline forensic face recognition system that combines human-interpretable metadata filtering with deep-learning-based face recognition. The project aimed to integrate and compare modern face recognition pipelines such as FaceNet and ArcFace, ensure privacy-preserving and scalable deployment, and develop a user-friendly desktop application suitable for real forensic and investigative environments.

Major Learning Outcomes : Through this PS-II project, I gained a strong practical understanding of deep face recognition models, metric learning concepts, and face detection pipelines. I developed hands-on experience in designing databases for both semantic metadata and high-dimen

Details of Papers/patents : No patents were filed as part of this project. The work is based on extensive study and implementation of established research papers including FaceNet, ArcFace, SCRFD, RetinaFace, and foundational biometric system evaluation literature.

Brief Description of working environment, expectations from the company : BISAG-N provided a highly professional and research-oriented working environment with strong emphasis

on discipline, data security, and ethical application of advanced technologies. The organization encouraged independent problem solving, continuous learning, and alignment of technical work with real-world governance and forensic requirements. During PS-II, I was expected to take ownership of my project, conduct independent research, follow structured development practices, and maintain proper documentation. Regular guidance from mentors helped ensure that the technical implementation met institutional standards. The environment fostered self-discipline, accountability, and a deeper understanding of how AI systems are developed and evaluated for sensitive applications.

Academic courses relevant to the project : The academic courses most relevant to this project include Machine Learning, Artificial Intelligence, Digital Image Processing, Computer Vision, Pattern Recognition, Database Management Systems, and Data Structures and Algorithms.

Name: ABHIRAM JUTURU .(2021B4A83143H)

Student Write-up

PS-II Project Title: Medical AI chatbot with Voice Interface

Short Summary of work done during PS-II : Building an LLM based chatbot with a voice interface for multiple languages and having voice interface.

Tool used (Development tools - H/w, S/w) : Python

Objectives of the project : LLM based fine tuned chatbot

Major Learning Outcomes : LLMs , Model Size , Response time

Details of Papers/patents : -NA

Brief Description of working environment, expectations from the company : Not particularly great but decent working environment.

Academic courses relevant to the project : AI , ML , OOPS

Name: ABIR SHRIVASTAVA .(2022A8PS0729H)

Student Write-up

PS-II Project Title: Live Transcription feature in Jitsi Web Meetings using Whisper by OpenAI

Short Summary of work done during PS-II : Developed a live transcription feature for the open-source Jitsi platform using faster-whisper, reducing manual note-taking effort by up to 40% and improving meeting accessibility for users with hearing impairments.

Tool used (Development tools - H/w, S/w) : Python, Node.js, Pytorch, Whisper by OpenAI, Silero VAD

Objectives of the project : Had to integrate a feature of live transcription in Jitsi Web Meetings and make the transcription accurate and seamless despite multiple language switches

Major Learning Outcomes : - Learned working on open source projects and contributing a feature to an already built project.
- Learned a lot of new skills in the field of machine learning
- Gained experience of working in a big organisation and team.

Details of Papers/patents : none.

Brief Description of working environment, expectations from the company : It was a little monotonous. Not a lot of socializing, people just worked and went home. The projects that the organization worked on were pretty interesting though.

Academic courses relevant to the project : Object Oriented Programming, Neural Networks.

PS-II Station : CSIR- IIP - Indian Institute of Petroleum - , Dehradun

Faculty

Name: Santosh Sopanrao Khandgave

Student

Name: SAARTHAK VERMA(2022A1PS1162P)

Student Write-up

PS-II Project Title: Deoiling of petroleum streams for paraffin wax

Short Summary of work done during PS-II : The feedstock for the experiments was Heavy Wax Distillate (HWD) obtained from Digboi Refinery, Assam Oil Division (AOD). Methyl Isobutyl Ketone (MIBK) was chosen as the deoiling solvent due to its high selectivity, good solvent recovery characteristics, and environmental advantages. Preliminary results indicate that the deoiling efficiency strongly depends on the cooling rate and filtration conditions. Oil content in wax was reduced below 0.5% under optimized runs, making it suitable for industrial-grade paraffin wax applications. Further optimization over the next four months will focus on refining process parameters for higher yield and commercial-grade quality wax.

Tool used (Development tools - H/w, S/w) : ASTM standard devices and instruments, lab scale facilities of filtration, distillation and other separation processes

Objectives of the project : The central aim of this internship project is to investigate and optimize the deoiling of petroleum wax streams for the production of commercial-grade paraffin wax using Methyl Isobutyl Ketone (MIBK) as the solvent.

Major Learning Outcomes : Solvent Extraction, Lab duties, Petroleum Refining, Downstream operations

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The environment provided was quite helpful and engaging

Academic courses relevant to the project : SP1,SP2,HT,PDP

Name: ARCHIT KUMAR(2022A1PS1479G)

Student Write-up

PS-II Project Title: Testing of Gasoline and Diesel as per BIS Specifications

Short Summary of work done during PS-II : I learnt fuel testing of various fuel sample of gasoline and diesel. This included pour point,flash point ,gum content,ethanol content,sulhpur analyser edxrf, distillation,hplc,reid vapor pressure,copper corrosion and density measurement of each and every sample. I also gained insight into why is fuel testing important and how does it help the country. I also learnt about how the American society of testing and materials and Bureau of indian standards and their standards help us in testing of fuel samples.

Tool used (Development tools - H/w, S/w) : Pour point , ABEL flash point tester ,edxrf , Distillation setup, gum content analyser , copper corrosion, density meter,reid vapor pressure , High pressure liquid chromatography.

Objectives of the project : To learn how the testing and reporting of fuel samples happens.

Major Learning Outcomes : Learnt about the different parameters which are tested for a fuel sample to be passed so that it can be commercialised.

Details of Papers/patents : I submitted a report to the institute and worked under Dr.Ganesh Naik

Brief Description of working environment, expectations from the company : The working environment is amazing and the mentors are extremely helpful. The Institute offers a wide range of learning experiences.

Academic courses relevant to the project : Separation Processes 1 and 2 , Process Design Principles 1 and 2 and Chemical Engineering labs 1 and 2.

PS-II Station : CSIR- Structural Engineering Research Centre (SERC), Chennai

Faculty

Name: Mahesh Kumar Hamirwasia .

Student

Name: MORANSH MALANI(2022A2PS1699P)

Student Write-up

PS-II Project Title: Fatigue life analysis of a steel bridge

Short Summary of work done during PS-II : I had to go through literature about fatigue life analyis of steel bridges and from the figure out the methodologies that i was supposed to use. Then I was provided with the elevations of the bridge to base my modal off of, which was then used for various kinds of load analysis

Tool used (Development tools - H/w, S/w) : ABAQUS-CAE

Objectives of the project : Making an ABAQUS model of a steel railway bridge and calculating the remaining fatigue life for the bridge

Major Learning Outcomes : ABAQUS-workflow, life-work balance

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : I am a native of Jaipur, Rajasthan and my office was situated in Chennai, Tamil Nadu. So, most of my troubles here came from culture shock but I adjusted within a week. The office staff were kind and helping along with my mentor who was very accommodating

Academic courses relevant to the project : Intro to FEM, Analysis of Steel Structures

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Name: MOHANA VARSHITH BOLLOJU .(2022A2PS1714H)

Student Write-up

PS-II Project Title: Cost and Carbon Metrics of a typical masonry building: A step towards sustainability

Short Summary of work done during PS-II : The CSIR project involved a comparative assessment of conventional and low-carbon building materials using a Life Cycle Assessment (LCA) approach in the Indian context. Global Warming Potential (GWP) values were obtained from Environmental Product Declarations and literature, and theoretically estimated where India-specific data were unavailable, ensuring consistent functional units for fair comparison. A parallel cost analysis was conducted using market and literature-based data to evaluate economic feasibility alongside environmental performance. Service life and durability aspects of major building materials were reviewed to understand their influence on long-term sustainability. The study included data analysis, graphical interpretation, and comparative evaluation to identify trends and trade-offs between environmental impact, cost, and durability. The outcomes support informed material selection for sustainable building practices.

Tool used (Development tools - H/w, S/w) : Microsoft Office.

Objectives of the project : To find the sustainable alternative for conventional construction materials and optimising the costs for both the scenarios

Major Learning Outcomes : 1. Understanding of Life Cycle Assessment of Masonry Buildings
2. Material Level Impact Estimation
3. Cost analysis integrated with sustainability

Details of Papers/patents : Processing a research paper for the same.

Brief Description of working environment, expectations from the company : The working environment may vary across laboratories. The lab in which I worked, the Advanced Concrete Testing and Evaluation Laboratory, was well equipped with the necessary facilities required for the assigned project. Expectations from the organization may also differ depending on the mentor. In my case, the work carried out was considered significant enough for my mentor to authorize it for journal paper publication; however, expectations may vary with different mentors.

Academic courses relevant to the project : Design of reinforced concrete, design of steel structure ls

Name: HRUSHIKESH SANAPALA .(2022A2PS1719H)

Student Write-up

PS-II Project Title: Dynamic Analysis and Reduction of Sloshing Phenomena in Storage Tanks under Earthquake Loading

Short Summary of work done during PS-II : The project deals with understanding and mitigation of sloshing in a partially filled rectangular storage tank under dynamic excitation. An exhaustive review on sloshing theories, effects of seismic loading, and their mitigation approaches, including IS 1893 Part-2 and various research works, was undertaken. Next, approximate analytical calculations were performed to estimate the natural sloshing frequencies for the selected tank geometries and water depths. A spring-mass idealization was formulated by using code-based charts to obtain the impulsive and convective components of the liquid. The experimental test setup was conducted with an LDS slip table following the analytical phase of the work. The tests were conducted on the tank without baffles, with a single baffle, and with double baffles. The accelerometer and load-cell data were measured for each configuration during low-frequency and high-frequency sweep excitations. Time histories, FFTs, and FRFs were plotted for identifying sloshing frequencies, hydrodynamic forces, and amplification characteristics. The experiments confirmed the findings of the analysis and that the unbaffled tank exhibited strong sloshing near its fundamental mode. The introduction of baffles substantially reduced low-frequency sloshing due to increased damping that interfered with the formation of proper waves. However, it was observed that for higher excitation frequencies, the presence of baffles shifted intense fluid interactions at different frequency bands, exhibiting increased local turbulence. Overall, the work carried out so far provides a complete analytical–experimental understanding of sloshing behavior and the influence of baffles, forming a strong foundation for concluding the study and recommending optimal sloshing mitigation strategies.

Tool used (Development tools - H/w, S/w) : Abaqus, Ansys, MATLAB, CoCo 80 Data Acquisition System.

Objectives of the project : To reduce liquid sloshing in storage tanks subjected to seismic loading by designing implementing effective mitigation and control strategies.

Major Learning Outcomes : Was able to learn new Software Skills like Abaqus and Ansys, and was able to increase my skills in MATLAB. And also got definite understanding of how experimental procedures are done. Running and Collecting the data from the shake table using data Acquisition.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : It was great working here all the people who are present in the lab from Scientists to Technical Assistants were very helpful and would be very willing to explain any doubts asked.

Academic courses relevant to the project : The courses which I did were partially relevant but not completely.

PS-II Station : CSIR-NAL, Bengaluru

Faculty

Name: Sameer Gupta .

Student

Name: ATHARVA SHRIKANT DESHMUKH .(2021B5A12538H)

Student Write-up

PS-II Project Title: Development of metal supports for solid oxide fuel cells.

Short Summary of work done during PS-II : My work mainly focused on fabricating the metal supports for the cell. Firstly, I researched on the various manufacturing methods related to metal-supports. Then , I was suggested to use tape-casting as a technique to fabricate them. Tape-casting involves steps from slurry preparation to casting on a flat surface. The raw materials included metal powders and solvents. The tape is then heat treated in various stages to get the final metal support. My work has not only been to fabricate these but also to study their properties or characterize them to determine their usefulness in SOFC. I also worked on other types of fuel cells such as anode-supported cells. Further work involved learning how to simulate the cell operation to determine the cell characteristics like power density and I-V characteristics.

Tool used (Development tools - H/w, S/w) : Most of my work was experimental and required the usage of equipment like tape-casting rig , milling machines and such . I also frequently used softwares like COMSOL and MATLAB.

Objectives of the project : To develop and fabricate metal supports for solid oxide fuel cells using various fabrication techniques.

Major Learning Outcomes : The major learning outcomes were the concepts related to fuel cells, their types and the importance of solid oxide fuel cells. I also learned about the various fabrication techniques of SOFC. Further , I learnt about the role of metal supports in the cell.

Details of Papers/patents : None , as the work is still in progress and the fabrication techniques have already been patented.

Brief Description of working environment, expectations from the company : The working environment in NAL is very conducive to research. I got work and interact with many scientists who had a lot of experience in the domain of my project. I also was helped by many project associates who were either working on a similar project as mine or had worked on it before. The organization expects you to be diligent with your research work and have a general idea of the project. They are open to suggestions related to your project and also ready to teach you about aspects of you work that you may not know.

Academic courses relevant to the project : Electrochemical engineering and Material Science and Engineering.

Name: PRAMUKH NANDAN REDDY KALLEM .(2022A1PS0766H)

Student Write-up

PS-II Project Title: Cr Based coatings for high-temperature steam oxidation resistance

Short Summary of work done during PS-II : Coated Cr and Cr/CrN on SS316L substrate of different geometries using unbalanced magnetron sputtering system. Tested samples under high temperature steam(1200 C) for 30min. analysed how oxygen diffuses into the coating and how gemotries of substrate affects coating morphology and perfomance under high temperature.

Tool used (Development tools - H/w, S/w) : FESEM, XRD, Origin.

Objectives of the project : To Assess oxygen diffusion through Cr coating

Major Learning Outcomes : Analysis of results, tools used for research work.

Details of Papers/patents : Not yet published.

Brief Description of working environment, expectations from the company : The working environment was great, we had every scientist discuss on all projects available with the surface engineering division in NAL. I had easy access to FESEM, XRD, and scratch test facilities, unlike in our college.

Academic courses relevant to the project : Material science.

Name: SATVIK SANDEEP SARODE(2022A4PS0578P)

Student Write-up

PS-II Project Title: Numerical Analysis of Morphing Airfoil at Variable Angles of Attack and Morphing Frequencies

Short Summary of work done during PS-II : This work presents a CFD study of unsteady aerodynamics in a variable camber morphing airfoil using OpenFOAM. Custom mesh motion routines and automated simulation scripting enabled detailed analysis of lift, drag, moment and vortex patterns across varying angles of attack and morphing rates. The results reveal pronounced hysteresis and distinct flow features depending on morphing parameters, visualised using Q-criteria, highlighting previously unexplored compound effects of temporal morphing on aerodynamic performance.

Tool used (Development tools - H/w, S/w) : S/w - OpenFOAM, Python, WSL, Paraview, Excel, Docs

Objectives of the project : To study the effect of varying 1. Angle of Attack 2. Morphing Rates on the aerodynamics of a global camber morphing airfoil for UAV applications

Major Learning Outcomes : 1. Learned Dynamic Meshing using custom Python Script in OpenFOAM
2. Understanding fluid flow phenomenon through Q-criteria plots for visualisation
3. Automation using Unix Bash Scripts

Details of Papers/patents : Study titled "Numerical investigation of camber morphing aerodynamics for
Unmanned Aerial Vehicle application" accepted for presentation in the International Conference of Fluid and Thermal Engineering 2026.

Brief Description of working environment, expectations from the company : The working environment, including the actual timings, work mode etc. depends a lot on the scientist appointed

on your project guide. While most encourage working on a research topic of their suggestion, some might instead involve the student in the regular work being undertaken at the organisation. Since NAL handles defense related project, various restrictions are present on campus which you have to abide by.

Academic courses relevant to the project : Fluid Dynamics, CFD, FEM

Name: PRERIT SUNIL SHAH .(2022A4PS0996H)

Student Write-up

PS-II Project Title: Functional Digital Twin of a Standard Aircraft Hydraulic System for Predictive Maintenance

Short Summary of work done during PS-II : During my PS-II internship at CSIR National Aerospace Laboratories, I worked on the project "Functional Digital Twin of a Standard Aircraft Hydraulic System for Predictive Maintenance". The primary objective was to address the industry-wide scarcity of labeled failure data by developing a high-fidelity physics-based simulation capable of generating synthetic datasets for machine learning applications. I utilized MATLAB Simulink and Simscape Fluids to model the hydro-mechanical interactions of four critical subsystems: the Hydraulic Power Pack, Nose Wheel Steering, Braking System, and Landing Gear. My core responsibilities included defining component specifications and MIL-F-5606 fluid properties, implementing robust control logic for safety interlocks (such as pump thermal protection and Weight-on-Wheels constraints), and designing a Virtual Cockpit Panel for real-time simulation monitoring. The digital twin successfully validated critical transient behaviors, such as pressure build-up and flow spikes, under both nominal and emergency operating conditions. This project established a verified virtual testbed for generating healthy and degraded system data, effectively laying the groundwork for future condition-based maintenance and prognostics capabilities.

Tool used (Development tools - H/w, S/w) : MATLAB Simulink and Simscape Fluids

Objectives of the project : Design and implement a functional digital twin of a standard aircraft hydraulic system encompassing four major subsystems for synthetic data generation

Major Learning Outcomes : model based systems engineering, Digital twin technology, aircraft hydraulic system architecture, maintenance methodologies

Details of Papers/patents : N.A

Brief Description of working environment, expectations from the company : Working at NAL's Systems Engineering Division was pretty insightful where the scientists were approachable and helpful. It's not about writing fancy reports, they want stuff that solves actual problems. You're expected to be pretty self-driven about your project. In my case, that meant building a digital twin that could create synthetic failure data.

Academic courses relevant to the project : Fluid mechanics, Control Systems, Mechatronics and Automation

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Name: YASH JHA .(2022A4PS1221H)

Student Write-up

PS-II Project Title: Optimization of parameters of friction stir welding

Short Summary of work done during PS-II : Samples were created for testing purpose.

Tool used (Development tools - H/w, S/w) : CNC machines

Objectives of the project : To get the best parameters of fsw

Major Learning Outcomes : Got studies done in material sciences and about fsw and how it's different from other welding types.

Details of Papers/patents : Conference paper in IIM ATM IIT Hyderabad

Brief Description of working environment, expectations from the company : Research oriented and easy going environment, not a very corporate type of environment. It will feel slow for someone who is not interested in RnD.

Academic courses relevant to the project : Material science, mostly, amos

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Name: NISHITH VIRMANI(2022ABPS0990P)

Student Write-up

PS-II Project Title: Reduced Order Modelling for Hydraulic Pipes Structural Analysis in Digital Twin Applications

Short Summary of work done during PS-II : My work presents a reduced-order modelling (ROM) framework for hydraulic pipe vibration and stress analysis, developed to enable fast digital twin applications. The full finite element state-space model, though accurate, is computationally intensive. Bal anced truncation is applied to retain the most controllable and observable modes, iden tified through Hankel singular values, while discarding weakly participating states. The reduced model preserves input-output fidelity with guaranteed error bounds and captures more than 99% of system energy.

Tool used (Development tools - H/w, S/w) : MATLAB and SIMULINK

Objectives of the project : To create a fast and accurate digital twin for real time structure monitoring

Major Learning Outcomes : Reduced-order modelling, control theory, simulation and feedback systems

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Working environment is peaceful and quiet, mentors are helpful and give resources, but projects in evolving fields need lots of research from students as well

Academic courses relevant to the project : FEM, Mechanics of Solids

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PS-II Station : Dayworks Private Limited (Weekday), , Bengaluru

Faculty

Name: Sidharth Mishra .

Student

Name: NAUMAN ATHAR MALIK(2022AAPS0244P)

Student Write-up

PS-II Project Title: End-to-End Growth Operations and Revenue Optimization at Weekday (YC W21)

Short Summary of work done during PS-II : During my PS-II at Weekday (YC W21), I worked as a Founder's Office Intern in Growth Operations, contributing across revenue, outreach, analytics, and client-facing functions. My primary responsibility was to optimize SDR workflows by improving outreach sequences, incentive structures, and performance tracking, which

collectively enhanced conversion consistency and lead quality. I built and refined dashboards for real-time monitoring of revenue, campaign performance, and activity metrics, enabling leadership to make data-driven decisions with greater clarity and speed. I supported CXO-level sales conversations by preparing strategic pitch decks, conducting sectoral research, and analyzing hiring trends across multiple industries. This exposure strengthened my understanding of high-stakes enterprise communication and market positioning. I also contributed to the development of forecasting models and improved CRM processes by standardizing tagging, cleaning data inputs, and improving reporting accuracy. On the operations side, I helped streamline client onboarding workflows, reducing activation time and improving cross-functional coordination between growth, product, and engineering teams. I played an active role in preparing monthly growth reports, strategy memos, and expansion roadmaps by consolidating insights from performance data and outreach analysis. Overall, my work contributed to improving revenue visibility, operational efficiency, and the strategic growth pipeline at Weekday. This experience strengthened my skills in analytics, communication, problem-solving, and growth strategy within a fast-paced startup environment.

Tool used (Development tools - H/w, S/w) : Google Sheets, Google Slides, Google Docs, Notion, Tableau, Internal CRM Platform, Excel, Slack, and basic workflow automation tools used within Weekday's internal systems.

Objectives of the project : The objective of this project is to strengthen Weekday's growth operations by improving SDR efficiency, refining outreach processes, and enabling data-driven decision-making. It also aims to enhance forecasting accuracy, streamline client onboarding, and support leadership through clear performance insights and strategic reporting.

Major Learning Outcomes : I gained practical experience in optimizing growth operations, improving SDR and outreach performance, building data-driven dashboards, enhancing forecasting accuracy, and supporting CXO-level sales and onboarding processes. I also developed stronger analytical skills.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment at Weekday (YC W21) is fast-paced, collaborative, and data-driven, reflecting the

culture of a high-growth startup. Teams operate with lean structures, which encourages autonomy, ownership, and close coordination across growth, product, and operations. As part of the Founder's Office, I worked directly with leadership and multiple teams, gaining exposure to real-time decision-making and strategy execution.

The company expects interns to take initiative, communicate clearly, handle responsibilities independently, and contribute directly to ongoing projects. Emphasis is placed on analytical thinking, attention to detail, and delivering measurable outcomes. Overall, Weekday provides a dynamic setting that supports hands-on learning while expecting high accountability and consistent performance.

Academic courses relevant to the project : Finance Minor, Probablity and Statistics

PS-II Station : DBOI - Business Finance,, Mumbai

Faculty

Name: Krishnamurthy Bindumadhavan .

Student

Name: SHREYA SINGH .(2022A1PS1411H)

Student Write-up

PS-II Project Title: P&L and Risk Reporting in Securitized Portfolios

Short Summary of work done during PS-II : During my six-month PS-II internship at Deutsche Bank, Mumbai, I worked as a Business Finance Intern in the Product Control team, focusing on P&L and risk reporting for securitized portfolios. My responsibilities included daily P&L validation, investigation of significant movements, and coordination with trading desks, risk, and operations

teams. I supported month-end and quarter-end close activities, ensuring accuracy and timeliness of financial reporting. I was involved in analyzing risk metrics, explaining sensitivities, and performing reconciliations between front-office systems and finance books. The role required a strong understanding of structured products, attention to detail, and adherence to internal control frameworks. I also contributed to process improvements by automating recurring reports and improving documentation. This internship provided valuable exposure to real-world financial markets, regulatory environments, and cross-functional collaboration within a global investment bank.

Tool used (Development tools - H/w, S/w) : MS Excel, Internal Deutsche Bank reporting and risk systems, Bloomberg / Market data tools

Objectives of the project : To support accurate P&L reporting for securitized products To identify and explain P&L movements and risk drivers To ensure compliance with internal controls and regulatory standards To improve reporting efficiency and data quality

Major Learning Outcomes : Strong understanding of P&L attribution and risk metrics
Exposure to securitized products and structured finance
Hands-on experience with financial controls and reconciliations
Improved analytical, problem-solving, and communication skills
Understanding o

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Deutsche Bank provided a highly professional and collaborative working environment with strong emphasis on accuracy, accountability, and compliance. The team followed well-defined processes while encouraging interns to ask questions and take ownership of tasks. Expectations included timely delivery, attention to detail, proactive communication, and adherence to internal control standards. The organization emphasized learning, ethical conduct, and teamwork, enabling a strong understanding of investment banking operations.

Academic courses relevant to the project : Financial Management
Accounting and Finance

Derivatives and Risk Management

Name: UNNABH RATHOD(2022A7PS1193G)

Student Write-up

PS-II Project Title: Business Finance

Short Summary of work done during PS-II : During the PS-II internship at Deutsche Bank Operations India Pvt. Ltd., I worked as a Business Finance intern supporting the Europe Structured Rates desk. My primary responsibility involved end-of-day T+0 P&L production and attribution for multiple structured rates portfolios. This included validating valuation outputs, analyzing key risk sensitivities such as Vega, Lambda, Treasury P&L, and Credit Delta, and preparing daily commentary for front-office traders. As the internship progressed, I gained exposure to T+1 P&L reporting, which involved reconciliation of flash P&L with ledger values, investigation of cash and fee breaks, and understanding variance drivers. This enhanced my understanding of financial controls, audit requirements, and the importance of accuracy in official reporting. In parallel, I undertook automation initiatives using VBA in Excel to reduce repetitive manual tasks involved in reporting and reconciliation. By the end of the internship, I had developed multiple automation tools projected to significantly reduce monthly manual effort and improve reporting efficiency. Overall, the internship provided comprehensive exposure to financial reporting, structured products, risk attribution, and operational efficiency within a global investment banking environment.

Tool used (Development tools - H/w, S/w) : Microsoft Excel (Advanced) VBA (Visual Basic for Applications) Internal Deutsche Bank valuation and reporting systems Internal data repositories and file servers

Objectives of the project : To understand and support end-to-end Profit and Loss (P&L) reporting for structured rates trading portfolios To perform daily T+0 P&L production, validation, and risk attribution for Europe Structured Rates To gain exposure to T+1 P&L reconciliation,

including break investigation and variance analysis To identify and implement automation opportunities for improving efficiency and accuracy in reporting workflows To develop practical understanding of financial control, valuation governance, and stakeholder communication

Major Learning Outcomes : Practical understanding of structured rates products and their valuation behaviour
Hands-on experience in daily P&L reporting and sensitivity analysis
Ability to investigate and resolve P&L breaks and variances
Experience in automation using VBA to opt

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment at Deutsche Bank Operations India Pvt. Ltd. was highly professional, structured, and collaborative. The Business Finance team operated within strict reporting timelines, emphasizing accuracy, accountability, and adherence to control standards. Regular interaction with front-office traders and senior finance stakeholders fostered a strong sense of responsibility and ownership over deliverables.
The organization encouraged learning through hands-on exposure, mentorship, and gradual increase in responsibility. Team members were approachable and supportive, providing guidance during complex reporting scenarios and automation development. The culture promoted analytical thinking, process improvement, and effective communication across geographically distributed teams.
The expectations from the company included maintaining high data accuracy, meeting daily reporting deadlines, complying with risk and control guidelines, and proactively identifying efficiency improvements. There was also an emphasis on documenting processes, ensuring audit readiness, and responding promptly to stakeholder queries.
Overall, the working environment provided a balanced blend of technical learning, professional discipline, and practical exposure to real-world financial operations within a global banking setup.

Academic courses relevant to the project : Derivates Risk Management, Financial Risk Management, Fundamentals of Financial Accounting

PS-II Station : DBOI - CB Transformation- , Mumbai

Faculty

Name: Krishnamurthy Bindumadhavan .

Student

Name: SHEREEN MALANI(2022A8PS0661G)

Student Write-up

PS-II Project Title: Automation in NAV reporting process

Short Summary of work done during PS-II : Core goal : automating the NAV reporting process and reducing manual intervention in the same.Summary : The team assigned to me had the main objective of automation, which aligned with my core goal. It's an ongoing process. The process involved gathering requirements for potential manual touch points from ops team, raising JIRA tickets and creating BRDs(Business Requirement Documents) logging all the possible manual changes as discussed with ops team. Discussing with the IT team to understand the feasibility for the same.Explaining the IT team the report and discussing the logic behind the implementation for the report development. Signing off the report once in UAT with the help of Ops team and creating an excel based testing evidence for the same. Post this, the report is deployed in the next production cycle

Tool used (Development tools - H/w, S/w) : H/w: na, S/w : JIRA, SimcorpDimension, Excel

Objectives of the project : To reduce the manual interventions in the NAV reporting process by the Operations team

Major Learning Outcomes : Cross collaboration with other teams
JIRA Management

Data analysis (using excel)
Converting business requirements to technical language.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Team was supportive and friendly. Flexibility of coming late or leaving early in case of a personal emergency.
Expectations:
- Execute the deliverables on time
- Do the work in a structured way and keep proper documentation wherever required.
- Take responsibility for your own work
- Manage the complete end-to-end process as much as possible by yourself

Academic courses relevant to the project : Finance minor (while not implemented in everyday basis, helps to understand & communicate the NAV reporting better)

PS-II Station : DBOI - CRM - Credit Risk & IB Credit, Mumbai

Faculty

Name: Krishnamurthy Bindumadhavan .

Student

Name: VISHUDDH JAIN(2022A2PS1024P)

Student Write-up

PS-II Project Title: Credit Rating Analyst

Short Summary of work done during PS-II : I was assigned the task of preparing monthly credit rating reports for DB's clients which were mostly banks and corporates.

Tool used (Development tools - H/w, S/w) : Excel and other Internal Softwares

Objectives of the project : Understand about credit rating processes for banks and corporates.

Major Learning Outcomes : Understood about entire Rating methodology of banks and corporates.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment is very good. People are very supportive. You can reach out to anyone for any help and they'll be more than happy to assist you. There is no hierarchy of junior/senior over the floor and everybody's opinions are viewed equally.

Academic courses relevant to the project : FRAM, DRM (not much though)

PS-II Station : DBOI - FIC Middle Office & Listed Derivatives, Bengaluru

Faculty

Name: Krishnamurthy Bindumadhavan .

Student

Name: SAYANTAN BASU(2022A8PS0145G)

Student Write-up

PS-II Project Title: FIC Middle office and Listed Derivatives

Short Summary of work done during PS-II : N/A

Tool used (Development tools - H/w, S/w) : Tools such as Power Query, Alteryx and Tableau

Objectives of the project : To increase the STP% for Smartdoc India

Major Learning Outcomes : Tools such as Power Query, Alteryx and Tableau

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : Very Collaborative and Helpful

Academic courses relevant to the project : N/A

PS-II Station : DBOI - Global Reconciliations, Single Prime Record and Securities Settlement, Bengaluru

Faculty

Name: Krishnamurthy Bindumadhavan .

Student

Name: SHRAVAN SHARMA(2022A3PS0327P)

Student Write-up

PS-II Project Title: Global Reconciliations, Single Prime Record and Securities Settlement

Short Summary of work done during PS-II : During my internship at Deutsche Bank, I worked on several key projects that directly contributed to improving operational efficiency. I developed a Python tool for volume and trend analysis that helped analyze transaction data more efficiently, enabling the team to identify patterns. This tool automated what was previously a manual process, saving time and improving accuracy. I also built multiple PowerApps applications tailored for the surveillance and investigations teams. These apps were designed to streamline their internal audit system and support the 4-eye check process, which is critical for compliance and risk management. Additionally, I created several Power Automate flows to automate routine manual tasks, particularly for periodic report generation. This eliminated repetitive work and ensured reports were generated consistently and on time. Overall, my contributions centered around automation and digitalization taking processes that were time-consuming and manual, and making them more efficient. The feedback I received was positive, and I'm glad the tools I built will continue to help the team work more effectively.

Tool used (Development tools - H/w, S/w) : Python, Power Apps, Power Automate, SQL, Excel

Objectives of the project : CB & IB process automation

Major Learning Outcomes : Learned about the banking industry, its functions and how transactions flow within the bank.
soft skills such as communication and teamwork
Hands-on experience with the Power Platform tools (PowerApps, Power Automate)
Ability to analyze and work with bank

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Deutsche Bank has a professional work environment, but what stood out to me was how approachable and helpful the senior management and team members were. Everyone was willing to answer questions and guide me through the work, which made the learning curve much smoother. During my internship, I worked in the office all five days, which I think really helped me stay connected with the team

and understand how things operate day-to-day. After conversion, there's a hybrid model with a couple of work-from-home days, which sounds like a good balance. The company expects you to be on time, take ownership of your work, and deliver things properly. They also rely heavily on tools like Power Automate, Power Apps and Alteryx to automate tasks, so getting comfortable with these platforms is important. Overall, it's a place where you can genuinely learn and grow.

Academic courses relevant to the project : Fin Minor Courses and Programming

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PS-II Station : DBOI - IB CFO,, Mumbai

Faculty

Name: Krishnamurthy Bindumadhavan .

Student

Name: VINAYAK SRIVASTAVA(2021B1AA2313P)

Student Write-up

PS-II Project Title: Total Capital Demand (TCD) Reporting

Short Summary of work done during PS-II : Understanding how Total Capital Demand gets calculated ad reported for a bank

Tool used (Development tools - H/w, S/w) : Excel

Objectives of the project : Understanding how Total Capital Demand gets calculated ad reported for a bank

Major Learning Outcomes : Understanding how Total Capital Demand gets calculated ad reported for a bank

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : Work environment was good, people were extremely helpful, huge focus on work life balance. Expectations from interns were only centered around reliability to deliver the tasks assigned on time. Tasks in general were very simple.

Academic courses relevant to the project : FRAM and FundaFin

PS-II Station : DBOI - Infra Finance,, Pune

Faculty

Name: Krishnamurthy Bindumadhavan .

Student

Name: YUVVRAJ RAHOUL JAGTAP(2022A4PS1291P)

Student Write-up

PS-II Project Title: Driver Based Cost Management

Short Summary of work done during PS-II : The work mainly involed preparing Financial reports from their internal software and then analysing them and facilitating alignment discussions with COOs, CFOs, and FDs, culminating in a senior-management-approved model. ENHANCING TRANSPARENCY IN ALLOCATIONS : Strengthened transparency in infrastructure cost

allocations through rigorous validations and business-side justification, improving stakeholder trust and satisfaction; AUTOMATION : Tried to automate few of the workflows using power automate and python

Tool used (Development tools - H/w, S/w) : SAP, Excel, Powerpoint

Objectives of the project : Process Optimisation

Major Learning Outcomes : Technical skills - MS Excel (Power Pivot and Power Query), SAP Knowledge- Understanding End to End cost Allocation and Management and the working of Bank

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : I was fortunate to get a great manager and good team who were very supportive, the culture is pretty good and chill in Deutsche. The work is also manageable and not so hectic, sometimes get quite boring as you'll have to do manual stuff at times. Honestly the expectation is not a lot as the duration is just 5months but if thinking about a PPO, you'll have to show up and take responsibilities of the tasks and take up some initiatives and work diligently so as to be consider to convert into a full time job ,and the bank is also wanting to automate certain work and would be great if you are able to do some of it.

Academic courses relevant to the project : FundaFin, Financial Management

PS-II Station : DBOI - Market Risk Analysis & Control, Mumbai

Faculty

Name: Krishnamurthy Bindumadhavan .

Student

Name: NALLABILLI SRI VARUN .(2022A4PS0871H)

Student Write-up

PS-II Project Title: Global Rates Business VaR Reporting and Analysis

Short Summary of work done during PS-II : .

Tool used (Development tools - H/w, S/w) : Excel, Tableau, Python, Internal tools

Objectives of the project : Overview of the Global Rates business and calculation of the Market risk factors like VaR , EC, RWA,etc and ensuring tge values are under the thresholds.

Major Learning Outcomes : Indepth understanding of Market Risk, Exposure to tools like Excel, Python , Tableau. Understand the functioning activuties of a bank from a risk perspective.

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : .

Academic courses relevant to the project : DRM, FRAM

Name: ARNAV GOEL(2022A4PS0915G)

Student Write-up

PS-II Project Title: Market Risk Analysis and Control

Short Summary of work done during PS-II : Worked on daily validation of market risk metrics such as VaR and SVaR across FX, Credit, and Equity desks. Analysed risk sensitivities (Delta, Gamma, Vega) and PnL drivers to support risk sign-offs for Market Risk Managers. Automated recurring reporting tasks using Python, SQL, and Tableau, significantly reducing manual effort and improving the reliability of risk analytics.

Tool used (Development tools - H/w, S/w) : Python, SQL, Tableau and in-house platforms of Deutsche Bank

Objectives of the project : 1) Analyse key risk metrics such as VaR and SVaR on a daily basis using various in-house platforms. 2) Automate reports via Python. 3) Primary Project - Integrate SQL and Tableau with server for daily data refresh to replace the current process via python.

Major Learning Outcomes : Learnt 'Market Risk' analysis via in-house softwares, developed skills in Python, Tableau and SQL.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment was highly professional and collaborative, typical of a global MNC. The team was extremely supportive and approachable, always encouraging questions and continuous learning. I was given meaningful exposure and responsibility, with clear processes, structured workflows, and a strong emphasis on accuracy, accountability, and teamwork.

Academic courses relevant to the project : FRAM (Financial Risk Analysis and Management), DRM (Derivatives and Risk Management)

PS-II Station : DBOI - Valuation Control, Mumbai

Faculty

Name: Krishnamurthy Bindumadhavan .

Student

Name: YASH ASHISH KOTHARI(2022A3PS0405P)

Student Write-up

PS-II Project Title: IFRS 9/13 P&L Control (Valuation Control Analyst)

Short Summary of work done during PS-II : During my internship at Deutsche Bank in the Valuation Control (LOD1) team, I supported the fair valuation of EMEA OTC derivatives in line with IFRS 13 and IFRS 9. I worked across Levelling, Observability, and Day-1 P&L controls, performing daily and quarter-end checks on Level-3 and illiquid trades to assess P&L recognition. I contributed to unobserved risk monthly controls, challenged trader marks where required, and validated index volatility inputs using Bloomberg Option Monitor. The role strengthened my understanding of valuation governance, derivative risk, and regulatory compliance in a global investment bank.

Tool used (Development tools - H/w, S/w) : Excel , Kannon , Summit , Gretl , Dice

Objectives of the project : The objective of my internship project was to ensure strict compliance with IFRS 9 and IFRS 13 in the valuation of financial instruments. This involved validating fair value measurement, hierarchy classification, and the observability of valuation inputs as per IFRS 13. I also assessed Day 1 P&L recognition and deferral of unobservable components to meet IFRS 9 requirements. Overall, the project focused on maintaining transparent, consistent, and audit-ready valuation practices.

Major Learning Outcomes : I developed a strong understanding of IFRS 9 and IFRS 13, particularly fair value measurement, hierarchy classification, and Day 1 P&L treatment. I learned to assess the observability and reliability of market data inputs and perform independent price ver

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment at Deutsche Bank was highly professional, structured, and collaborative, with a strong emphasis on accuracy, control, and regulatory discipline. The team maintained high standards of ownership and accountability, encouraging interns to engage with real business problems and interact with stakeholders across front office, risk, and finance. The company expects employees to be detail-oriented, analytically strong, and proactive in challenging assumptions while adhering strictly to governance and compliance frameworks. Clear communication, timely execution, and a willingness to learn complex financial concepts were key expectations throughout the internship.

Academic courses relevant to the project : Finance Minor

Name: R Y JAIKRISH .(2022A3PS1304H)

Student Write-up

PS-II Project Title: GFX valuations control

Short Summary of work done during PS-II : During my internship with the GFX Valuation Control team at Deutsche Bank, I worked on daily Independent Price Verification (DIPV) for FX and Precious Metals products. This involved extracting market data from Forge, reviewing Greeks, checking threshold breaches, and preparing daily IPV reports for the desk and MRM. I maintained the GFX Quality Analysis report by consolidating key valuation parameters and highlighting daily movements. I also monitored Precious Metals reserves and prepared summaries, especially during periods of volatility. In addition, I prepared weekly Totem rejection reports to identify pricing deviations against the broader market and helped the desk reduce rejections. I took part in weekly and monthly IPV reviews and helped align desk marks with independently verified prices. I also checked stale FX data and reported currencies where prices remained unchanged for several days. Overall, this internship gave me practical exposure to

valuation control, fair-value adjustments, and the importance of accurate market data in pricing and risk.

Tool used (Development tools - H/w, S/w) : Forge – internal market data and Greeks dashboard

- Totem – external pricing benchmark platform
- Internal Valuation/Reserves Systems (for IPV & PM reserves tracking)
- Excel (data consolidation, reporting, QA templates)
- MS Outlook & Teams (communic

Objectives of the project : To support the GFX Valuation Control function by performing Independent Price Verification, monitoring pricing variances, validating market data inputs, and contributing to daily and periodic reporting that ensures accurate fair-value measurement for FX and Precious Metals products under global valuation policies.

Major Learning Outcomes :

- Developed a strong understanding of fair-value concepts, valuation control policies, and the three-lines-of-defense model at Deutsche Bank.
- Gained hands-on experience in IPV, price testing classification (IP, PV, CAP, PT, UT) and IFRS fair-va

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : During my internship, I worked in a highly professional and collaborative environment where learning, ownership, and accountability were strongly encouraged. The team structure supported open communication and knowledge sharing, which helped me gain a thorough understanding of both daily processes and domain-specific concepts. I had the opportunity to interact with experienced professionals who were approachable and willing to guide me whenever I faced challenges. The work culture was fast-paced, dynamic, and centered around accuracy and timely delivery, providing a practical exposure to real-time tasks and decision-making situations.

The company expected me to take responsibility for assigned tasks, complete them within the stipulated timelines, and maintain the quality of output. I was encouraged to proactively ask questions, seek clarifications, and continuously improve my understanding of the business functions. Regular feedback from team members and managers helped me refine my skills and align with the broader objectives of the team. The company also emphasized confidentiality, compliance, ethical behaviour, and adherence to organizational policies.

Overall, the internship environment enabled me to grow technically as well as professionally. It offered practical exposure to real-world business practices, motivated me to build domain knowledge, and helped me develop confidence to handle tasks more independently. The experience enhanced my analytical skills, communication skills, and ability to collaborate within a corporate setup.

Academic courses relevant to the project : Finance minor course

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Name: DEV SAHU .(2022A4PS1663H)

Student Write-up

PS-II Project Title: Valuation Control

Short Summary of work done during PS-II : During my PS-II internship at Deutsche Bank in the Global Valuation Group (GVG), I worked on the Weekly Independent Price Verification (WIPV) process for securitized products (US & EU) and distressed products (US). My primary responsibility was to reconcile internal trading desk marks with independent external vendor prices sourced from Markit, Reuters, and ICE. I performed tolerance checks, identified valuation discrepancies, conducted root-cause analyses, and documented exceptions for escalation. In addition, I assisted in the fundamental valuation of illiquid bonds using Discounted Cash Flow (DCF) models, where I helped calibrate assumptions such as Constant Prepayment Rates (CPR), Constant Default Rates (CDR), recovery rates, and discount margins. To improve efficiency, I developed Excel-based macros for data cleaning, formatting, reconciliation, and report archival. I also designed a count-check mechanism to control ICE data feed costs. Furthermore, I built a logic-based model to compute net exposures for Credit Default Swaps (CDS) by assigning directional signs to trade notionals. Overall, this internship strengthened my understanding of valuation methodologies, financial risk controls, and real-world market data handling while improving my analytical, technical, and professional skills.

Tool used (Development tools - H/w, S/w) : Hardware Office workstation / Laptop Software Microsoft Excel (Advanced formulas, VBA macros) Microsoft PowerPoint Microsoft Word Internal Deutsche Bank valuation systems Market data platforms: Markit (S&P Global), Reuters (LSEG), ICE

Objectives of the project : To perform Independent Price Verification (IPV) for securitized and distressed products. To ensure accuracy, transparency, and regulatory compliance in valuation processes. To identify and analyze valuation discrepancies and perform root-cause analysis. To assist in fundamental valuation of illiquid instruments using DCF methods. To improve operational efficiency through small-scale automation and cost-control mechanisms.

Major Learning Outcomes : Understanding of valuation control frameworks in global investment banks.
Practical exposure to securitized and distressed product pricing.
Application of DCF valuation techniques for illiquid instruments.
Knowledge of market data vendors like Markit,

Details of Papers/patents : N.A.

Brief Description of working environment, expectations from the company : The work culture promoted continuous learning, feedback, and professional growth. Employees were encouraged to ask questions, propose improvements, and take ownership of tasks.

Academic courses relevant to the project : Finance Minor Subjects were very relevant

PS-II Station : DBOI- CRDU, , Pune

Faculty

Name: Krishnamurthy Bindumadhavan .

Student

Name: TANISH KATARIYA .(2022A2PS1456H)

Student Write-up

PS-II Project Title: Qa-CRDU

Short Summary of work done during PS-II : The work I completed during my six-month internship at Deutsche Bank (DB) in the Credit Risk Data Unit-Quality Assurance team. The team, part of the global Risk division, focuses on ensuring the accuracy, completeness, and reliability of credit risk data for regulatory reporting and internal risk assessment. My role involved analyzing credit risk data month by month across global portfolios. I validated IFRS-9 staging (Stages 1, 2, and 3) and performed quality checks on important attributes like credit ratings, ECL and CLA values, and exposure measures. I also prepared reports for stakeholders. I collaborated closely with business units such as FIC Trading, Asset Management, and Capital Release Unit(CRU) to resolve discrepancies and maintain data integrity.

Tool used (Development tools - H/w, S/w) : Excel,Microstrategy

Objectives of the project : Quality Assessment of financial products of DB

Major Learning Outcomes : IFRS9 Principles, ECL models and calculations.

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The environment was pretty nice. Team was very good and helpful and taught me everything I asked.

Academic courses relevant to the project : FRAM, FOFA

PS-II Station : Deccan Fine Chemicals, Goa

Faculty

Name: Santosh Sopanrao Khandgave

Student

Name: MAYANK PRASAD(2022A1PS1447G)

Student Write-up

PS-II Project Title: Process Optimization

Short Summary of work done during PS-II : During PS-II, I gained hands-on exposure to the manufacturing of intermediates used in fine-chemical production within a batch-process environment. I learned how major equipment is constructed and operated, and observed the standard procedures followed by plant personnel. Significant time on the shop floor helped me understand real operating conditions for crystallizers, reactors, heat-transfer systems, and separation units. My first project focused on a crystallizer that consistently held batches longer than expected. I analyzed batch records and operator logs to study variations in cooling profiles, agitation speeds, and feed conditions. Based on these findings, I proposed process adjustments aimed at reducing batch time, along with equipment-level improvements—such as modifications to pipe sizing and flow arrangements—to achieve more uniform cooling. The second project involved evaluating the performance of a wiped-film evaporator. I reviewed key operating parameters including feed rate, temperature, vacuum level, and rotor speed, and suggested changes to improve film formation, heat-transfer efficiency, and product consistency. After completing the technical work, I contributed to support tasks such as preparing identification stickers for field equipment, which familiarized me with the plant layout. I also assisted senior

engineers with routine activities, giving me exposure to practical engineering workflows, inter-department coordination, and how projects progress from planning to execution.

Tool used (Development tools - H/w, S/w) : DCS (YOKOGAWA), Centum, Presentation, Excel, Power BI, Tabelu, Historian Trends (AVEVA), Query (AVEVA), Excel

Objectives of the project : Reduction of Batch Cycle Time, Optimising a Wiped Film Evaporator using batch data computation of Yield of a multi stage production chemical, Automation of Sequence of process to bring down the overall operational time

Major Learning Outcomes : HAZOP, Process Automation (YOKOGAWA), RCA, Data Analysis, Chemical Processes, office printer operation

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment is primarily office-based, supplemented by regular field visits to operational areas where hazardous chemicals are present. These visits provide valuable practical exposure and require strict adherence to safety protocols and established procedures.

The company places strong emphasis on self-driven learning. Due to limited staffing and the fast-paced nature of plant operations, continuous one-on-one guidance is not always feasible. Much of the learning therefore comes from interacting with plant personnel, observing ongoing operations, and taking initiative to clarify processes whenever possible. Developing a complete understanding of the systems takes time, so patience and persistence are important.

Task selection is also largely self-directed. While some routine or support-oriented assignments may arise, students are encouraged to take up work that contributes meaningfully to both their learning and the team's needs. At the same time, shifting operational priorities require flexibility and adaptability. Staying engaged and consistently contributing helps in securing tasks aligned with individual learning goals.

The experience could be further enhanced by a more structured onboarding process and clearer logistical support for interns—particularly during the initial settling-in period—as this would help students integrate more quickly and navigate the workplace more effectively.

Overall, the environment encourages initiative, curiosity, and responsibility. With active participation, it offers strong exposure to real industrial operations and the practical challenges of working in a chemical manufacturing setting.

Academic courses relevant to the project : Chemistry-1, SP1, PDP2, PDP1, FM, HT, Thermo,

PS-II Station : DeepDrishti.ai, Hyderabad

Faculty

Name: Vijayalakshmi Anand .

Student

Name: RUDRO CHATTERJI .(2022A3PS0568H)

Student Write-up

PS-II Project Title: Customer Segmentation and Email Marketing

Short Summary of work done during PS-II : I was asked to make a proper MERN Stack application for customer segmentation and email marketing sending(bulk) to different pharma clients across the country

Tool used (Development tools - H/w, S/w) : Mac mini , vs code

Objectives of the project : Create a suite systems catering to sending bulk email marketing systems and customer segmentation

Major Learning Outcomes : Full stack engineering with AI and automation

Details of Papers/patents : na

Brief Description of working environment, expectations from the company : Proper startup culture with exhaustive coding practices going in each and every system in the office

Academic courses relevant to the project : fdsa, dbms,ai,ml

Name: LIKITH SALLA .(2022A7PS0195H)

Student Write-up

PS-II Project Title: Integrated Warehouse Management, Forecasting and Scheduling System

Short Summary of work done during PS-II : During my six-month Practice School-II internship at Deepdrishti.Ai, I contributed to three major software systems that together digitise and optimize warehouse operations. The first and most extensive module was a full-stack Warehouse Management System (WMS), built using React, Go, and MongoDB. I developed 75+ REST APIs and multiple UI screens supporting workflows such as inventory tracking, order management, dispatch, reporting and user roles. After the WMS was stable, I worked on a Forecast Prediction module to automate stock decision-making. Several models—including XGBoost, Prophet and Linear Regression—were evaluated. Based on performance and stability, ARIMA was selected and integrated into the WMS, enabling automated alerts and dashboard-level forecasting. In the final phase, I developed a Maintenance Scheduler for equipment upkeep. This involved modelling worker and equipment datasets in MongoDB Compass and implementing scheduling logic to assign and track maintenance tasks through a calendar interface. This internship strengthened my full-stack development, database modelling and machine learning capabilities while offering deep exposure to professional software development and agile processes.

Tool used (Development tools - H/w, S/w) : Software: React.js, Go, MongoDB, MongoDB Compass, Swagger UI, Docker, GitLab, Jira Machine Learning: ARIMA, XGBoost, Prophet, Linear Regression Hardware: Standard development workstation provided by the company

Objectives of the project : Develop a scalable full-stack Warehouse Management System (WMS) using React, Go and MongoDB. Design and deploy 75+ REST APIs to support core warehouse workflows including inventory, orders, forecasting and scheduling. Research and implement forecasting models and deploy the best-performing model for stock prediction. Build a Maintenance Scheduler to streamline equipment task assignment and calendar-based tracking. Gain real-world exposure to agile methodology, code reviews, performance optimization and collaborative product development.

Major Learning Outcomes : Hands-on expertise in full-stack development using React (frontend), Go (backend) and MongoDB (database modelling).
Understanding of time-series forecasting, model comparison, hyperparameter tuning and production deployment.
Experience designing and man

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment at Deepdrishti.Ai was collaborative, fast-paced and learning-oriented. Interns were treated as core contributors to the product, with responsibilities similar to full-time engineers. Weekly reviews and sprint-based planning ensured clarity of goals and constant feedback. The company emphasized both technical depth and business understanding, encouraging interns to learn how warehouse operations function in the real world instead of focusing only on implementation. Expectations were set around punctual delivery, clean documentation, and independent problem solving. Overall, the company expected ownership, curiosity and adaptability while providing a supportive workplace that enabled both professional and personal growth.

Academic courses relevant to the project : Object-Oriented Programming
Database Systems
Machine Learning

Software Engineering

Probability & Statistics

PS-II Station : Delightful Gourmet Private Limited, Licious, Bengaluru

Faculty

Name: Ankur Pachauri

Student

Name: PIYUSH LALWANI(2022A1PS1448G)

Student Write-up

PS-II Project Title: Stickiness and loyalty for Licious as a brand

Short Summary of work done during PS-II : During my PS-II at Licious, I worked on three major charters — Share of Stomach (SOS), Product Differentiation, and WhatsApp Assisted Buying. I built behavioural segments, created 16 consumer buckets, analysed category depth, ARPU, OF, browsing patterns, created Venn models using Python, and co-developed the SOS model with Analytics to estimate each consumer's wallet size and share of stomach. I conducted 45+ consumer interviews to understand journeys, values, anxieties, and category preferences. I supported the differentiation charter by running blind tests for 11+ SKUs to identify real consumer-valued attributes versus over-engineered ones. I also contributed to the "Prove" project, researching and testing microbial and freshness validation tools (pH, bioluminescence, torimeter, ammonia tests). In the WA Assisted Buying project, I handled real-time customer queries, analysed 500+ interactions, and summarised category-level concerns — input that later helped shape the AI buying assistant we proposed during the company hackathon. Overall, the internship

gave me a complete view of growth, category strategy, consumer behaviour, and evidence-backed differentiation.

Tool used (Development tools - H/w, S/w) : ython (segmentation, venn analysis, category overlap) Excel / Google Sheets (bucket creation, analytics, revenue modelling) Licious Internal Dashboards

Objectives of the project : Build the Share of Stomach model to identify wallet size, consumption habits, category depth, and stickiness. Understand consumer behaviour through calls and behavioural cues. Support differentiation through blind tests, value delta analysis, and microbial "Prove" methods. Improve category-level nudges and CRM targeting. Support WhatsApp Assisted Buying to resolve real consumer queries and derive insights. Contribute to the hackathon by building an AI-driven buying assistant.

Major Learning Outcomes : Deep understanding of consumer behaviour & value drivers.
Ability to build data models (SOS, segmentation, category cohorts).
Conducting structured consumer interviews and synthesizing insights.
Cross-functional collaboration with Analytics, NPD, CX, a

Details of Papers/patents : none

Brief Description of working environment, expectations from the company : Licious provides a fast-paced, consumer-backwards, and highly collaborative working environment. I worked with the Growth & Category teams, where the culture strongly encourages questioning assumptions, validating insights with data, and understanding real consumer behaviour. My role involved close interaction with Analytics, Consumer Insights, Product, NPD, and Category Managers.
The work environment is transparent, ownership-driven, and structured around weekly OKRs. As an intern, I was given full freedom to drive key parts of the Share of Stomach (SOS) project — including building segmentation buckets, conducting 45+ consumer interviews, developing behavioural cohorts, and contributing to the SOS predictive model alongside the analytics team.
Cross-functional exposure was immense. I participated in blind tests, value delta studies, WhatsApp Assisted Buying, and the microbial "Prove" differentiation project. I also contributed to a hackathon where we conceptualized an AI-powered buying assistant based on real consumer query data.

The environment is highly supportive — my manager and senior stakeholders continuously pushed me to think deeper, validate assumptions, and structure the differentiation storyline for future use. Overall, the experience was enriching, intellectually stimulating, and provided me end-to-end exposure to real business problems.

Academic courses relevant to the project : Data Analytics
Basics of Python & SQL
Marketing Management
Consumer Behaviour
Statistics & Probability
Market Research Methods
Product & Category Management (elective/independent learning)

Name: AISHWARYA VERMA .(2022A1PS1679H)

Student Write-up

PS-II Project Title: Business Analytics

Short Summary of work done during PS-II : Worked upon dashboard making, fetched various metrics relevant to the firm such as traffic metrics, engagement metrics and retention on daily basis for generating insights for keh stakeholders. Worked upon pricing index analysis to benchmark the company's products against competitors. All this work was carried out using tools such as SQl and Python and Tableau.

Tool used (Development tools - H/w, S/w) : SQL, Python , Tableau, Google Sheets, MS Excel

Objectives of the project : To give data driven insights to keh stakeholders in e-commerce.

Major Learning Outcomes : Learnt various technical skills such as SQL, Python, Tableau, MS Excel Google sheets.

Details of Papers/patents : N.A.

Brief Description of working environment, expectations from the company : The working environment was quite good. Mentors were helpful in guiding throughout the PS. Moreover w.r.t work culture it was really nice, everyone was quite friendly and helpful.

Academic courses relevant to the project : CNI minor course and Data science minor courses such as (ML modeling AI, Python, DBMS)

Name: DHRUVJIT PATRA(2022A2PS1700P)

Student Write-up

PS-II Project Title: Optimizing and identifying bottlenecks in Licious supplychain

Short Summary of work done during PS-II : The work includes visiting various facilities of licious and understanding the supplychain. After understanding the supplychain I was asked to make various analysis on teh current datasets and even make new datacollection methods to collect data with minimal human involvment. Apart from these I was involved in the daily operations and i was asked to manage it and keep track of the KPI's

Tool used (Development tools - H/w, S/w) : python, numpy, pandas, matplotlib, scikitlearn,excel/google sheets, powerpoint,SQL

Objectives of the project : To optimize and improve KPI's

Major Learning Outcomes : learning about a nationwide chicken supply chain at licious

Details of Papers/patents : none

Brief Description of working environment, expectations from the company : The working environment is very good, and people working at Licious are very supportive and helpful. They treat you more as an employee and less as an intern. But the con is the working hours, although flexible, can often demand you stay longer and after working hours to finish the task.

Academic courses relevant to the project : analytics for supply chain, supply chain management, POM

Name: SAMRIDH KASHYAP(2022A3PS1005G)

Student Write-up

PS-II Project Title: Pricing Science and Experiments

Short Summary of work done during PS-II : I contributed to designing Licious's hyperlocal pricing engine by synthesising consumer insight, competitive intelligence, and experimental evidence. My work spanned qualitative research, hyperlocal price benchmarking, evaluation of targeted price interventions, and workflow design for automated customer assistance—strengthening data-driven decision making in premium positioning and adoption strategy.

Tool used (Development tools - H/w, S/w) : Microsoft Excel, Google Sheets, PowerPoint, JIRA/Confluence, Internal experimental dashboards

Objectives of the project : To design and validate hyperlocal pricing frameworks, understand customer price perception, benchmark competition at a micro-market level, analyse the effect of price interventions, and contribute to digital experience solutions such as the F&S automated assistant — enabling Licious to manage premium pricing scientifically while improving customer adoption and value delivery.

Major Learning Outcomes : Understanding of pricing psychology, experiment design, market benchmarking, customer research, cross-functional collaboration, data-driven decision making,

and early exposure to how product, operations, city teams, and category teams align to execute com

Details of Papers/patents : Not applicable — no research paper or patent was filed during the internship.

Brief Description of working environment, expectations from the company : Licious provides a fast-paced, execution-oriented, analytical working environment. Cross-team collaboration is natural, and interns are expected to independently structure problems, interact with stakeholders, and own outcomes

Academic courses relevant to the project : NA

Name: ARYAN RAE .(2022A4PS0875H)

Student Write-up

PS-II Project Title: Enhanced Serviceable Timings for Licious

Short Summary of work done during PS-II : I worked in product management, where I guided a product from idea to execution and continuous improvement. My role involved understanding user needs, defining the product vision, prioritizing features, and collaborating with engineering, design, operations, and marketing teams to turn concepts into real solutions. I used tools like user stories, roadmaps, and data analysis to make informed decisions and ensure alignment with business objectives. A core part of my work was iterating based on user feedback, performance metrics, and market conditions. Overall, I focused on ensuring the product solved meaningful problems, delivered value, and evolved effectively over time.

Tool used (Development tools - H/w, S/w) : Nil

Objectives of the project : Extend Working Hours of Licious

Major Learning Outcomes : Product Requirement Doc Writing

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : None, very good company culture

Academic courses relevant to the project : SAPM, BAV, FOFA DRM, FM

PS-II Station : Dentsu Global Services, Bengaluru

Faculty

Name: Sangeetha Viswanathan .

Student

Name: ADITYA PANDIT(2022A3PS0380P)

Student Write-up

PS-II Project Title: Building automations using AI

Short Summary of work done during PS-II : We worked on 4 projects, 3 internal and 1 POC for a client pitch, and all of them revolved around leveraging AI to build solutions and Automations, one leveraged AI to predict the Accuracy of result, one we built a data processing agent to process any kind of raw dataset, one we built a mapping bot agent which helps in internal data mapping and one we automated a few of the manual Invoicing processes

Tool used (Development tools - H/w, S/w) : Python, StreamLit, Langchain, Langgraph, UiPath, Excel Macros

Objectives of the project : To leverage AI to build solutions which help reduce time and weave AI into their company ecosystem

Major Learning Outcomes : Thinking big, and how to take a small project and scale it for a widespread use. Along with hard skills like Python, StreamLit, Langchain, Langgraph, UiPath and Excel Macros

Details of Papers/patents : We didn't write a paper

Brief Description of working environment, expectations from the company : We had a hybrid work culture and were busy with multiple projects so we were kept occupied through the entire duration of the PS, work hours are normal 10-6, they do not have the expectations for you to work overtime or something, so good work culture and good people

Academic courses relevant to the project : N/A

PS-II Station : Dezerv Investments - Analytics, Bengaluru

Faculty

Name: K Venkatasubramanian .

Student

Name: SATYA VENKATA GUDURU(2021B4A82503H)

Student Write-up

PS-II Project Title: Data-Driven Insights and Reporting in Wealth Management

Short Summary of work done during PS-II : During the Practice School-II internship at Dezerv Investments, the work involved supporting the data analytics and business intelligence function of a technology-driven wealth management platform. The role focused on building, maintaining, and validating analytical systems used for internal reporting and decision-making. The work included developing dashboards to track core business metrics such as assets under management, revenue, client acquisition, engagement, and churn. These dashboards were designed to present long-term trends and cohort-level insights in a clear and structured manner for leadership and internal teams. A significant portion of the role involved writing and maintaining SQL-based pipelines that combined data from multiple sources. Modular, CTE-driven queries were used to support scalable analysis and automated daily refresh cycles. The internship also involved constructing cohort-based analytical models to study client behaviour across different lifecycle stages. These models were used to analyse retention patterns, asset growth, revenue contribution, and overall engagement trends. In addition, the role included building payback and take-rate models to support profitability analysis, cost allocation, and long-term financial planning. Ongoing data validation and diagnostic work formed an important part of the responsibilities. This included identifying and resolving issues such as duplicate records, missing data, timing mismatches, and pipeline refresh inconsistencies. Ad-hoc tables and reports were also created to support finance and leadership teams with external-facing and investor-ready analysis. Overall, the role involved hands-on analytical work at the intersection of data, finance, and business reporting within a wealth management environment.

Tool used (Development tools - H/w, S/w) : SQL (Snowflake, Superset, Excel)

Objectives of the project : To improve visibility into client behaviour, revenue trends, and operational efficiency using structured data analysis.

Major Learning Outcomes : Gained practical experience in applying data analytics techniques to real-world financial and business problems.
Learned to identify, diagnose, and resolve data quality and pipeline inconsistencies.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Work environment was very welcoming, onboarding process was helpful in familiarising myself with the way the company works and the context around what kind of work is being done in each team. Expectations are reasonable, perhaps time-consuming in terms of effort but to a fair extent.

Academic courses relevant to the project : NA

Name: GAURANSH DUBEY .(2021B5AA2795H)

Student Write-up

PS-II Project Title: Data analyst

Short Summary of work done during PS-II : During my Practice School–II internship, I worked as a Data Analyst at Dezerv Instruments, where I gained hands-on experience in financial data analytics and client-focused reporting. My role involved working with large equity and fixed-income datasets to support portfolio management and investment decision-making. I extensively used SQL and Python to clean, transform, and validate data, and to optimize existing queries that were inefficient or prone to inconsistencies. A key part of my work was redesigning portfolio rebalancing logic to improve accuracy and reliability of outputs used in internal analysis and client reports. I also contributed to backend table maintenance and ensured data integrity across multiple data sources. In addition, I developed dashboards and analytical views that converted complex financial data into clear, actionable insights for stakeholders. I worked closely with cross-functional teams, including design and technology, to integrate analytics workflows into production-ready, client-facing systems. I also prepared structured decks and reports with refined timelines and metrics to improve clarity and communication for business users. Overall, the internship strengthened my technical skills in data analytics, enhanced my understanding of real-world business constraints, and improved my ability to communicate insights effectively to both technical and non-technical stakeholders.

Tool used (Development tools - H/w, S/w) : Snowflake and superset

Objectives of the project : To analyze, clean, and transform data to generate accurate insights, optimize processes, and support data-driven decision-making.

Major Learning Outcomes : Developed proficiency in data cleaning, transformation, and analysis using SQL and Python; strengthened problem-solving through logic validation and optimization; and gained experience translating analytical results into actionable insights for stakeholde

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment during my Practice School–II internship was professional, collaborative, and fast-paced, providing exposure to real-world industry practices. The organization fostered a data-driven culture where analytical rigor, accuracy, and accountability were strongly emphasized. Team members were approachable and encouraged open discussions, enabling effective knowledge sharing and continuous learning. The environment supported independent ownership of tasks while also offering guidance and feedback when required.

The company's expectations centered on maintaining high standards of data quality, logical consistency, and timely delivery of results. Interns were expected to understand business requirements, work with large datasets, and translate raw data into meaningful insights that could support decision-making. There was a strong focus on problem-solving, adaptability, and the ability to learn new tools or concepts quickly. Clear communication of findings to both technical and non-technical stakeholders was also considered important.

Overall, the internship provided a balanced blend of technical challenges and professional development. The work environment encouraged responsibility, critical thinking, and practical application of academic knowledge, preparing interns to operate effectively in an industry setting while contributing tangible value to ongoing projects.

Academic courses relevant to the project : NA

PS-II Station : Dezerv Investments - Engineering, Bengaluru

Faculty

Name: K Venkatasubramanian .

Student

Name: ADITI GOEL(2021B4A32175G)

Student Write-up

PS-II Project Title: Backend intern

Short Summary of work done during PS-II : During my six-month internship at Dezerv, I contributed to backend development for Systematic Investment Plan (SIP) management systems across three major areas: Automated Cron Jobs: Implemented two production cron jobs using Argo Workflows for automated SIP lifecycle management. The Auto Resume job runs daily at midnight to automatically reactivate paused plans based on predefined conditions, while the Auto Cancel job handles plan terminations at 11 AM daily. Both implementations use concurrent processing with Go goroutines, MongoDB transaction-safe operations, and Slack notifications for monitoring. Transaction Retrieval API: Built a new modular transaction API flow replacing legacy monolithic architecture. Implemented feature-flagged deployment strategy to enable gradual rollout while maintaining backward compatibility. The system splits transaction data fetching across multiple microservices—SIP instalments from the plan manager service and top-up transactions from the payments service—then aggregates and merges results by period. SIP Management APIs: Developed two end-to-end API flows for SIP operations. The List View API retrieves hierarchical SIP data by extracting client identifiers from user investment strategies and querying the plan database. The Form Load API implements dynamic entity resolution and fetches strategy-specific configuration including eligible dates, bank details, and validation rules with proper access controls.

Tool used (Development tools - H/w, S/w) : Golang, MongoDB, Git

Objectives of the project : Build transaction-safe automated cron jobs with concurrent processing capabilities Design feature-flagged API deployment strategy for zero-downtime rollouts and backward compatibility Ensure data consistency across distributed microservices architecture

Major Learning Outcomes : Mastered Golang for backend development with goroutines, MongoDB transactions, and RESTful API design
Learned Argo Workflows for cron job orchestration and production deployment practices
Gained expertise in microservices architecture, feature flags, and

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment at Dezerv was fast-paced, collaborative, and highly technical. As a fintech startup, the company operated with agility and maintained high standards for code quality and system reliability. The engineering team followed modern software development practices including code reviews, test-driven development, and continuous integration/deployment pipelines.

Academic courses relevant to the project : Object Oriented Programming (OOP)

PS-II Station : Dezerv Investments - Execution, Bengaluru

Faculty

Name: K Venkatasubramanian .

Student

Name: AMOGH AGRAWAL(2021B4A32870G)

Student Write-up

PS-II Project Title: Daily Insight

Short Summary of work done during PS-II : During PS-II at Dezerv Investments, contributed to API development by building and deploying new backend services, followed by QA cycles to fix data inconsistencies and ensure stability. Identified and resolved critical architectural bugs. Implemented the Goal Planning module in Flutter using BLoC for event handling, state transitions, member integration, and analytics validation . Executed VAPT security upgrades, including Android OS migration, OTP rate-limiting, removal of production endpoints, and analytics sanitization to enhance app security. These efforts spanned full-stack engineering, debugging, and security hardening over 149 days, providing hands-on exposure to financial platform development.

Tool used (Development tools - H/w, S/w) : Golang, Dart, Flutter, MongoDB, Postman, JSON, AWS S3

Objectives of the project : Develop and deploy the api for each daily insight by both backend and frontend

Major Learning Outcomes : Developed skills in backend API creation, deployment, and QA validation for production readiness. Gained expertise in diagnosing architectural flaws, through log analysis and system tracing. Mastered Flutter frontend development using BLoC architecture.

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment offered flexible working hours, which made it easier to manage personal and professional commitments within the day. At the same time, the overall workload and expectations were quite high, leading to a consistently stressful and high-pressure atmosphere.Interpersonal dynamics contributed significantly to this pressure. Team members were often not approachable, and even when doubts were raised, the responses could be taunting rather than supportive or

encouraging. Communication was sometimes indirect, with people keeping others in the loop without addressing issues straightforwardly, which created confusion and additional stress. While the general office environment was decent, these behavioural aspects and the unnecessary pressure at times overshadowed the positives.

Academic courses relevant to the project : Computer Programming, Object Oriented Programming, Data Structures and Algorithms, Database Management Systems

PS-II Station : Dezerv Investments - Product, Bengaluru

Faculty

Name: K Venkatasubramanian .

Student

Name: CHHAVI SONI(2022A7PS0639G)

Student Write-up

PS-II Project Title: 1click withdrawal automation

Short Summary of work done during PS-II : During PS-II, I worked as a Product Intern contributing to multiple problem statements across the withdrawal and investment journeys. I led the product design and logic formulation for the 1-Click Withdrawal flow, which consolidated fragmented systems into a single automated pipeline. This included preparing the PRD, UI flows, validation rules, API dependencies, exception handling, custody file logic, and payout decision checks. I also built and optimized Superset dashboards for investments, SIPs, and transaction monitoring by resolving data-join issues, improving schema mapping, and coordinating with the Data Engineering team. Additionally, I improved operational transparency by contributing to

issue-tracking frameworks using Jira, Slack integrations, and Google Forms, reducing ambiguity for Ops and enabling faster escalation. This internship provided hands-on product exposure covering requirement scoping, stakeholder alignment, data-driven decision-making, and delivery of production-ready features.

Tool used (Development tools - H/w, S/w) : Software: SQL, Apache Superset, Jira, Slack, Google Sheets/Forms, Figma, Postman • Hardware: Standard workstation

Objectives of the project : To streamline and automate the withdrawal execution process.

- To build dashboards improving visibility into investments and transactions.
- To design scalable checks, exception flows, and custody file generators for Ops.
- To improve cross-functional workflows through structured issue-tracking systems.

Major Learning Outcomes : End-to-end understanding of how financial product flows are designed, validated, and released.

- Experience in writing PRDs, creating UI/UX flows, and defining data/logic checks.
- Hands-on skills in SQL, Superset, API behavior analysis, and operationa

Details of Papers/patents : there is no paper

Brief Description of working environment, expectations from the company : The company offered a collaborative, fast-paced product environment with strong cross-functional interaction across Tech, Ops, Risk, Compliance, and Data Engineering. Interns were expected to take ownership of problem statements, document requirements clearly, analyze data independently, and drive solutions from ideation to release. The culture encouraged proactive communication, structured thinking, high-quality documentation, and continuous iteration based on stakeholder feedback. Regular standups and syncs enabled smooth alignment with engineering timelines and operational constraints.

Academic courses relevant to the project : • Database Systems

- Software Engineering
- Product Management (electives if applicable)
- Probability & Statistics
- Data Visualization / Analytics

- Algorithms & Data Structures (for technical understanding)

Name: SHUBH SANKALP TAPAS KUMAR DAS(2022A8PS0682G)

Student Write-up

PS-II Project Title: Engagement PM

Short Summary of work done during PS-II : I worked on increasing the DAU WAU MAU of the app using multiple integration and projects

Tool used (Development tools - H/w, S/w) : Snowflake , mixpanel, jira

Objectives of the project : Working in retention metrics

Major Learning Outcomes : Sql, product design , user personal analysis, devops and tech integration

Details of Papers/patents : Na

Brief Description of working environment, expectations from the company : Very good scope of growth

Academic courses relevant to the project : NA

PS-II Station : Dezerv Investments - QC, Bengaluru

Faculty

Name: K Venkatasubramanian .

Student

Name: ADITYA PRAKASH SHUKLA .(2021B5AA2304H)

Student Write-up

PS-II Project Title: Product Management & Dashboarding

Short Summary of work done during PS-II : During my internship at Dezerv Investments, I transitioned from a role focused on Data Analytics to Product Management, contributing significantly to the firm's internal reporting and operational efficiency. In the initial phase, I developed and enhanced the internal dashboarding infrastructure using Apache Superset and Snowflake SQL. I created six new strategy-specific dashboards—including Capital Reserve Equity, Liquid, and Arbitrage—to consolidate fragmented data into a unified view. This involved implementing critical performance metrics such as TWRR, XIRR, and client outperformance buckets, as well as integrating STP (Systematic Transfer Plan) metrics to monitor execution efficiency. Additionally, I built ancillary tools to automate tax calculations and model the impact of corporate actions. In the second half, I shifted my focus to Technical Product Management by authoring a comprehensive Product Requirement Document (PRD) for the "Management of COB (Change of Broker) Assets." To address the inefficiencies of manual rebalancing, I designed an end-to-end automated platform featuring a "OneModel Runner" for generating sell recommendations and a validation engine to check client eligibility. I also designed a centralized RM Dashboard to manage client consents and track trade execution. Overall, my work improved portfolio transparency and established a scalable foundation for automating complex business workflows.

Tool used (Development tools - H/w, S/w) : Apache Superset, Snowflake, G-Suite (Google Docs, Google Sheets, Google Slides)

Objectives of the project : Worked on Internal Dashboards for displaying relevant performance metrics of all Investment Strategies offered by Dezerv as well as headlined a project by creating a PRD (Product Requirement Document) for a new interactive Dashboard for Management of COB (Change of Broker) assets.

Major Learning Outcomes : Learned end-to-end dashbaord development cycle
Learned to model data for multiple Investment strategies and optimize SQL queries for faster execution, ensuring dashboards remained responsive even with large datasets.
Learned how to translate loose busines

Details of Papers/patents : No published papers/patents

Brief Description of working environment, expectations from the company : Everyone is super approachable and eager to help. Since the company is still in a relatively early stage and working it's way towards going public, there are no specific roles and everyone sort of does everything. The boundaries of your work would be very flexible and there would be no hard and fast requirements of your area of work. Make sure to interact with as many people as possible and get to know the internal workings of the company and get up to speed as quickly as possible. Everyone works at an incredible pace here and you don't want to be lagging behind. Ask a lot of questions and be curious. You won't be treated as an intern but as a full time employee, as will be the work that is given to you. You'll be expected to answerable and own full responsibility of anything related to your work.

Academic courses relevant to the project : prior knowledge of SQL basics is preferable, must have a background in economics principles (i didn't and had to learn trade market technicalities from scratch for the first month of my internship). having strong soft skills (communication and expression

PS-II Station : Divgi Torq Transfer Systems Ltd. Shirwal,, Satara

Faculty

Name: Ravi Shrikrishna Reosekar .

Student

Name: JANAKIRAM BOLLAPRAGADA .(2021B5A42366H)

Student Write-up

PS-II Project Title: Design and Optimization of Hybrid Industrial Fume Collectors

Short Summary of work done during PS-II : This project addresses the critical inefficiency and high maintenance costs associated with industrial oil fume collectors used for OKS-418 high-temperature grease. Existing sys- tems utilizing standard filtration suffer from rapid clogging. This report presents a comprehen- sive design for a hybrid fume collection system. The solution integrates three core technolo- gies: (1) Aerodynamic optimization of ductwork using 45◦ elbows to reduce pressure losses by approximately 40%; (2) A custom-designed two-stage Electrostatic Precipitator (ESP) to enhance fine particle charging; and (3) Optimizing HEPA filtration integration. Furthermore, following supplier consultations, a novel vapor condensation unit was introduced as a final design improvement. This stage is designed to cool the exhaust stream below its dew point, forcing volatile oil vapors to coalesce into drainable droplets before they can foul the HEPA media. Theoretical modelling demonstrates that this hybrid approach extends filter lifespan by over 200% and optimizes energy consumption.

Tool used (Development tools - H/w, S/w) : Siemens NX, MATLAB, Ansys

Objectives of the project : To enhance the performance of oil fume collectors

Major Learning Outcomes : . Learnt the fundamentals of duct design and HVAC
. Gained knowledge on modern methods of design and analysis in the industry
. Understood the value of performing cost and ROI analysis using power laws for fans
. Attended training sessions on common indu

Details of Papers/patents : This project addresses the critical inefficiency and high maintenance costs associated
with industrial oil fume collectors used for OKS-418 high-temperature grease. Existing systems utilizing standard filtration suffer from rapid clogging. This report p

Brief Description of working environment, expectations from the company : Good opportunity with a lot of freedom to conduct research on contemporary technology used in most manufacturing plants. The work culture can be described as a laid back approach to common failure modes. The work load truly depends on how much work the individual wants.

Academic courses relevant to the project : Fluid Mechanics
Thermodynamics
Heat Transfer
Materials Science
CAD/CAE/FEA

Name: ADARSH ARYA .(2022A4PS1431H)

Student Write-up

PS-II Project Title: Documentation of special cutting tool management for gear manufacturing

Short Summary of work done during PS-II : During my Practice School-II internship at Divgi TorqueTransfer Systems, Pune, I worked on the documentation and consolidation of special cutting tool management practices used in gear manufacturing. The primary objective of the project was to convert an earlier abstract and limited manual into a comprehensive, structured, and practical technical reference. The work involved detailed study and documentation of major special cutting tools including shaper cutters, hobs, broaches, shaving cutters, spline rolls, thread rolls, and gun drills. For each tool family, information was compiled on design, types, applications, operating principles, and tool classifications. Significant effort was devoted to collecting and

integrating cutter drawings, tool images, inspection reports, re-sharpening records, machine specifications, and relevant industrial standards (DIN, ISO, AGMA). Regular shop-floor visits and interactions with engineers, operators, and quality personnel helped in understanding real production practices, tool behavior, and machine limitations. Technical data was gathered from machine manuals, inspection sheets, supplier catalogues, and internal documents, and was reorganized into a systematic and easy-to-use manual format. The final outcome of the project is a consolidated cutting tool manual that supports better tool understanding, standardization of documentation, improved training of new personnel, and more informed decision-making in production, quality, and tooling functions. The manual is intended to assist Divgi TTS in enhancing productivity, maintaining consistent gear quality, and strengthening long-term tool management practices.

Tool used (Development tools - H/w, S/w) : Hardware: Gear shaping, hobbing, shaving, broaching, rolling, and gun drilling machines (observational and data collection) Measuring and inspection equipment such as profile testers, lead testers, and runout inspection setups (reference to reports) Toolr

Objectives of the project : The objective of this manual is to provide a complete, structured, and easy-to-use reference for all special cutting tools used in gear manufacturing, helping improve tool understanding, standardize documentation, support training, and enhance accuracy, efficiency, and decision-making on the shop floor.

Major Learning Outcomes : This project provided practical exposure to special cutting tools used in gear manufacturing, including their design, applications, inspection, and re-sharpening practices. It enhanced understanding of machine specifications, standards, and real shop-floo

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : Divgi TorqueTransfer Systems, Pune, provides a professional and technically rich working environment with strong emphasis on quality, safety, and precision manufacturing. The shop floor is well-structured, equipped with advanced gear manufacturing machines, and supported by systematic inspection and quality control practices. Engineers, supervisors, and operators work collaboratively, creating an atmosphere that encourages learning and technical discussions.

During the internship, exposure to production, toolroom, and quality functions helped in understanding real industrial workflows and tool usage practices. The company expected a disciplined, professional approach, adherence to safety norms, and respect for confidentiality of technical data. The key expectation from the project was to develop a detailed and structured manual for special cutting tools that could be practically used for reference, training, and standardization. Overall, the environment provided an excellent platform to apply theoretical knowledge to real manufacturing scenarios and gain meaningful industrial experience.

Academic courses relevant to the project : 1) Manufacturing Processes
2) Materials Science and Engineering

PS-II Station : Divgi TorqTransfer Systems Pvt. Ltd. - Bhosari,, Pune

Faculty

Name: Ravi Shrikrishna Reosekar .

Student

Name: RAGHAV MODI(2022A4PS1456G)

Student Write-up

PS-II Project Title: Designing 3-Speed Hybrid Transmission

Short Summary of work done during PS-II : Work concentrated on understanding and optimizing EV drivetrains and DHT (Dedicated Hybrid Transmission) architectures. On the EV side, the focus was on the full path from battery and inverter to e-motor, reduction gearbox and differential, then linking this to transmission error, NVH and thermal limits through MASTA, ANSYS and CFD-based studies. Parallel work on DHTs covered benchmarking multiple 3-speed

series, parallel and series-parallel layouts, evaluating efficiency, cost, packaging and control flexibility. Using DFA/DFM (Boothroyd-Dewhurst style) criteria, different EV transmission and hybrid layouts were compared for manufacturability and assembly complexity, leading to a structured template and quantified scores. Across the numerous weeks, the main outcome was a systems-level understanding of how architecture choice (EV single/multi-speed vs DHT layouts), micro-geometry, structural strength, fatigue, vibration and lubrication/thermal behavior all interact, and how to turn this into concrete design recommendations for the company.

Tool used (Development tools - H/w, S/w) : MASTA, ANSYS, MATLAB, Siemens NX & Particleworks

Objectives of the project : Electric Drivetrain Development & Benchmarking of DHT Architectures

Major Learning Outcomes : Learnt how modern DHTs integrate two power sources (ICE + one or two e-machines) with compact gearsets to switch between EV, series, parallel and blended modes for efficiency and performance. EV drivetrain study deepened understanding of the complete chai

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The work environment was unstructured and self-driven, with no dedicated laptops or devices provided. There was plenty of free time, so learning depended heavily on persistence, initiative and proactively seeking guidance, offering high exposure for motivated individuals but limited support for passive learners.

Academic courses relevant to the project : Design of Machine Elements, AMOS & CAD

PS-II Station : Dixon Technologies (India) Ltd., Noida

Faculty

Name: Neha Vinayak .

Student

Name: KRITIKA DHANKHAR(2022AAPS0250P)

Student Write-up

PS-II Project Title: AI CHATBOT

Short Summary of work done during PS-II : Developed an AI-powered chatbot using Python and Gemini API with a clean, responsive web UI. Integrated MongoDB to store employee details and chat history, ensuring smooth interaction between the UI, backend, and database. The project demonstrates end-to-end full-stack development and intelligent response generation.

Tool used (Development tools - H/w, S/w) : Technologies: Python, HTML, CSS, JavaScript APIs: Google Gemini API Database: MongoDB Other Tools: VS Code, Postman, Git/GitHub, Microsoft Teams

Objectives of the project : Dixon owe Chatbot

Major Learning Outcomes : Gained hands-on experience in building end-to-end AI applications using Python and modern APIs. Improved understanding of NLP, prompt engineering, and chatbot response optimization.Strengthened skills in database design by managing structured data using M

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : As an SDE intern, the working environment at Dixon Technologies India Ltd was collaborative, learning-driven, and focused on building practical technical skills. I worked closely with the software and

automation teams, where I was encouraged to explore real problem statements, understand system requirements, and contribute to ongoing development tasks. The environment promoted independent thinking, clean coding practices, and regular feedback from mentors. I expected an environment that supports skill development, provides clarity on tasks, encourages teamwork, and gives interns a chance to contribute to real projects while improving their technical confidence.

Academic courses relevant to the project : OOP

PS-II Station : Duratech Manufacturing Private Limited, Raipur

Faculty

Name: Shashank Mohan Tiwari .

Student

Name: AAYUSH MITTAL(2021B2A40894P)

Student Write-up

PS-II Project Title: Project Phoenix: Modular Office Solutions

Short Summary of work done during PS-II : led "Project Phoenix," Duratech's strategic initiative to enter the modular office furniture market. Phase 1 involved conducting a SWOT analysis and competitive benchmarking against legacy brands like Wipro and Godrej. Phase 2 focused on execution: I optimized presence on IndiaMART and Amazon Business, achieving a 35% reduction in lead response time through WhatsApp automation (Bytespeed). I also created a suite of 18 sales enablement brochures and a 3-tier product catalogue. The project successfully established a scalable operational engine for Duratech's B2B sales.

Tool used (Development tools - H/w, S/w) : ndiaMART Seller Panel, Amazon Seller Central, Microsoft Excel (Advanced Data Analysis), PowerPoint, Google Analytics, SEO Tools (SEMRush/Ahrefs)

Objectives of the project : To develop and execute a Go-to-Market (GTM) strategy for Duratech's entry into the modular office furniture segment. This included conducting market and competitor analysis, building a B2B sales funnel, optimizing digital presence on marketplaces (IndiaMART, Amazon Business), creating sales enablement assets, and automating customer communication.

Major Learning Outcomes : Strategic Execution, B2B Marketing, Data Analysis

Details of Papers/patents : Internal Strategy Reports submitted to management

Brief Description of working environment, expectations from the company : The environment at Duratech is fast-paced and hands-on, typical of a growing manufacturing firm. As an intern, the expectation was not just to strategize but to execute operational tasks. I worked closely with cross-functional teams (production, sales, and design) to translate engineering capabilities into market-ready assets. The management valued data-driven insights and expected full ownership of "Project Phoenix," from initial market research to the final deployment of automation tools and sales collateral.

Academic courses relevant to the project : Principles of Management, Marketing Management, Supply Chain Management, Technical Report Writing, and Operations Management.

Name: SAMAIRA JAIN(2022A3PS0394P)

Student Write-up

PS-II Project Title: Project Phoenix

Short Summary of work done during PS-II : During my Practice School-II internship at Duratech Manufacturing Pvt. Ltd., I worked on Project Phoenix, a strategic initiative focused on the company's entry into the modular office furniture market. The project involved both strategic groundwork and execution-oriented deliverables across the entire internship duration. I began by conducting extensive market research and competitor analysis covering major players such as Godrej Interio, Nilkamal, Wipro Furniture, and Durian. This helped identify a market gap in mid-range modular office solutions that balance durability, design, and cost efficiency. Based on these insights, I developed Ideal Customer Profiles, performed SWOT analysis, and formulated a digital-first Go-to-Market strategy supported by a structured B2B sales funnel. In the later phase, I focused on executing the GTM plan through marketplace optimisation and digital enablement. This included optimising 30+ product listings on IndiaMART, creating A+ content for Amazon Business, developing SEO keyword maps, and drafting long-form content for organic growth. I also created sales enablement assets such as product brochures, technical specification sheets, modular catalogue structures, and pricing estimation frameworks. Additionally, I mapped end-to-end user journeys for lead handling, post-booking communication, and product comparison flows, and analysed lead funnel data to propose qualification filters and KPIs. The internship provided hands-on exposure to B2B strategy, digital marketing, and operational execution in a manufacturing-led organisation.

Tool used (Development tools - H/w, S/w) : IndiaMART Seller Platform, Amazon Business Seller Central, Microsoft Excel, Google Sheets, Google Analytics (basic), Canva, PowerPoint, SEO tools (keyword research), CRM tools (lead tracking), Internal ERP data

Objectives of the project : To design and execute a comprehensive Go-to-Market (GTM) strategy for Duratech Manufacturing Pvt. Ltd.'s entry into the modular office furniture segment. The project aimed to analyse the market and competitive landscape, identify ideal customer profiles, strengthen Duratech's digital and marketplace presence, develop sales enablement assets, and design scalable user journeys to support lead generation, conversion, and long-term growth in the B2B institutional furniture market

Major Learning Outcomes : Understanding of the modular office furniture ecosystem and institutional B2B procurement cycles
Hands-on experience in GTM strategy formulation and execution

Practical exposure to B2B marketplace optimisation and SEO
Experience in creating sales enabl

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at Duratech Manufacturing Pvt. Ltd. was professional, collaborative, and execution-driven. As a manufacturing-led organisation, the workplace encouraged hands-on involvement, cross-functional coordination, and practical problem-solving. I closely interacted with teams from marketing, sales, design, and operations, which provided holistic exposure to how strategic decisions translate into on-ground execution. The leadership was approachable and encouraged interns to take ownership of deliverables while maintaining clear accountability.
The company fostered a culture of learning through regular discussions, reviews, and feedback sessions. I was given access to real business data, ongoing projects, and operational workflows, enabling me to understand market dynamics, customer requirements, and internal processes in depth. The expectations from the company were clearly communicated, with a strong emphasis on quality of work, timely execution, and analytical reasoning behind recommendations.
Duratech expected interns to be proactive, adaptable, and self-driven, particularly while working on multi-phase projects such as market research, digital optimisation, and sales enablement. The environment promoted independent thinking while also encouraging collaboration for complex problem statements. Overall, the experience provided a balanced mix of autonomy, responsibility, and mentorship, allowing me to apply academic concepts to real-world business challenges in a structured and supportive professional setting.

Academic courses relevant to the project : Principles of Management

PS-II Station : e6data,, Bengaluru

Faculty

Name: Srinath R.Naidu .

Student

Name: SUYASH KHARE(2021B2A43021G)

Student Write-up

PS-II Project Title: CORE FUNCTIONS

Short Summary of work done during PS-II : This internship delivered transformative learning across technical and professional domains. I achieved production-level proficiency in Rust programming, mastering memory management and systems optimization to deliver 62.5% performance improvements in migrated components. I gained deep expertise in distributed systems architecture, query optimization techniques (predicate pushdown, join reordering, adaptive execution), and modern data engineering tools (Trino, Spark, Parquet, ZSTD compression). Beyond technical skills, I developed critical professional competencies including executive-level communication, multi-project management across four concurrent client environments, production incident response, and cross-functional team coordination. The experience transformed my understanding of software engineering from academic theory to real-world practice, teaching me how to balance technical excellence with business value, manage complexity at scale, and deliver measurable impact in high-stakes production environments. Most importantly, I learned to embrace uncertainty, fail fast and learn faster, and approach unfamiliar challenges with confidence backed by rigorous data-driven analysis.

Tool used (Development tools - H/w, S/w) : The internship utilized a comprehensive technology stack centered around modern data infrastructure and systems programming. Primary development was conducted on Linux workstations (Ubuntu 24.04) and AWS cloud infrastructure (EC2, S3) using Rust, Python,

Objectives of the project : The primary objective of this six-month internship was to contribute to E6data's high-performance query engine through systems-level optimization, strategic technology evaluation, and production engineering support. The project aimed to develop

expertise in Rust programming and distributed systems while supporting enterprise client acquisition through rigorous performance benchmarking against competitors like Databricks. Additionally, the internship focused on delivering production-grade solutions across multiple Fortune 500 client environments (InMobi, Zepto, Nielsen, JPMC) to improve system reliability, performance, and cost efficiency while developing professional competencies essential for senior engineering roles.

Major Learning Outcomes : This internship delivered transformative learning across technical and professional domains. I achieved production-level proficiency in Rust programming, mastering memory management and systems optimization to deliver 62.5% performance improvements in mig

Details of Papers/patents : NONE

Brief Description of working environment, expectations from the company : E6data Computing provided a fast-paced, startup environment where innovation and impact were prioritized over hierarchy. The company's flat organizational structure enabled direct access to leadership, including the CTO and CFO, fostering a culture of open communication and rapid decision-making. The engineering team comprised highly skilled professionals working on cutting-edge distributed systems and query optimization, creating an intellectually stimulating atmosphere that valued technical excellence and data-driven approaches.

The working environment was collaborative yet demanding, with engineers expected to take ownership of their projects from conception to production deployment. Cross-functional teams worked closely together, breaking down silos between development, operations, and business development. The company embraced remote-friendly practices with flexible working hours, though the pace was intense, often requiring quick pivots to address client needs or production issues.

Academic courses relevant to the project : It included courses which I self studied as I am from mechanical background but computational mechanics was something I found similar.

PS-II Station : EarnIn, Bengaluru

Faculty

Name: Raja Vadhana Prabhakar .

Student

Name: SHOURYA KALPESH KOTHARI(2021B3AA1526G)

Student Write-up

PS-II Project Title: Enhancing Observability and Reliability with Vector and CI/CD Workflows

Short Summary of work done during PS-II : During my PS-II internship at EarnIn, I worked on two major initiatives aimed at improving the company's observability, reliability, and operational efficiency. The first focused on strengthening the Vector logging pipeline, a core component used for parsing, enriching, and redacting production logs. I designed and implemented comprehensive unit tests for all Vector transforms, achieving 100% coverage and integrating these tests into a GitHub Actions CI workflow. This automation ensured that every code change was validated before deployment, significantly reducing the risk of logging regressions. I also identified and safely removed 16 unused transforms, simplifying the pipeline and improving maintainability. The second initiative centered on automating Datadog Service Level Objectives (SLOs). I built an automated workflow that generates standardized latency SLOs, constructs correct queries, applies recommended thresholds, and publishes SLOs directly to Datadog with Slack notifications. I additionally created a user-facing dashboard for self-service SLO creation and developed a script to retroactively onboard services lacking SLOs. Beyond the technical contributions, I gained valuable exposure to Scrum—including standups, planning, refinement, and retrospectives—and collaborated closely with globally distributed teams across the US and Bangkok. This internship provided deep learning in observability, automation, CI/CD, and large-scale engineering practices.

Tool used (Development tools - H/w, S/w) : Vector – For log parsing, transformation, enrichment, and PII redaction using VRL. Vector Test Framework (YAML/TOML) – To define deterministic unit tests for transforms. GitHub Actions – For CI/CD automation and running Vector tests on every pull reques

Objectives of the project : Automate Validation of Vector Transforms Ensure log parsing, redaction, and enrichment logic is correct by building a complete unit testing framework for all Vector transforms. Establish CI/CD-Based Reliability for Logging Pipeline Integrate automated Vector tests into GitHub Actions so that every PR is validated before deployment, preventing regressions in production logging. Clean Up and Optimize the Vector Pipeline Identify and remove unused or dormant transforms to reduce configuration complexity and improve maintainability. Automate Datadog SLO Creation Build workflows and dashboards to automatically generate standardized latency SLOs for services across the organization. Improve Organization-Wide Observability and Reliability Metrics Enable consistent SLO adoption, reduce manual effort, and enhance visibility into service performance.

Major Learning Outcomes : Gained hands-on experience with Vector, VRL transforms, and building automated test suites.
Learned to design and implement CI/CD workflows using GitHub Actions.
Developed strong understanding of observability, structured logging, and reliability engine

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : EarnIn provided an exceptionally supportive and dynamic working environment that greatly enriched my internship experience. The company follows a hybrid work culture, allowing employees to balance in-office collaboration with the flexibility of remote work. This structure created an atmosphere where productivity, autonomy, and well-being were equally prioritized. On in-office days, I had the opportunity to engage directly with engineers and mentors, participate in whiteboard discussions, and experience the fast-paced problem-solving that happens within SRE and platform teams.
Given EarnIn's globally distributed workforce across the US, Bangalore, and Bangkok, much of the collaboration operates through asynchronous communication. I regularly worked with engineers across multiple time zones, which taught me valuable skills in clear documentation,

thoughtful messaging, and managing work that progresses around the clock. Async workflows allowed for deeper focus time while still enabling smooth coordination with teams in other regions. What stood out most was the company's friendly and inclusive culture. Every team member—from senior engineers to managers—was approachable and invested in helping me learn. I felt encouraged to ask questions, participate in discussions, and take ownership of meaningful work. The welcoming environment made it easy to integrate into the team despite the distributed setup. Regular standups, planning meetings, and casual team interactions helped me feel connected and supported throughout the internship.

Overall, the working environment at EarnIn fostered technical growth, collaboration, and confidence, making it an ideal place to learn and contribute as an intern.

Academic courses relevant to the project : Computer Programming, Operating Systems

Name: VIDIT GOYAL(2021B4AA2944G)

Student Write-up

PS-II Project Title: Data Science Contractor

Short Summary of work done during PS-II : During my PS-II internship at EarnIn, I worked on three major automation and AI-driven projects that aimed to improve operational efficiency, accuracy, and scalability within key internal workflows. My primary contribution was in enhancing automation pipelines that process financial documents and customer-submitted information. This included improving extraction accuracy, refining decision-making logic, and ensuring workflows could handle real-world variations in data. One of the major areas of work involved optimizing an existing automation system by introducing concurrency and threading to reduce processing delays and prevent race conditions between automated handlers and human agents. This significantly improved reliability and helped stabilize the automation pipeline. I also contributed to the development of a new workflow designed to interpret complex user-submitted data, extract structured fields from it, and apply detailed business rules to generate consistent outcomes. This work involved reading and understanding a detailed product requirements document (PRD),

mapping user stories into technical logic, and designing fallback mechanisms for ambiguous or incomplete data. In addition, I worked on a data-driven project involving large-scale information extraction from external sources and used AI models to generate structured insights. This required building a multi-step pipeline involving web-scraping, caching, model prompting, and cost tracking. Across all projects, I gained hands-on experience in workflow design, large-language-model integration, debugging, performance optimization, and preparing systems for shadow-mode and production readiness. The internship allowed me to apply technical knowledge to real production systems while making meaningful contributions to automation reliability and decision accur

Tool used (Development tools - H/w, S/w) : 1. Programming & Workflow Development Python (core development language) Threading & Concurrency libraries LangGraph (workflow/state-machine orchestration) 2. AI & Model Integration OpenAI GPT-4.x models Claude Vision models Prompt engineering fram

Objectives of the project : The three projects collectively aimed to enhance automation, improve decision-making accuracy, and support data-driven functionality across different parts of the system. The first project focused on streamlining an existing operational workflow by reducing manual effort and increasing processing speed. The second project aimed to design a new automated pipeline that could handle complex inputs reliably and support future scalability. The third project centered on creating an intelligent data-processing system capable of generating meaningful insights from raw information. Together, these initiatives strengthened overall efficiency, improved user experience, and laid the groundwork for more advanced automation and analytical capabilities.

Major Learning Outcomes : I learned how to design and optimize multi-step automation workflows, including data extraction, validation, and decision logic. I gained hands-on experience with LLM-based structured output, prompt engineering, and handling inconsistencies.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Work environment is very nice everyone is very nice and supportive and work pressure is not much.

Academic courses relevant to the project : Machine Learning, Artificial Intelligence, GenAI

Name: NITIN NAYAN(2022A8PS1244P)

Student Write-up

PS-II Project Title: Bank Transaction queue Automation, pSEO job prediction,paystub queue Automation

Short Summary of work done during PS-II : Developed an AI-driven bank transaction validation system using LangGraph and LLMs to automate screenshot-based financial verification. Implemented robust prompt engineering, confidence-based decisioning, and MLflow evaluation frameworks to ensure accurate, scalable, and reliable payroll validation workflows

Tool used (Development tools - H/w, S/w) : GitHub, databricks,aws,datadog,mlflow

Objectives of the project : To reduce manual work and save cost

Major Learning Outcomes : Generative Ai

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment was highly collaborative, fast-paced, and innovation-driven, with a strong focus on building reliable, production-ready AI systems for real-world financial use cases. Teams encouraged open communication, technical discussions, and ownership of end-to-end solutions, allowing engineers to work closely with product, data, and platform teams. There was a strong emphasis on code quality, scalability, security, and accuracy, especially given the sensitivity of financial data and decision-making workflows.

The company expected engineers to be proactive, adaptable, and comfortable working with evolving technologies such as LLMs, cloud platforms, and MLOps tools. A key expectation was

the ability to design robust solutions, handle edge cases, and continuously improve system performance through experimentation and evaluation. Engineers were encouraged to think critically, propose improvements, and take responsibility for delivering measurable impact. Overall, the environment fostered continuous learning, accountability, and practical problem-solving, enabling teams to build high-impact AI solutions efficiently.

Academic courses relevant to the project : OOP

PS-II Station : EDHAA INNOVATIONS PRIVATE LIMITED - Software Engineering, Mumbai

Faculty

Name: Swarna Chaudhary .

Student

Name: AABIR SHUBHAJIT SARKAR(2022A3PS0473P)

Student Write-up

PS-II Project Title: Design and Feature Enhancements for a Medical Test Management System

Short Summary of work done during PS-II : During PS-II, I worked on enhancing a Medical Test Management System used to manage patients, laboratory test results and reporting workflows in a clinical setting. The application follows a monolithic architecture with a React + TypeScript frontend, Node.js/Express backend and MongoDB Atlas as the database. My primary contributions were in four areas. First, I led a clean design transformation of the web UI by introducing a consistent medical design language, centralized styles and card-based layouts, turning a cluttered interface into a professional clinical dashboard. Second, I redesigned the

Patient List and Test Results experience by simplifying actions, adding a “View Results” flow and implementing color-coded result cards with summary statistics for normal, abnormal and critical tests. Third, I built a dedicated Results module with sub-tabs for Excel and PDF exports; using jsPDF and autoTable, I generated professional-grade PDF lab reports with patient headers, gender-specific reference ranges and proper pagination. Finally, I implemented a one-click UART auto-import pipeline via Google Sheets, where CSV data from lab devices is validated, mapped into patients, test types and test results, and stored in MongoDB with detailed import statistics. Alongside feature work, I focused on robust testing, role-based access control, and documenting challenges, outcomes and future scope.

Tool used (Development tools - H/w, S/w) : Software / Frameworks: React, TypeScript, Node.js, Express, MongoDB Atlas, Mongoose Libraries: jsPDF, jsPDF-autoTable, JWT libraries, CSV parsing libraries Developer Tools: VS Code, Git/GitHub, Postman, Browser DevTools, Render (deployment) Integration

Objectives of the project : Modernize an existing medical test management application to match professional hospital software standards. Improve clarity, speed, and reliability of patient test data visualization and reporting. Centralize and standardize PDF-based lab reports within a dedicated Results module. Automate data flow from UART-based lab devices into the central database via Google Sheets.(To list some)

Major Learning Outcomes : Practical experience in designing and implementing a full-stack healthcare application from UI to database.
Deeper understanding of secure system design, including JWT authentication, RBAC, and multi-tenant data isolation.
Hands-on exposure to integrati

Details of Papers/patents : Bio-Cheq device designed to carry out tests in the fraction of cost time and effort

Brief Description of working environment, expectations from the company : The working environment at Edhaa Innovations was that of a fast-paced, early-stage healthtech startup with a strong focus on ownership and practical problem-solving. As an intern, I was treated as a core

team member and given end-to-end responsibility for significant modules of the Medical Test Management System, from design discussions to deployment and testing.
The company expected me to quickly understand an existing production codebase, follow coding standards and architectural patterns already in use, and deliver incremental improvements without breaking current workflows. I was encouraged to propose design ideas, validate them with mentors and iterate based on feedback. Regular check-ins with my industry mentors and PS faculty ensured that my work aligned with both organizational needs and academic expectations. Overall, the culture emphasized initiative, communication and learning: I was expected to document my work clearly, raise issues early, and collaborate closely with mentors and other interns. The environment was supportive yet challenging, which helped me grow technically and professionally.

Academic courses relevant to the project : Computer Programming

PS-II Station : Eightfold AI India Pvt. Ltd., Noida

Faculty

Name: Febin A Vahab .

Student

Name: SURAJ PAL(2021B2A72755P)

Student Write-up

PS-II Project Title: Agentic Platforms (earlier known as AI Recruiter): AI Companion and AI Interviewer

Short Summary of work done during PS-II : During my PS-II at Eightfold.ai, I worked on improving the AI interview platform across interviewer assistance, system performance, and analytics. I contributed to building AI Companion, a tool that joins scheduled interviews, records media, generates live transcripts, and assists interviewers in real time through configurable nudges and on-demand responses. The system also automates post-interview feedback generation using transcripts, significantly reducing manual effort for interviewers. I additionally worked on reducing latency in AI-driven interview workflows by parallelizing independent AI calls, enabling streaming of interview questions, and pre-generating and caching questions before interview start. These changes improved responsiveness and reduced p90 latency from 18 seconds to 5 seconds, enhancing both interviewer and candidate experience. Alongside this, I enhanced interview analytics by adding comprehensive event logging, updating database schemas, creating structured datasets, and building dashboards using AWS QuickSight. This enabled better visibility into interview usage, system performance, and operational trends, supporting data-driven decision-making and improving the overall reliability and scalability of the platform.

Tool used (Development tools - H/w, S/w) : React, TypeScript, Python Flask, REST API, Relational DBs, PostgreSQL, AWS QuickSight

Objectives of the project : To create and maintain AI powered tools to help in recruitments

Major Learning Outcomes : Applied theoretical knowledge to production-scale AI interview and proctoring systems, got experience in Full stack engineering (responsive design, accessibility, modular TypeScript
components, REST APIs, Flask, LLMs etc), gained experience in agile workf

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The working environment at Eightfold.ai was collaborative, fast-paced, and engineering-driven, with a strong emphasis on ownership and impact. I worked closely with experienced engineers and mentors who provided regular code reviews, and feedback. The company encouraged independent problem-solving while maintaining high standards for code quality and system reliability. I was

expected to take end-to-end ownership of tasks, adhere to deadlines, and deliver scalable, production-ready solutions aligned with real-world product requirements.

Academic courses relevant to the project : Database Systems, Operating Systems, Computer Networks, DSA

PS-II Station : Eltropy - Software Development, Bengaluru

Faculty

Name: Monali Tushar Mavani .

Student

Name: DIVYANSH ANAND SAXENA(2022A7PS1173P)

Student Write-up

PS-II Project Title: Backend Infrastrucure in Golang and Grails

Short Summary of work done during PS-II : During my PS-II internship, I worked on strengthening the security architecture of a financial SaaS platform serving over 1,000 enterprise clients. My primary responsibility was to identify, analyze, and eliminate critical vulnerabilities across the system's API integration layer. I conducted comprehensive security assessments spanning 50+ REST endpoints and discovered attack vectors including CSRF, XSS, SSRF, malicious file uploads, and insecure authentication flows. To mitigate these risks, I architected and deployed an enterprise-grade security framework featuring centralized input validation, content-security policies, file-sanitization pipelines, request-rate throttling, and multi-layered authorization checks. I collaborated closely with backend teams to redesign security-sensitive components, reviewed code for compliance, and implemented automated test cases to prevent

regression vulnerabilities. Post-deployment, the platform achieved zero security incidents while securely handling 50,000+ daily API requests. My work significantly improved system resilience, reduced operational risk exposure, and established a scalable foundation for future product expansion.

Tool used (Development tools - H/w, S/w) : Golang,GIt,Windsurf,Redis,AWS,Docker

Objectives of the project : Solve production issues related to Security Vulnerabilities due to legacy code

Major Learning Outcomes : Learnt Golang,Grails,Opentelemetry, Docker and how does microservices work in a backend architecture.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at the company was highly collaborative, professional, and conducive to learning. I was part of a cross-functional engineering team where developers, QA specialists, and product managers worked in close coordination. The workplace culture encouraged ownership, clear communication, and proactive problem-solving. Regular team meetings, code reviews, and knowledge-sharing sessions provided continuous technical and professional exposure. My mentors and teammates were approachable and supportive, creating an environment where asking questions and exploring new ideas was welcomed.

In terms of expectations, the company provided clear objectives from the beginning of the internship and ensured that my work aligned with real business requirements. I was expected to understand the system architecture, deliver high-quality and secure code, document my work thoroughly, and adhere to project timelines. The organization also encouraged independent research and initiative, which helped me improve both technical capabilities and industry best practices.

Academic courses relevant to the project : Computer Networks, OS,Database Systems,Object Oriented Programming

PS-II Station : EMB Global, Gurgaon

Faculty

Name: Parag Rastogi

Student

Name: VIKHYAT GUPTA(2022A8PS0327G)

Student Write-up

PS-II Project Title: US GTM

Short Summary of work done during PS-II : Did market research and created a BUSINESS startegy for the company to expand into USA

Tool used (Development tools - H/w, S/w) : Dripify , various AI tools , Zoho

Objectives of the project : SETUP GROWTH ENGINE FOR THE COMPANY IN USA

Major Learning Outcomes : Cross team collaboration , scope of AI in the usa , ai devolopment as well as sales cycle

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : Its a startup so a fast paced environment, constant competetion

Academic courses relevant to the project : BAV

PS-II Station : Engati Technologies Private Limited - Data Science, Bengaluru

Faculty

Name: Akanksha Bharadwaj .

Student

Name: SRUJAN DAMARLA .(2022A3PS0546H)

Student Write-up

PS-II Project Title: Performance, scalability and reliability engineering

Short Summary of work done during PS-II : During the Practice School–II internship at Engati Technologies, the work focused on the development, evaluation, and enhancement of conversational AI systems deployed in real-time voice and text-based applications. The internship provided hands-on experience with large language models, speech processing pipelines, and production-level AI infrastructure. A portion of the work involved evaluating low-latency speech-to-speech, speech-to-text, and text-to-speech models for real-time conversational agents. These models were analyzed based on latency, response quality, and robustness under streaming conditions. To improve system efficiency, an automated transcript evaluation framework was developed using large language models to classify conversations and generate structured insights, reducing dependency on manual review. Additionally, a prompt evaluation and improvement pipeline was designed to assess prompt quality, detect inconsistencies, and provide automated feedback, leading to more consistent and reliable agent behavior. Contributions were also made to production voice and text agent pipelines, including enhancements to call lifecycle handling and mechanisms to identify and manage incoherent or low-quality model responses. The internship further involved platform-level integrations for server-side marketing and conversion tracking using external APIs, enabling improved campaign measurement and data reliability. Overall, the work contributed to improving automation, scalability, and user experience

across Engati's conversational AI platform while offering practical exposure to real-world AI system design and deployment.

Tool used (Development tools - H/w, S/w) : Python, Java Spring, Kafka, Redis, MongoDb, MariaDb, Fastapi, Streamlit

Objectives of the project : Work with AI agents team to help collaborate and contribute to AI Conversational-Text and Voice Agents pipeline.

Major Learning Outcomes : How SD life cycle works, how different teams collaborate to ensure timely deployments of customer live products, How to research and approach new problem especially when working on new and upcoming technology. How to write clean and efficient production.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Working environment provided for great space to learn, explore, get hands on experience with up-to-date technology. A rich and supportive group of mentors as well as senior provided for great space to discuss and clash with new ideas. Speed is fast, in general, they expect people to rise to the occasion and deliver work on time with precision and efficiency. Provides a platform to help produce production grade code on a weekly basis, thereby allowing us to contribute on a wider and much larger and impactful scale.

Academic courses relevant to the project : AI

PS-II Station : EPIK - Operations, Bengaluru

Faculty

Name: Arindam Roy .

Student

Name: HARSH JAIN(2021B4A42868G)

Student Write-up

PS-II Project Title: Business Operations: Scaling Brand Partnerships, Inventory, and Supply Chain at Epik

Short Summary of work done during PS-II : My internship at Epik focused on scaling business operations across Business Development, Supply Chain, and Logistics to support the company's 60-minute delivery promise. In Business Development, I led the identification and onboarding of 50+ new brands, acting as the Single Point of Contact (SPOC) for partner management and listing optimization for over 500+ SKUs. I also contributed significantly to commercial strategy by negotiating and converting 12 brands to a paid "per-demo" fee model, successfully transforming operational costs into a verifiable revenue stream. On the operational front, I assisted in the planning and coordination of 3 new hubs, directly impacting city-level coverage and enhancing delivery speed. I optimized supply chain efficiency through data-driven demand forecasting and participating in 100% inventory and demo unit audits to minimize stock variance. Furthermore, I collaborated cross-functionally with Tech and Marketing teams to align stock availability with sales campaigns, ensuring a seamless customer experience from browsing to delivery.

Tool used (Development tools - H/w, S/w) : Software (S/w): Easyecomm: Used for inventory management, order processing, and SKU mapping for 500+ products. Zoho: Used for CRM (Customer Relationship Management) to track the pipeline of 50+ brand partners and operational workflows. Adobe Photo

Objectives of the project : To scale Epik's marketplace operations by expanding brand partnerships, optimizing inventory planning for 500+ SKUs, and supporting the operational logistics required to maintain a 60-minute delivery promise in key urban zones.

Major Learning Outcomes : My internship provided holistic exposure to scaling e-commerce operations. I developed B2B negotiation skills by managing 35+ brands and structuring revenue-generating demo models. I learned to drive operational efficiency by expanding hub logistics for f

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at Epik is professional and fast-paced, characteristic of a high-growth startup ecosystem. It operates on a 6-day work week schedule from 10:00 AM to 7:30 PM. The culture is collaborative and decent, where interns are treated as integral team members rather than temporary staff, fostering a strong sense of belonging and responsibility.
The company expects a high level of ownership and accountability. Interns are expected to manage end-to-end responsibilities—such as handling relationships with 50+ brands or overseeing inventory for 500+ SKUs—rather than just executing isolated tasks. There is a strong emphasis on "speed of execution" and data-driven decision-making. You are expected to be a proactive problem-solver capable of collaborating across Tech, Marketing, and Operations teams to resolve bottlenecks and drive tangible business impact. While the schedule is rigorous, the environment is highly rewarding for those eager to learn the nuances of scaling an e-commerce business.

Academic courses relevant to the project : Probability and Statistics, Principles of Management, Operations Research, Supply Chain Management,

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Name: ANAGHA B MENON(2021B5A41535G)

Student Write-up

PS-II Project Title: Business Operations

Short Summary of work done during PS-II : Work on data analytics and CRM development across operations, revenue, and marketing functions. Business workflow evaluation and

identification of critical data touchpoints. Role as primary POC for CRM implementation and transition to HubSpot. Creation of structured internal data collection processes and centralized data frameworks. Development of operational, revenue, and investor-facing dashboards. Marketing analytics across Google and Meta platforms. Support of data-driven decision-making and reporting.

Tool used (Development tools - H/w, S/w) : Google Sheets, HubSpot CRM, Creysto CRM, Google Ads, Meta Ads Manager, Microsoft PowerPoint, Canva.

Objectives of the project : Design and implementation of scalable data analytics and CRM systems, improvement of internal data collection processes, enabling reliable operational and revenue reporting, supporting CRM migration to HubSpot, maintaining data accuracy and analytical usability.

Major Learning Outcomes : Exposure to CRM architecture and implementation, experience in building scalable data frameworks, development of analytics and dashboarding skills, understanding of cross-functional collaboration and stakeholder coordination

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Fast-paced startup environment with evolving requirements and cross-functional collaboration. High ownership and independence expected in handling data and reporting tasks. Emphasis on adaptability, proactive problem-solving. Expectation of strong communication skills while coordinating with customers, partner brands, suppliers, and third-party tech teams.

Academic courses relevant to the project : Basic Maths (M1) and Excel

PS-II Station : EPIK - Tech, Bengaluru

Faculty

Name: Garima Jindal

Student

Name: GAURAV AGARWAL(2021B4A41715P)

Student Write-up

PS-II Project Title: Tech (this is only mentioned)

Short Summary of work done during PS-II : I did automated scheduling for their daily scheduling part and made home page for their one vertical to get customers

Tool used (Development tools - H/w, S/w) : CSS, HTML, Node

Objectives of the project : enhancing the backend and frontend

Major Learning Outcomes : communication and how to work with different verticals

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : work culture is not at all good and when I joined there was no tech team in the company

Academic courses relevant to the project : NA

PS-II Station : Ericsson R and D, Bengaluru

Faculty

Name: Harish Kumar J. R.

Student

Name: YASHWARDHAN TAYAL(2022A3PS1062G)

Student Write-up

PS-II Project Title: Three Stage Automated Application Deployer Manager

Short Summary of work done during PS-II : During my Ericsson internship, I designed and implemented a three-stage automated application deployment composer comprising a Deployment Manager, Scheduler, and Orchestrator, built with Go microservices, MongoDB for persistent component catalogues (storing metadata, traits, dependencies, and constraints), Redis for real-time resource inventory and reuse detection, and Docker for containerization. I developed a directive-driven decision engine to parse deployment requirements, resolve dependencies, and generate optimized machine placement plans while enforcing co-location constraints and avoiding redundant deployments. This backend infrastructure system streamlined complex application orchestration for scalable, resource-aware deployments.

Tool used (Development tools - H/w, S/w) : Golang, Docker, MongoDB, Redis, NodeJS (2nd project)

Objectives of the project : To automate multi stage appointment deployments through intelligent dependency resolution and resource aware scheduling

Major Learning Outcomes : 1. Go microservices architecture and concurrent programming patterns
2. Distributed systems design: dependency resolution, scheduling algorithms, resource constraints.

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : Flexible working timings. Work from home not allowed for interns. No strict deadlines for R&D interns.

Academic courses relevant to the project : N/A

Name: JAI SHRREE RAAM V R(2022A8PS1264P)

Student Write-up

PS-II Project Title: Root Cause Analysis for Operations Management Cloud Infrastructure

Short Summary of work done during PS-II : Developed and implemented an intelligent root cause analysis system for Ericsson's OMC (Operations Management Center) platform. The project involved building data pipelines for processing high-volume time-series network metrics from 5G infrastructure. Implemented anomaly detection using machine learning algorithms and developed correlation analysis modules to identify causal relationships between network events. Created visualization dashboards for operational insights and integrated the system with existing monitoring infrastructure. Conducted testing and validation of RCA algorithms on production datasets, demonstrating significant improvements in MTTR. Collaborated with cross-functional teams to ensure seamless integration with 5G operational processes.

Tool used (Development tools - H/w, S/w) : Backend: Go, Python, SQL, Bash scripting. Frameworks: Gin, GORM, microservices architecture. Databases: PostgreSQL, VictoriaMetrics (time-series), Redis. DevOps: Docker, Kubernetes, Helm, Tilt. Monitoring: Prometheus, VictoriaMetrics, Grafana, ELK stack.

Objectives of the project : To develop an automated root cause analysis system for identifying and correlating network anomalies in the 5G infrastructure. The system aims to reduce mean time

to detection and resolution of operational issues in the OMC platform by implementing intelligent data correlation algorithms and machine learning-based anomaly detection models.

Major Learning Outcomes : Gained comprehensive understanding of 5G network architecture and cloud infrastructure management. Developed proficiency in machine learning algorithms for anomaly detection including isolation forests and LSTM neural networks. Learned data correlation te

Details of Papers/patents : No papers or patents published during this internship. However, work on correlation algorithms and anomaly detection methodologies could be potential candidates for publication in IEEE or ACM conferences on network management and cloud computing. Document

Brief Description of working environment, expectations from the company : Working at Ericsson's R&D center in Bangalore provided an exceptional environment for learning cloud infrastructure and 5G technologies. The team was highly collaborative and supportive of new initiatives. Strong emphasis on code quality, testing, and best practices was maintained throughout. Expected the company to provide mentorship on advanced backend systems and AI/ML applications in telecom, which was delivered excellently. The organization's culture of continuous learning and innovation aligned perfectly with my career aspirations in AI/ML product management and system design.

Academic courses relevant to the project : Data Structures and Algorithms, Advanced Database Systems, Machine Learning, Statistical Methods for Data Analysis, Computer Networks, Distributed Systems Design, Cloud Computing Architecture, Operating Systems, Software Engineering, Probability and Stati

PS-II Station : Ernst & Young LLP, Gurugram, Gurgaon

Faculty

Name: Gaurav Nagpal .

Student

Name: ABHINAV LAMBA(2021B4A70913P)

Student Write-up

PS-II Project Title: Loan Pool Valuation Tool

Short Summary of work done during PS-II : I have been working on various financial models, have been involved in valuation of multiple complex securities from CLOs to loan pools.

Tool used (Development tools - H/w, S/w) : S&P, Intex, CAPIQ

Objectives of the project : I designed a tool to value the loan pool , using the concept of securitisation,DCF and yield roll forward.

Major Learning Outcomes : ML,python, securitisation

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : My team was quite flexible as it has around 50% BITSIANs .

Academic courses relevant to the project : ML, BAV, DRM, FODS

PS-II Station : Es Magico Experiences Private Limited - Generalist, Mumbai

Faculty

Name: Chetana Anoop Gavankar .

Student

Name: ANSHUMAN DEWANGAN(2021B1A42279P)

Student Write-up

PS-II Project Title: Generalist Intern : Growth, Product, UI/UX, Automation etc

Short Summary of work done during PS-II : 1. Product Solutioning : Development of Proposals, pitch decks, etc. 2. Rapid Prototyping UI/UX for POCs(Proof of concept) 3. AI Automation workflows for internal problem statements(N8N, lovable, replit)

Tool used (Development tools - H/w, S/w) : Perplexity, N8N, Lovable, Replit, Vercel, etc.

Objectives of the project : Growth, Acquisition/conversion of more clients.

Major Learning Outcomes : Understood the sales and product development lifecycle, from POC to actual development.

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : Since it is a startup, work environment is relatively flexible, and adjustable, while making sure productivity is not compromised.

Academic courses relevant to the project : Effective Public Speaking : HuEl.

PS-II Station : Eureka Forbes Ltd - Engineering, Mumbai

Faculty

Name: Benu Madhab Gedam .

Student

Name: ISHAAN SHARMA(2022A4PS0782P)

Student Write-up

PS-II Project Title: Data Engineer

Short Summary of work done during PS-II : During my internship at Eureka Forbes, I worked on the data engineering side of an enterprise analytics system. Most of my work was on Databricks, where I built and modified ETL pipelines using PySpark and SQL. These pipelines pulled data from Microsoft Dynamics 365, SAP, and PostgreSQL, cleaned and transformed it, and stored it in Azure Data Lake. The data volume was large (around 2M records per day), so the focus was on correctness, performance, and reliability rather than just writing code. I also worked on data governance tasks. I wrote Python scripts using the Azure Graph API to automatically scan storage containers, identify PII-related data, and apply the correct sensitivity labels. This replaced a lot of manual work and helped standardize how sensitive data was handled across teams. A significant part of the internship was debugging. Many pipelines already existed, and I had to understand unfamiliar code, trace failures, fix data issues, and optimize slow jobs. I learned how distributed Spark jobs actually behave, how small mistakes can cause large failures, and how to read logs properly instead of guessing. Finally, I documented the pipelines, data flow, and decisions so that someone else could maintain or extend the system later. Overall, the internship taught me how real data engineering works in production, not just in tutorials.

Tool used (Development tools - H/w, S/w) : Databricks, Microsoft Dynamics 365, Azure

Objectives of the project : To design and implement scalable, automated data pipelines on Databricks that ingest, process, and govern large volumes of operational data from Microsoft Dynamics 365 and other enterprise sources, ensuring efficient analytics, improved data quality, and compliance with data privacy standards through automated PII classification and sensitivity labeling.

Major Learning Outcomes : Built and maintained production-scale ETL pipelines using Databricks, PySpark, and SQL on real enterprise data
Gained hands-on experience with distributed data processing and performance optimization
Learned end-to-end data pipeline architecture on Azur

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment is supportive and non-hectic. Expectations from interns are reasonable; the focus is not on output but on learning, understanding the systems, and gradually taking ownership of tasks.

Academic courses relevant to the project : DBMS

PS-II Station : Eureka Forbes Ltd - R&D role, Mumbai

Faculty

Name: Benu Madhab Gedam .

Student

Name: ANVIK GHOSH .(2022A8PS0694H)

Student Write-up

PS-II Project Title: Automated Test Jigs for Water Purifier PCBs and Multi-Sensor Flow/TDS Measurement

Short Summary of work done during PS-II : This work focuses on designing and implementing STM32-based systems for automated water-quality measurement and PCB testing in a production-style environment. The core of the project is an embedded firmware stack on an STM32G0 microcontroller that measures flow rate, temperature, and TDS using timers, ADC, and GPIO, with robust handling of sensor polarity, averaging, and temperature compensation. Two main configurations were developed: a single-sensor setup with closed-loop pump control and a multi-sensor platform capable of testing multiple flow and TDS channels simultaneously for high-throughput scenarios. In parallel, a FreeRTOS-based STM32 test jig was built to validate water-purifier PCBs by driving relays, reading ADC channels, and communicating with the unit under test over a custom framed UART protocol, automatically determining pass/fail with detailed error masks. A key innovation is the integration of rich Python Tkinter GUIs for both the flow/TDS system and the test jig, providing real-time dashboards, pump and test control, logging, and features like barcode/QR label generation and in-line firmware flashing, which are typically absent in traditional, purely mechanical/electrical jigs. Overall, the work demonstrates an end-to-end pipeline from sensor and PCB hardware, through real-time embedded firmware and protocols, up to operator-friendly desktop interfaces suitable for production testing and future extensibility.

Tool used (Development tools - H/w, S/w) : Hardware - STM32 Development board, multiple in-house sensors, PCBs and other components. Software- Embedded C (for firmware coding), Python (for GUI using tkinter and pyserial)

Objectives of the project : The objective of the project was to build a complete, production-compatible system for measuring and validating water purifier related hardware and sensors (flow sensors, TDS sensors, pumps, PCBs) with reliable, automated testing and an informative GUI dashboard interface.

Major Learning Outcomes : 1. Using STM32 peripherals (timers, ADC, UART, GPIO) with FreeRTOS to build reliable, modular real-time firmware.

2. Interfacing and calibrating flow and TDS sensors, converting raw pulses/ADC counts into stable physical measurements and sensible data.

Details of Papers/patents : nil

Brief Description of working environment, expectations from the company : The working environment at the company has been very positive and healthy. People are friendly, easy to talk to, and there is a lot of respect between team members. It feels comfortable to ask questions, share ideas, and learn from others.
Managers and senior engineers are supportive and approachable. They take time to guide interns, explain concepts, and give useful feedback. Interns are treated like regular team members, not just temporary helpers, and our suggestions are listened to.
The projects given during the internship were interesting and meaningful, not just side tasks. There was a good mix of working independently and getting help when needed. Overall, it has been a very good place to learn and work on real problems.

Academic courses relevant to the project : Majority of an Electronics degree curriculum, mostly pertaining to microcontrollers and sensor integration. Additionally a good understanding of C and python helped.

PS-II Station : FemtoWeb Technologies Pvt Ltd (Nanonets), Bengaluru

Faculty

Name: Vineet Kumar Garg .

Student

Name: AROHI PORE .(2022A1PS1678H)

Student Write-up

PS-II Project Title: Analysis of retention strategies and operational metrocs

Short Summary of work done during PS-II : The worked spaned across 5 project with 3 different departments finance, cuatomer success and business analysis. Projects included ROI calculator development , retention strategies for self served customers , making various dashboards for revenue trends for based on buckets in each cohort , support team , enterprise customers with their specific metrics that need to be tracked for acclimt health.

Tool used (Development tools - H/w, S/w) : Sql , cursor

Objectives of the project : Improve the retention strategies for self served cutomers , track revenue retention and team performances

Major Learning Outcomes : Working of strategy and operations In a SaaS company.

Details of Papers/patents : Na

Brief Description of working environment, expectations from the company : The working environment is great with supportive teammates willing to help and guide whenever needed.

Academic courses relevant to the project : POM

PS-II Station : Flipkart Internet Pvt Ltd - Business Development,, Bengaluru

Faculty

Name: Ramesh Venkatraman .

Student

Name: JANHAVI SANTOSH SAVANT(2021B1A32362G)

Student Write-up

PS-II Project Title: Business Development

Short Summary of work done during PS-II : Was a part of Merchandising team in Large Appliances. Worked on the Store wireframes, gave daily seo/sem inputs. Worked on offline vs online offer optimization. Understood various metrics important to track traffic and worked on improving traffic on the app for the category.

Tool used (Development tools - H/w, S/w) : Excel mainly, flipkart internal tools

Objectives of the project : Category Growth

Major Learning Outcomes : Communication skills, Excel, SQL

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : -

Academic courses relevant to the project : -

Name: AVIRAL JAIN(2021B1AA2501G)

Student Write-up

PS-II Project Title: Business Development & Analytics in Men's Fashion

Short Summary of work done during PS-II : During my PS-II internship at Flipkart, I worked as a Business Development and Analytics intern in the Men's Branded Apparel category under the marketplace model. My work focused on analyzing large-scale transactional and promotional data to support category strategy and investment decisions. A major part of my project involved evaluating the effectiveness of coupon and promotional spending at a product level. I analyzed data for over 800,000 product listings across multiple months using SQL and Excel, and developed a Return per Coupon (RPC) metric to assess promotional ROI. This analysis helped identify a set of low-ROI products, based on which recommendations were made to optimize promotional spend. In addition, I built multiple dashboards and trackers to monitor category, brand, and vertical performance during business-as-usual periods as well as high-impact events like the Big Billion Days sale. I also conducted customer cohort and search-term analysis to identify demand trends, emerging fashion preferences, and assortment gaps. Throughout the internship, I regularly interacted with category managers and key account managers to present insights and support data-driven decision-making related to pricing, promotions, and inventory planning.

Tool used (Development tools - H/w, S/w) : Software: SQL, Microsoft Excel, Google Sheets Databases: Internal data warehouse (SQL-based)

Objectives of the project : The primary objective of the project was to analyze large-scale marketplace data to improve business decision-making in the Men's Branded Apparel category at Flipkart. This included evaluating the efficiency of promotional investments, identifying demand and customer trends, supporting assortment and inventory planning, and building analytical tools and dashboards to enable faster and more informed decisions for category and account management teams.

Major Learning Outcomes : Ability to structure open-ended business problems into clear analytical frameworks.Hands-on experience working with large, real-world datasets.
Practical understanding of promotional ROI and investment efficiency.
Improved proficiency in SQL and Excel fo

Details of Papers/patents : Not Any

Brief Description of working environment, expectations from the company : Flipkart provided a fast-paced and professional working environment that emphasized data-driven decision-making and ownership. Interns were expected to quickly understand business context, work independently on assigned problems, and contribute insights that could be used by the team. The culture encouraged asking questions, validating assumptions through data, and communicating findings clearly to stakeholders.
The expectations from the company included maintaining data accuracy, meeting timelines, and being proactive in learning new tools and concepts required for the role. Collaboration with cross-functional teams such as category management and account management was a key aspect of the work environment. Overall, the internship offered meaningful exposure to large-scale e-commerce operations and provided valuable learning through real business problems and responsibilities.

Academic courses relevant to the project : Not Any

Name: ATISHAY JAIN(2021B2A41913G)

Student Write-up

PS-II Project Title: Business Development

Short Summary of work done during PS-II : During my internship with Flipkart Ads, I worked across campaign execution, operations, analytics, and automation within the Mobiles, Electronics, and Large Category teams. I took ownership of end-to-end execution of special ad constructs, particularly during high-impact events, ensuring timely launches, smooth delivery, and strong coordination across teams. To reduce operational complexity and communication gaps, I built centralized trackers and dashboards that brought together critical campaign information, improving visibility and alignment between Sales Ops, Category, Planning, and Brand teams. I also handled complete CRM workflows for multiple brands, managing a wide range of ad formats

including search, display, print, live commerce, influencer, and video campaigns. A key focus area was creative performance analysis. I conducted in-depth manual reviews to generate quick insights during critical periods and later designed a scalable creative analysis framework. I built an automated tool that evaluated both visual and textual elements of creatives, enabling standardized benchmarking, faster reporting, and data-driven recommendations to improve campaign performance. In Large Category Search Optimization, I developed detailed tracking and forecasting mechanisms to monitor spend efficiency, identify underperforming areas, and support proactive budget planning. This helped shift decision-making from reactive monitoring to forward-looking optimization. Additionally, I contributed to data analysis, review deck creation, and multiple automation initiatives using scripting and analytical tools to reduce manual effort and improve reporting accuracy. Overall, my work focused on improving execution reliability, operational efficiency, and data-driven decision-making at scale.

Tool used (Development tools - H/w, S/w) : Python Excel SQL

Objectives of the project : Program management and Automation

Major Learning Outcomes : Stakeholder Management, python and excel

Details of Papers/patents : NIL

Brief Description of working environment, expectations from the company : The working environment was highly collaborative, fast-paced, and learning-oriented. I had the opportunity to work closely with cross-functional teams, which encouraged open communication, quick problem-solving, and strong ownership of tasks. Team members were approachable and supportive, making it easy to ask questions, share ideas, and receive constructive feedback.

The culture emphasized accountability and trust, allowing interns to take meaningful responsibility and contribute to real business outcomes. Despite the high-pressure nature of event-driven work, the environment remained structured and solution-focused, with teams coming together to handle challenges efficiently.

There was a strong focus on data-driven decision-making and continuous improvement, which helped me develop both analytical and execution skills. Regular interactions with stakeholders helped me improve my professional communication and gain a deeper understanding of how large-scale operations function in a real-world business setting.

Overall, the environment fostered growth, encouraged initiative, and provided exposure to impactful projects, making it a highly enriching and motivating experience.

Academic courses relevant to the project : Computer Programming, PoM

Name: VIKHYAT BHARADWAJ(2022A4PS0926P)

Student Write-up

PS-II Project Title: Cataegory Management & Program Management

Short Summary of work done during PS-II : During my PS-II internship at Flipkart Internet Pvt. Ltd. (BU–Shopsy), I worked as a Category Management Intern and Program Management Intern for the Men's Apparel category, handling end-to-end responsibilities across Business-As-Usual cycles and major sale events such as the Independence Day Sale, Grand Shopsy Mela, and Big Billion Days. My role involved planning and executing multiple deal constructs including Crazy Deals, Flash Deals, Hero Deals, Branded Deals, and Deals of the Day, in coordination with sellers and internal stakeholders, to drive GMV growth while maintaining margin discipline. I regularly analyzed key performance metrics such as GMV, ASP, conversion rate, OPI, PPV, CTR, search volumes, and inventory health to enable data-driven decision-making and real-time optimizations. I conducted structured Root Cause Analyses using the MECE framework to identify and address drops in traffic, visibility, or conversions through pricing corrections, catalogue quality improvements, merchandising interventions, and supply actions. In parallel, as a Program Management Intern, I owned and executed cross-functional initiatives such as the launch of the New In Fashion Store and Premium Store, onboarding and launch of new apparel brands on Shopsy, trend-based merchandising using Instagram trends data, and seasonal winter planning, coordinating across Product, Design, Engineering, Pricing, Supply, and Merchandising teams. This internship provided hands-on exposure to large-scale e-commerce operations, structured execution, stakeholder management, and analytical problem-solving, while contributing directly to category performance and revenue growth.

Tool used (Development tools - H/w, S/w) : MS-Excel, Google Sheets, Flipkart FDP, Flipkart Trends Console

Objectives of the project : For Category Management: Maximising the GMV of the overall BU: Men's Apparel. For Program Management: Deliver few of the important projects leading to incremental GMV on time.

Major Learning Outcomes : This internship provided a holistic understanding of both category management and program management within a large-scale e-commerce ecosystem like Flipkart/Shopsy. From a category management perspective, I gained hands-on experience in end-to-end ownersh

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment at Flipkart Internet Pvt. Ltd. (BU–Shopsy) was highly supportive, fast-paced, and collaborative, providing an excellent learning platform for an intern. From the beginning, I was entrusted with meaningful responsibilities and given ownership of real business problems, which reflected the company's strong culture of trust and accountability. The team maintained an open and approachable work environment where guidance and feedback were readily available, enabling continuous learning and improvement. Cross-functional collaboration was strongly encouraged, and I regularly interacted with stakeholders from Pricing, Supply, Merchandising, Product, Design, and Engineering teams, which helped me gain a holistic understanding of large-scale e-commerce operations. The organization fostered a data-driven mindset, with decisions backed by metrics and structured analysis, while also valuing innovation and experimentation.
The expectations from the company were clearly defined and aligned with business impact. I was expected to demonstrate analytical rigor, structured problem-solving, ownership, and timely execution of tasks, especially during high-pressure sale events. Proactiveness, adaptability, and effective communication were strongly valued, as the role involved coordinating with multiple stakeholders and responding to dynamic business requirements. Overall, Flipkart provided a professional yet encouraging work environment that balanced high performance standards with strong mentorship and support, enabling me to contribute effectively while developing both technical and managerial skills.

Academic courses relevant to the project : N/A

Name: HET DAVE(2022A4PS1276P)

Student Write-up

PS-II Project Title: Business development

Short Summary of work done during PS-II : Seller cluster development and mathematical models

Tool used (Development tools - H/w, S/w) : Excel,sql,python

Objectives of the project : Increase GMV

Major Learning Outcomes : Excel, sql,python

Details of Papers/patents : No

Brief Description of working environment, expectations from the company : Friendly and helpful

Academic courses relevant to the project : Principle of economics, finance

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Name: SAKSHI SHAHANI(2022A4PS1277G)

Student Write-up

PS-II Project Title: Expansion of BPC Category and understanding the potential business size

Short Summary of work done during PS-II : I was given multiple side projects which taught me ownership skills. I was supposed to conclude my main project with a selection recommendation on the basis of 5+ parameters data.

Tool used (Development tools - H/w, S/w) : Excel, Power BI

Objectives of the project : -> Research about the BPC Market globally and nationally -> Understand consumer behaviour for BPC -> Analyse Flipkart grocery and national's data to obtain meaningful insights and convert them to actionale outcomes -> Suggest selection recommendation on the basis of all the paramters assigned

Major Learning Outcomes : Proficiency in Excel, Presentation skills, Soft skills

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Supportive environment, will expect you to work well, even the leadership is always ready to help you, will give you a nice start to the corporate culture

Academic courses relevant to the project : POM

Name: ANSHIKA VERMA .(2022A8PS1541H)

Student Write-up

PS-II Project Title: Assistant Manager - Business Development

Short Summary of work done during PS-II : During PS-II, I assisted the team in maintaining tracking sheets, monitoring new selections, and supporting daily operational tasks. I contributed

to preparing review presentations by compiling insights and ensuring data accuracy. The role involved regular communication with team members, adapting to changing priorities, and understanding process requirements. This experience helped me apply classroom learning to real workflows while developing discipline, accountability, and confidence in handling assigned responsibilities.

Tool used (Development tools - H/w, S/w) : Excel/Google Sheets, internal dashboards, PowerPoint, and a standard workstation.

Objectives of the project : The project aimed to support the team by managing tracking workflows, ensuring data accuracy, preparing review materials, and assisting in routine operational tasks. It provided exposure to structured analysis, documentation, and decision-making processes.

Major Learning Outcomes : I gained practical experience in maintaining data systems, preparing review decks, and supporting operational decision-making. The internship improved my analytical thinking, communication, and ability to work independently in a professional environment.

Details of Papers/patents : No papers or patents were produced during the course of this internship.

Brief Description of working environment, expectations from the company : The working environment was collaborative and fast-paced, with clear expectations regarding accuracy, communication, and timely updates. I was encouraged to ask questions, participate in discussions, and take ownership of tasks. Regular check-ins and structured workflows helped me stay aligned with team goals, while tight timelines taught me prioritisation and professionalism.

Academic courses relevant to the project : Data Structures & Algorithms, Probability & Statistics, Database Systems, Engineering Mathematics, Technical Communication.

PS-II Station : Flipkart Internet Pvt. Ltd. - AM Planning, Bengaluru

Faculty

Name: Ramesh Venkatraman .

Student

Name: NAYAK ANNADA BALCHANDRA(2022A5PS1427P)

Student Write-up

PS-II Project Title: D0 BBD Charter

Short Summary of work done during PS-II : Handled D0 delivery by improving D0 peak during BBD, achieved one of the highest ever D0 % 11.7 on 10th November and achieved highest D0% in New Delhi which trended at 21.5 %

Tool used (Development tools - H/w, S/w) : Sql, Reprogramming, Excel, Power Bi, Looker Studio

Objectives of the project : Improve D0 performance

Major Learning Outcomes : Strengthened stakeholders management

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Acquired expertise in working in stressful and high-pressure environment
Learnt work ethics and company had good work culture

Academic courses relevant to the project : Supply Chain

PS-II Station : Forus Health Pvt. Ltd., Bengaluru

Faculty

Name: Swapna S Kulkarni

Student

Name: MOHANA KEERTHI PATHURI .(2022A8PS0738H)

Student Write-up

PS-II Project Title: Snellen chart projection for a wearable phoropter

Short Summary of work done during PS-II : During my PS-II at Forus Health, I worked on developing a digital Snellen chart projection system for a wearable phoropter as part of the 3nethra Specto platform. My work focused on replacing the conventional 6-meter eye chart with a micro-OLED-based near-eye projection system that recreates the same visual angles required for clinical visual acuity testing. The internship involved four major components: hardware exploration, optomechanical design, software development, and experimental validation. I evaluated micro-OLED displays (Sony ECX334AF), researched compatible HDMI-to-LVDS display controllers, shortlisted suitable single-board computers, and studied power requirements for a portable device. I modelled the optical system in Fusion 360, aligning the microdisplay, relay lenses, and viewing path to achieve a virtual 6-meter projection. On the software side, I built a pixel-accurate Snellen chart rendering pipeline using Python and OpenCV, ensuring correct letter sizing, spacing, and contrast based on clinical specifications. I also conducted experiments including thermal profiling of the OLED display, brightness testing, and a visual acuity equivalence study involving 15 participants. The results showed strong agreement between traditional Snellen charts and the digital system, validating the feasibility of a wearable near-eye visual acuity tester.

This project gave me valuable exposure to embedded systems, optics, medical device design, and user-centric evaluation.

Tool used (Development tools - H/w, S/w) : 1)Hardware: Sony ECX334AF micro-OLED display, HDMI-LVDS display controller, Raspberry Pi Zero 2W, Radxa Zero series, Orange Pi candidates, Lithium-ion battery, BMS, boost converter 2)Software: Python, OpenCV, Pygame, Autodesk Fusion 360, Inkscape (vector

Objectives of the project : To design and validate a digital Snellen chart projection system for a wearable phoropter by integrating a micro-OLED display, custom optics, and real-time rendering software to accurately replicate 6-meter visual acuity testing.

Major Learning Outcomes : 1)Understanding of microdisplay systems and LVDS/HDMI interfacing.
2)Hands-on experience with Python, OpenCV, and optotype rendering.
3)Exposure to optomechanical design and Fusion 360 modelling.
4)Practical testing: luminance, thermal behaviour, visua

Details of Papers/patents : No papers or patents were produced during the internship.

Brief Description of working environment, expectations from the company : Forus Health provided a highly collaborative, research-driven, and innovation-focused working environment. The team encouraged independent problem-solving, hands-on experimentation, and cross-functional learning across electronics, optics, and software engineering. My mentors ensured continuous guidance while giving me the freedom to explore design choices, test hypotheses, and iterate on prototypes. Regular technical reviews helped refine the design, align the work with clinical requirements, and ensure engineering rigor.
The work culture was friendly, fast-paced, and supportive, with interns treated as integral contributors to ongoing product development. I was expected to document findings, justify design decisions, deliver prototypes on time, and present experimental results clearly. The company also emphasized understanding medical device constraints such as usability, accuracy, safety, thermal behaviour, and clinical reliability. Overall, the environment balanced technical depth with practical exposure, enabling significant professional and personal growth.

Academic courses relevant to the project : Industrial Instrumentation, Control Systems, Signals & Systems, IOT, Digital Design

PS-II Station : Franklin Templeton (Technology), , Hyderabad

Faculty

Name: Gopalakrishnan Venkiteswaran .

Student

Name: SAHEJ PREET SINGH(2022A7PS0085P)

Student Write-up

PS-II Project Title: ASSETS UNDER MANAGEMENT TREND SUMMARISATION AND PATTERN ANALYSIS

Short Summary of work done during PS-II : During my PS-II at Franklin Templeton Technology, I worked on building a governed, end-to-end analytics solution for Assets Under Management (AUM) trend summarisation and pattern analysis. The project focused on converting large, enterprise-grade financial datasets into an analysis-ready format and enabling business users to interact with the data through natural language queries. I curated a unified AUM dataset by integrating multiple FDH Oracle sources, applying column pruning, dominance/skewness checks, and roll-forward integrity validation. The processed data was materialised into Parquet files and stored on AWS S3 for performant downstream analytics. Heavy transformations were handled using PySpark on Databricks, while DuckDB was used for fast SQL-on-Parquet execution. On top of this data layer, I developed a Streamlit-based chatbot application deployed on Databricks. The application translates natural-language questions into validated, fiscal-aware SQL queries and generates business-grade commentary using LLMs integrated through LiteLLM and

PandasAI. To ensure accuracy and consistency, I introduced custom prompt instructions and implemented a structured model evaluation framework comparing multiple LLM configurations using an LLM-as-judge approach. Overall, the solution significantly reduced analysis turnaround time, improved explainability through emitted SQL and token tracking, and demonstrated a scalable, governance-first approach to LLM-assisted financial analytics.

Tool used (Development tools - H/w, S/w) : Databricks, PySpark, DuckDB, Streamlit, PandasAI, LiteLLM, Oracle sql developer, AWS S3, Git,Python, SQL,,Parquet, CSV, Pandas DataFrames, Matplotlib

Objectives of the project : To design and implement a governed analytics pipeline for Assets Under Management (AUM) analysis by integrating Large Language Models (LLMs) with enterprise financial datasets, enabling fiscal-aware trend analysis, validated natural-language to SQL querying, and stakeholder-ready business commentary while ensuring data quality and compliance.

Major Learning Outcomes : Business Understanding, Financial Analytics, Generative AI Frameworks, Prompt Engineering, Data Quality & Validation, Enterprise Data Governance, Model Evaluation Techniques

Details of Papers/patents : N.A

Brief Description of working environment, expectations from the company : The working environment at Franklin Templeton Technology was highly professional, collaborative, and aligned with enterprise-scale engineering and analytics standards. I worked closely with data science, FP&A, and engineering teams, receiving regular feedback through design discussions, code reviews, and milestone demos. The environment emphasized data governance, reproducibility, and business relevance, especially given the sensitivity of financial data.
The company expected a strong understanding of both technical implementation and business context. This included adhering to data quality checks, following fiscal calendar rules, maintaining stakeholder-safe narrative generation, and ensuring that all analytics outputs were explainable and auditable. There was also a strong focus on performance optimization, cost awareness, and secure handling of enterprise data.

Overall, the experience closely mirrored real-world industry expectations, helping me develop discipline in structured problem solving, clear communication with non-technical stakeholders, and delivery of production-ready analytical solutions.

Academic courses relevant to the project : Data Structures & Algorithms, Database Systems, Machine Learning, Data Mining, Artificial Intelligence, Probability & Statistics, GenAi, Intro to LLM

PS-II Station : Future Generali India Life Insurance - Product Architect (Operations), Mumbai

Faculty

Name: Arindam Roy .

Student

Name: ZOHEB FAZAL AHAD(2022A1PS1043P)

Student Write-up

PS-II Project Title: Inventory portal and time management system

Short Summary of work done during PS-II : We created a portal to help display all inventory and a employee time management system for better management

Tool used (Development tools - H/w, S/w) : Sql , C#

Objectives of the project : Have surveys and RCA and create the desired product in this case a time management and inventory management system

Major Learning Outcomes : Sql , c#

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Good company, sweet and helpful people, really helped me get up and running and solved all my doubts whether the doubts were simple or complex.

Academic courses relevant to the project : Computer programming

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PS-II Station : Future Generali India Life Insurance - Product Architect (Operations), Mumbai

Faculty

Name: Arindam Roy .

Student

Name: ADITYA VARMA .(2022A4PS1491H)

Student Write-up

PS-II Project Title: DevOps-Driven Migration of ASP.NET Core Applications to ACR and AKS using GitHub Actions

Short Summary of work done during PS-II : The primary objective of my internship project at Future Generali India Life Insurance (FGILI) is to modernize the deployment process of backend microservices by transitioning from traditional Azure Web App deployments to a containerized, cloud-native environment using Azure Container Registry (ACR) and Azure Kubernetes Service

(AKS). This transformation is part of FGILI's broader strategy to improve scalability, maintainability, and automation of its digital infrastructure. The specific goals of the project include: • Dockerization of ASP.NET Core Applications Develop multi-stage Dockerfiles for backend services built with .NET 8 to enable consistent and portable builds across environments. • Implement CI/CD Pipelines Using GitHub Actions Automate the build, test, and deployment lifecycle using GitHub Actions, ensuring rapid, error-free deployments with minimal manual intervention. • Integration with Azure Container Registry (ACR) Configure secure image storage and management by pushing Docker images to ACR, replacing older deployment models. • Deployment to Azure Kubernetes Service (AKS) Deploy containerized services to AKS clusters, enabling high availability, load balancing, and efficient resource utilization. • API Analysis and Testing Review and test existing backend APIs using Postman to validate their functionality after migration and ensure compatibility with containerized deployment. • DevOps Best Practices Follow security and DevOps standards for secret management, logging, and error handling throughout the development lifecycle.

Tool used (Development tools - H/w, S/w) : Visual Studio 2022, SQL Server Management Studio(SSMS) 2019, Azure Portal, Git, Github, Docker

Objectives of the project : Dockerization of ASP.NET Core Applications, Implement CI/CD Pipelines Using GitHub Actions, Integration with Azure Container Registry (ACR), Deployment to Azure Kubernetes Service (AKS), API Analysis and Testing, DevOps Best Practices

Major Learning Outcomes : The project enhanced my understanding of modern DevOps practices,
including container orchestration, CI/CD automation, cloud infrastructure
provisioning, and secure deployment workflows. It also strengthened my skills
in debugging, system design, and w

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : It was work from home. The mentors were friendly and ready to help. They helped me learning new things.

Academic courses relevant to the project : Foundation Of Data Structure and Algorithms, Database Systems, Operating Systems, Object Oriented Programming

PS-II Station : Gameskraft, IT- Analytics, Bengaluru

Faculty

Name: Venkateswara Rao Thunuguntla .

Student

Name: ABHIJEET MALIK .(2021B5A32264H)

Student Write-up

PS-II Project Title: Data-Driven Monitoring and User Engagement Analytics for Large-Scale RummyTournaments

Short Summary of work done during PS-II : During my Practice School–II at Gameskraft, I worked on building a data-driven monitoring and analytics framework for large-scale rummy tournaments, with a particular focus on the Indian Rummy Grandmasters (IRG) series. The core of my work involved designing and validating a consolidated SQL pipeline that integrated multiple data warehouse tables to generate accurate daily metrics such as registrations, withdrawals, ticket entries, rebuys, revenues, and play rates. To make these insights accessible to non-technical stakeholders, I developed interactive Tableau dashboards that visualized key performance indicators and enabled rapid identification of anomalies and trends. In parallel, I used Mixpanel to perform user-level behavioral analysis, including funnel analysis and controlled experiments on tournament entry popups to evaluate click-through rates, conversion behavior, and feature adoption. In addition to analytics, I supported operational and cross-functional activities related to IRG, including compiling and publishing zonal winners' data, providing

backend data support to the marketing team, and maintaining tournament visuals on Figma. Although the IRG Grand Finale was cancelled due to new government regulations affecting real-money gaming, the monitoring systems and analytical insights developed during the internship remain scalable and applicable to future tournaments. Overall, the internship provided practical exposure to production-grade analytics, experiment-driven decision making, and the impact of regulatory constraints on product and data workflows.

Tool used (Development tools - H/w, S/w) : SQL (PostgreSQL), Tableau, Mixpanel, Microsoft Excel, Google Docs, Figma, internal data warehouse tools, web browser.

Objectives of the project : To make and maintain a dashboard for daily monitoring of all the tournaments, and report if there is any discrepancy.

Major Learning Outcomes : This project helped me gain hands-on experience in designing and validating end-to-end data analytics pipelines using SQL, Tableau, and Mixpanel for large-scale tournament monitoring. I also learned how to translate raw data into actionable business insig

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment at Gameskraft was professional, collaborative, and fast-paced, with a strong emphasis on data-driven decision making. Teams across product, analytics, marketing, and operations worked closely together, encouraging open communication and cross-functional learning. Mentors were approachable and provided clear guidance, allowing interns to take ownership of meaningful responsibilities rather than limiting them to observational roles. The company expected interns to be proactive, detail-oriented, and adaptable. Given the scale of operations and the sensitivity of real-money gaming platforms, accuracy and accountability in data handling were strongly emphasized. Interns were encouraged to validate their work rigorously and to understand the business implications of their analyses, not just the technical correctness.

Academic courses relevant to the project : DBMS might be very useful

PS-II Station : Genpact-, PAN India

Faculty

Name: S.P.Vimal .

Student

Name: HARSHIT(2021B1AA2996G)

Student Write-up

PS-II Project Title: AI-Driven Computational Drug Discovery and Molecular Screening Pipeline

Short Summary of work done during PS-II : During my PS-II internship at Genpact, I worked on a computational drug discovery project focused on applying machine learning and data-driven techniques to accelerate early-stage drug screening. The project involved processing molecular and protein-related datasets obtained from public biological repositories and internal sources. My responsibilities included data cleaning, feature extraction, and analysis of molecular descriptors to evaluate drug-likeness and biological relevance. I contributed to building and testing predictive models for properties such as absorption, distribution, metabolism, excretion, and toxicity (ADMET). Automation scripts were developed to streamline data preprocessing and model inference, thereby improving efficiency and consistency. I collaborated closely with domain experts to understand biological constraints and align technical solutions with pharmaceutical use cases. The internship provided exposure to how AI and analytics are applied in real-world drug discovery settings, bridging the gap between theoretical knowledge and industry applications. Overall, the project enhanced my understanding of interdisciplinary problem-solving at the intersection of data science, biology, and healthcare.

Tool used (Development tools - H/w, S/w) : Hardware: Company-provided workstation Software & Tools: Python Machine Learning Libraries (NumPy, Pandas, Scikit-learn) Jupyter Notebook

Objectives of the project : To apply machine learning techniques for early-stage drug discovery To analyze molecular and protein data for candidate screening To automate prediction of drug-like properties such as ADMET To support data-driven prioritization of potential drug candidates

Major Learning Outcomes : Gained practical exposure to computational drug discovery workflows
Learned integration of biological data with machine learning models
Developed skills in molecular data preprocessing and feature engineering
Understood real-world challenges in pharma

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Genpact provided a structured and professional working environment with strong emphasis on data confidentiality, accuracy, and reproducibility. The organization encouraged analytical thinking and expected interns to apply technical knowledge to real-world pharmaceutical problem statements. Regular interactions with mentors helped in understanding both the biological context and the technical requirements of the project.
The company expected interns to be proactive, adaptable, and capable of learning domain-specific concepts quickly. Emphasis was placed on proper documentation, model validation, and clear communication of results. The collaborative environment facilitated knowledge sharing across analytics and domain teams, enabling effective problem-solving and continuous learning.

Academic courses relevant to the project : Machine Learning
Artificial Intelligence
Database Systems
Probability and Statistics
Data Mining
Programming in Python

Name: VEDANT MATHUR(2022A3PS0375P)

Student Write-up

PS-II Project Title: A.I. code review tool

Short Summary of work done during PS-II : Well my task was to create an inhouse AI code review tool. this code review tool needed both frontend and backend to be designed. Also this tool has to be powered via Azure openAI for a safe AI space. At last the project was hosted on

Tool used (Development tools - H/w, S/w) : React, FastAPI, Azure , NodeJS, Vite, SQLAlchemy

Objectives of the project : Design and creation of an inhouse code review tool that is powered by Azure OpenAI GPT 4o and hosted on Azure infrastructure

Major Learning Outcomes : Well learned how to create a complete project, both frontend, backend, how to manage API keys, how to host the project on Azure

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : Well mine was the data engineering team. people in my team were flexible people, concerned only with their work.

Academic courses relevant to the project : Data Science minor did help

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Name: ADITYA JOSHI(2022A3PS1081G)

Student Write-up

PS-II Project Title: Multi label classification and Invoice fraud detection using HRM

Short Summary of work done during PS-II : During my PS-II internship, I contributed to two major projects: multi-label text classification and invoice fraud detection using the Hierarchical Reasoning Model (HRM). In the first project, I developed a multi-label classification pipeline capable of assigning multiple relevant categories to each input document. My work included dataset preprocessing, handling label imbalance, implementing TF-IDF and transformer-based embeddings, and training baseline models. I evaluated model performance using precision, recall, micro/macro F1-scores, and analyzed cases where high accuracy did not reflect true performance due to class imbalance. This project strengthened my understanding of supervised learning, evaluation metrics, and NLP model development. The second project focused on applying HRM—a planner–executor reasoning architecture to detect fraud in invoice documents. I built a full Document AI workflow involving OCR extraction using DeepSeek-OCR, image tokenization, metadata generation, and fusion of visual and textual features. I adapted HRM for invoice reasoning, implemented training and evaluation scripts, handled class imbalance using pos-weight, and benchmarked the model against standard deep-learning baselines. I also documented the pipeline, optimized preprocessing, and analyzed reasoning outputs for interpretability. Overall, the internship enhanced my skills in NLP, Document AI, deep learning workflows, model evaluation, and research-oriented problem solving.

Tool used (Development tools - H/w, S/w) : Python, Pytorch, Transformer, Numpy, Pandas, Scikit-learn

Objectives of the project : Multi-Label Classification Objective is to build a model that can predict multiple relevant categories for each input text/image by learning overlapping and co-occurring labels. HRM Objective is to implement a Hierarchical Reasoning Model that performs structured, step-wise reasoning to improve accuracy and interpretability in complex decision-making tasks.

Major Learning Outcomes : Gained hands-on experience in building a complete Document-AI pipeline, including OCR extraction, image tokenization, feature engineering, and fraud classification.
Developed a deep understanding of multi-label learning, evaluation metrics, and handling i

Details of Papers/patents : No papers/patents produced during the internship

Brief Description of working environment, expectations from the company : During my PS-II internship, I worked in a collaborative and technically focused environment that encouraged learning, experimentation, and independent thinking. The team provided clear guidance while also giving me the flexibility to explore ideas and implement solutions.
The company expected me to follow good coding practices, maintain proper documentation, meet deadlines, and communicate progress effectively. I was also encouraged to take initiative, analyze problems deeply, and validate results through experimentation.

Academic courses relevant to the project : Probability and Statistics, Object Oriented Programming

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Name: SHRISH KUMAR .(2022A7PS1295H)

Student Write-up

PS-II Project Title: Multi-Agent MCP Server and Client of SQL Generation

Short Summary of work done during PS-II : Made a Universal MCP Server and Client to reduce time spent by DBAs for generating trivial SQL so they can utilize their time on relevant tasks.

Tool used (Development tools - H/w, S/w) : MCP, Model Context Protocol, AI, Python, FastAPI, PostgreSQL, MSSQL, Streamable HTTPS, AWS

Objectives of the project : Reduce time spent by DBAs for generating trivial SQL so they can utilize their time on relevant tasks.

Major Learning Outcomes : Universal MCP Server and Client

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Ok, solo project, wanted in a team though. Mentor was nice, timings flexible and good workspace. No other perks that you'd expect from a MNC. No holidays too.

Academic courses relevant to the project: Dbms

Name: ROHAN R VENUGOPAL .(2022AAPS0407H)

Student Write-up

PS-II Project Title: Agentic AI projects

Short Summary of work done during PS-II : Automate an undertaking ratification system and procurement system using agentic AI. Both being proof of concepts.

Tool used (Development tools - H/w, S/w) : VS Code, Azure Ai/ml playground

Objectives of the project : Automate workflows using llm powered AI Agents

Major Learning Outcomes : Learnt about RAG pipelines

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Work timings were pretty relaxed for interns however for full time people it seemed much more hectic with very little leaves. The expectation vs guidance provided to us interns didn't match.

Academic courses relevant to the project : Machine learning

PS-II Station : GeoIQ (Quantduo Technologies Pvt. Ltd., Bengaluru

Faculty

Name: A Michael Alphonse

Student

Name: PAKKIRU GUNA SHEKHAR REDDY(2020B3A41510G)

Student Write-up

PS-II Project Title: Data Science Intern

Short Summary of work done during PS-II : The project workflow integrated foundational Python programming skills with advanced data processing using Pandas and GeoPandas. Emphasis on geospatial operations enabled precise spatial data aggregation, enriching analysis with geographic context. Onboarding exercises equipped the team with practical experience in applying spatial joins, overlays, and indexing techniques. Client interactions further strengthened problem-solving capabilities, delivering tailored solutions through effective use of Python and geospatial analytics.

Tool used (Development tools - H/w, S/w) : Python,Pandas,Geopandas,Numpy,SQL,scikitlearn

Objectives of the project : Support the data team in building internal tools and competing client requests

Major Learning Outcomes : Cleaning, organising datasets,SQL,Data Analysis, Python,Numpy,Pandas,Scikitlearn

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Good Seniors, Managers were very busy with merger so our batch interns did not get projects in DS domain. Seniors' projects were very good and client facing. ME and co-intern had to build a data pipeline for internal use. Not much client facing work either, Just cleaning datasets and using their platforms.There won't be much monitoring or micro-management so you've to keep asking for tasks.

Academic courses relevant to the project : NA

Name: PRABHAT PATI TRIPATHI(2022A4PS0655G)

Student Write-up

PS-II Project Title: Frontend Development for GeoIQ Web & Mobile Platforms

Short Summary of work done during PS-II : During my PS-II internship, I worked as a Frontend Developer at GeoIQ, contributing to both the web platform and the mobile app. My primary tasks involved developing new UI components and improving existing ones using ReactJS, Remix, React Native, Nextjs, Expo etc. I built multiple responsive sections for the company's main website, including hero, product, and case-study modules, and integrated them with Strapi CMS to enable dynamic content management. I also worked on the Market Connect mobile app, where I implemented tab views, carousels, sheets, and WebView-based features. Additionally, I created useful components such as the User Guide button and Quick Fixes suggestions, improving user experience within the application. A large part of my work involved debugging issues, optimizing performance, and ensuring consistency across different devices and screen sizes. Throughout the internship, I collaborated with the team using Bitbucket and Jira, learning how to follow proper branching strategies, raise pull requests, and deliver tasks within deadlines. Overall, my work contributed to enhancing the functionality, usability, and design quality of GeoIQ's web and mobile products while giving me valuable hands-on experience with real-world frontend development.

Tool used (Development tools - H/w, S/w) : The software tools used during the project were VS Code, Git, Bitbucket, Jira, ReactJS, Remix, Next.js, React Native, Expo, Strapi CMS, Node.js, npm, Postman, Chrome DevTools, and Figma.

Objectives of the project : The main objective of this project was to develop and improve frontend features for GeoIQ's web and mobile platforms. This included building responsive UI components, integrating dynamic sections with Strapi CMS, and enhancing user experience using ReactJS, Remix, React Native, and the company's UI kit. I also worked on fixing bugs, improving performance, and implementing API-driven features to ensure the application worked smoothly across different devices. Overall, the goal was to learn real-world development practices and contribute to production-ready features.

Major Learning Outcomes : During this project, I learned how to build real-world frontend features using ReactJS, Remix, and React Native while following industry standards. I gained practical experience in creating responsive UI components, integrating APIs, and connecting dynami

Details of Papers/patents : No papers or patents were produced as part of this project.

Brief Description of working environment, expectations from the company : The working environment at GeoIQ was very friendly and supportive. The team members were nice, helpful, and always open to guiding me whenever I faced any difficulty. As a fresher, I felt comfortable asking questions and learning new things. The company expected me to be willing to learn, write clean code, and complete tasks on time. Overall, it was a very good experience and a great place for freshers to grow and gain real-world development exposure.

Academic courses relevant to the project : All computer science core subjects

Name: KRISHNENDU BISWAL .(2022A4PS1392H)

Student Write-up

PS-II Project Title: Vision Agent ETL Pipeline

Short Summary of work done during PS-II : Vision Agent Analytics is a production-grade, end-to-end data engineering and analytics platform designed to transform large volumes of unstructured conversational AI logs into actionable business intelligence. The project addresses a critical challenge faced by organizations using conversational agents: the lack of unified, real-time visibility into user behavior, agent performance, product engagement, and system health. The solution implements an optimized 18-stage ETL pipeline that ingests heterogeneous log data from multiple sources, including Loki and event streams, processes approximately 900,000 records daily, and loads curated, analytics-ready data into a highly optimized PostgreSQL data warehouse. The warehouse follows a star-schema design with strategic indexing, partitioning, and materialized views, enabling sub-100 ms query performance at scale. On top of this foundation, a comprehensive analytics layer was built using Grafana, comprising more than 30 production dashboards. These dashboards provide real-time and near-real-time insights across engineering, product, data, and executive teams, covering session analytics, agent funnel performance, product conversion flows, latency (TTFT) monitoring, error tracking, and system reliability. The platform integrates tightly with the LGTM observability stack, enabling SLO-based monitoring, alerting, and proactive issue detection. The system operates with 99.8% pipeline success rate, 98.5% data quality, and 99.9% uptime, serving over 10,000 daily active users. Overall, the project delivers a scalable, secure, and fully automated analytics ecosystem that enables data-driven decision-making, operational excellence, and continuous optimization of conversational AI systems.

Tool used (Development tools - H/w, S/w) : Python, SQL (PostgreSQL), Pandas, NumPy, Grafana, Grafana Loki, Prometheus/Mimir, Tempo, PostgreSQL (partitioning, indexing, materialized views), Docker, Kubernetes (CronJobs), Linux (Ubuntu), GCP, Git, Bash/Shell scripting, LGTM observability stack, RBAC

Objectives of the project : The proliferation of conversational agents across industries has led to an exponential rise in raw interaction logs. These logs, while rich in information, remain underutilized due to their unstructured and fragmented nature. This project develops an end-to-end ETL and analytics framework that transforms raw conversational logs into actionable intelligence. Using Python pipelines on integrated log data from multiple sources, the solution

includes automated PostgreSQL data warehousing processing 900,000 records daily with real-time Grafana dashboards for proactive business insights and performance monitoring.

Major Learning Outcomes : This project successfully transformed Vision Agent Analytics from fragmented raw logs into a world-class data intelligence platform supporting 10,000+ daily users with real-time decision-making capabilities.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at GeoIQ (Quantduo Technologies Pvt. Ltd.) lacked structure, clarity, and consistent technical guidance. There was no clearly defined project roadmap, documented system design, or well-articulated expectations at the start of the internship. As a result, the responsibility of understanding the problem statement, identifying business requirements, and deciding the technical direction fell almost entirely on me.

There was minimal mentorship or hands-on guidance during development. Most architectural decisions, technology choices, data modeling strategies, ETL design, performance optimization, and dashboard definitions were made independently, without structured reviews or predefined standards. Feedback, when provided, was largely outcome-focused rather than process-oriented, with limited direction on how to approach complex engineering problems. This often required extensive self-driven research, experimentation, and iterative refinement to ensure production-grade reliability.

Expectations from the company were implicitly high in terms of delivery and impact, but poorly communicated in terms of scope, priorities, and success criteria. The environment demanded complete ownership of the project with little institutional support, effectively treating the intern as a standalone engineer responsible for end-to-end delivery. While this lack of structure increased pressure and uncertainty, it also resulted in full ownership of the system and forced the development of strong independent problem-solving, architectural thinking, and execution skills under ambiguous conditions.

Academic courses relevant to the project : CNI Minor

PS-II Station : GMDC Science & Research Centre, Ahmedabad, Ahmedabad

Faculty

Name: Santosh Sopanrao Khandgave

Student

Name: PIYUSH KUMAR(2021B1A40815P)

Student Write-up

PS-II Project Title: Impact of Particulate Matter Emission from the Mining Activity in Mata No Madh Lignite Mine, GMDC, Kutch, Gujarat

Short Summary of work done during PS-II : [1] Performed literature survey of 23 research papers related to 'Paticulate Matter Emissions due to lignite mining' [2] Participated in 6 GMDC Mine visits in Kutch. [3] Performed field sampling of NO2, SO2 and Respirable Dust Concentration in Mata No Madh Lignite Mine, Kutch.

Tool used (Development tools - H/w, S/w) : Numpy, Pandas, Seaborn, Matplotlib, Python, MS-Excel

Objectives of the project : [1] To collect data of Particulate Matter (PM2.5, PM10) and Gaseous Emissions (SOX, and NOX) along with associated trace metals from Mata No Madh Lignite Mine, GMDC, Kutch, Gujarat. [2] To perform chemical analysis and statistical analysis of particulate matter and gaseous emissions, with emphasis on associated trace metals. [3] Perform Dispersion Modelling of Particulate Matter and Gaseous Emissions using software like CALPUFF. [4] To draw interpretations from the data regarding the impact of mining activities in the Mata No Madh Lignite Mine, GMDC, Kutch, Gujarat, by evaluating concentration and spatial distribution of particulate matter ($PM_{2.5}$, PM_{10}), gaseous emissions (SOX, NOX), and presence of trace elements.

Major Learning Outcomes : 1. Comprehensive Identification of Air Quality Risk Factors: Present to the officials of Mata No Madh Lignite Mine (GMDC, Kutch, Gujarat) a detailed evaluation of specific air quality determinants, including PM2.5 and PM10 concentrations, percentages of t

Details of Papers/patents : My Publication is undergoing review:
Title: Systematic Review of Particulate Matter emissions from Lignite & Coal Mine

Brief Description of working environment, expectations from the company : 1. Working Environment: It is moderate.
i. Dr. Deepak Rawtani Sir emphasizes and supports on publishing a Research Paper/ Review Paper related to the "Assigned Project" from the company. He has been my un-official mentor to work on my Publication.
ii. Dr. Deepak Rawtani (BITS-Pilani Alumnus) has been coming in Top 2% Scientist (Stanford Rankings) for last consecutive 5 years.
iii. Field Visits of Mines & Laboratory Visits are conducted to inculcate practical experiences as a Researcher.
iii. The field visits conducted by the company were:
1. Ambadungar Fluorspar Mine, Chhota Udepur, Gujarat
2. Mata No Madh Lignite Mine, Kutch, Gujarat
3. Panandhro Lignite Mine, Kutch, Gujarat
4. Bhavnagar Lignite Mine, Bhavnagar, Gujarat
5. GEMI, Gandhinagar
6. PDEU, Gandhinagar
7. IIT Gandhinagar Laboratories, Gandhinagar
8. PMC Laboratory, Gandhinagar
iv. For my project, I had to visit Mata No Madh, Lignite Mine, GMDC, Kutch multiple times to do sampling of Respirable Air Dust.
v. The CEO of the company (Dr. Sanjiv Tyagi, Retired IFS, Fellow of the Royal Society of Chemistry) is helpful and emphasizes on going for Field Visits for learning purposes.

Academic courses relevant to the project : Probability and Statistics, M1, M2, M3

Name: ANIKET BHAGWAN PRASAD(2022A1PS0714P)

Student Write-up

PS-II Project Title: Optimization of Additive Formulation to Enhance Lignite & Coal Combustion

Short Summary of work done during PS-II : During my PS-II internship at Gujarat Mineral Development Corporation (GMDC), I was involved in understanding and supporting operations related to lignite mining and its associated processing activities. The internship focused on gaining practical exposure to the end-to-end workflow, starting from raw material extraction to handling, processing, and dispatch. My work involved studying the process flow diagrams (PFDs) and standard operating procedures to understand how different units function together. I assisted in collecting and analyzing operational data related to production rates, efficiency parameters, and material handling. I also observed routine inspections and maintenance activities to understand equipment reliability and downtime management. Additionally, I contributed to documentation tasks, including compiling observations, preparing basic reports, and assisting senior engineers in evaluating process performance. A key aspect of the internship was understanding the role of safety systems and environmental norms, particularly in mining operations where risk mitigation is critical. Overall, the internship helped bridge the gap between theoretical knowledge gained during coursework and its practical application in an industrial environment. It provided valuable insight into operational challenges, decision-making under constraints, and the scale at which chemical engineering principles are applied in the mining and energy sector.

Tool used (Development tools - H/w, S/w) : Excel, Word

Objectives of the project : Optimization of Calorific Value for Coal & Lignite

Major Learning Outcomes : Gained hands-on exposure to large-scale industrial operations in the mining and mineral processing sector, particularly lignite-related processes and developed an understanding of process flow, equipment functioning, and operational constraints in a real

Details of Papers/patents : Wrote a Review Manuscript

Brief Description of working environment, expectations from the company : The working environment at GMDC was highly professional, structured, and safety-driven. The organization emphasizes strict adherence to safety standards, operational discipline, and regulatory compliance, which is essential in large-scale mining and mineral-based industries. Engineers and staff were approachable and supportive, encouraging interns to ask questions and actively engage in learning.

The work culture promoted team collaboration and responsibility, with clear communication between departments such as operations, maintenance, safety, and administration. As an intern, I was expected to be punctual, attentive, and proactive in understanding plant operations rather than merely observing them. The company encouraged interns to develop a practical mindset and appreciate real-world constraints such as equipment limitations, cost considerations, and environmental responsibilities.

GMDC expects interns to demonstrate professional conduct, eagerness to learn, and respect for industrial protocols. In return, the organization provides a strong learning platform with exposure to real operations, experienced professionals, and a disciplined industrial environment. This balance of expectations and support helped create a meaningful and enriching internship experience, contributing significantly to my professional development.

Academic courses relevant to the project : Chemical Engineering Courses and Mathematics I, II, III

PS-II Station : Goodera - Software Development Engineer (SDE), Bengaluru

Faculty

Name: Ashish Narang .

Student

Name: PARVER CHHABRA(2021B1A72304P)

Student Write-up

PS-II Project Title: SDE Intern

Short Summary of work done during PS-II : learned a lot about how important it is to make things easy and clear for users. For example, I realized that even small changes—like saving people's filter settings or making sure information is always up-to-date—can save users a lot of time and frustration. I also saw how crucial it is to handle feedback well, both from users and from the team, and to keep improving based on that input. I learned to pay attention to details, like making sure numbers add up correctly, preventing mistakes before they happen, and making sure only the right people have access to certain features. I also got better at thinking about security, cost savings, and how to make systems work smoothly together. Overall, this work taught me that good development isn't just about adding new features, but about making things work better for everyone—by listening, testing, and always looking for ways to improve.

Tool used (Development tools - H/w, S/w) : Typescript,React

Objectives of the project : To Learn Full Stack Development

Major Learning Outcomes : Understanding of How Development of Software at Scale works.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Flexible

Academic courses relevant to the project : DBS,OOPs

PS-II Station : Goodera - Software Development Engineer Testing (SDET), Bengaluru

Faculty

Name: Ashish Narang .

Student

Name: GUPTESH RANJAN SAHOO(2022A2PS1067P)

Student Write-up

PS-II Project Title: Expansion of goodyos

Short Summary of work done during PS-II : Hybrid role of SDET and SDE,, learning both web dev and implementing new feature on frontend and backend as well as bug fixing + learning API automation on cypress and implementing basic sanity suites for testing purposes

Tool used (Development tools - H/w, S/w) : VS code, CLI, AWS, Cypress

Objectives of the project : Implementation of new features on internal company tool "Goodyos"

Major Learning Outcomes : Web dev, Javascript, AWS, psql

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Very Kind seniors with friendly atmosphere with somewhat work tangible timings, but a despite these a significant amount of work is done thus helping me gain many new experiences

Academic courses relevant to the project : OOPS, DBS, DSA, COMNET, CP

PS-II Station : Gosprint logistics pvt ltd, Bengaluru

Faculty

Name: Arindam Roy .

Student

Name: ADITYA HARESH KORDE(2021B1A43006G)

Student Write-up

PS-II Project Title: Business Analysis and GTM of Sentry

Short Summary of work done during PS-II : a)Led strategic delivery optimization for 40+ clients , identifying address-quality gaps and designing interventions that reduced RTO by 15%, directly improving unit economics. b) ommunicated with sellers and internal teams to implement 120+ courier selection rules , improving monthly delivery performance across 20,000+ shipments.

Tool used (Development tools - H/w, S/w) : MS Excel, MS PowerPoint, Canva, Switf's Rule Editor, BigQuery

Objectives of the project : 1) To manage the seller side of the business by creating courier based rules specific to the clients. b) To plan and execute the GTM of Sentry, an in house product made by the company and onboard 50+ users on the same

Major Learning Outcomes : Cross functioning with various teams, ability to sell a product by enhancing my pitching skills. Working very closely with the founder to gain insights on the industry.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Work environment depends on the team you are in. The business team which I was a part of is very flexible and lets you work with freedom. My expectations was that the culture could've been better. More activities within the company would help a lot.

Academic courses relevant to the project : Principles of Management

PS-II Station : Grahith Learning, Nalgonda

Faculty

Name: Bhamidipati Vaishali .

Student

Name: SIRIGIRI SOWMITH REDDY(2020B3A80556G)

Student Write-up

PS-II Project Title: ENHANCING AN LMS/ERP PLATFORM THROUGH PRODUCT DEVELOPMENT AND AI INTEGRATION

Short Summary of work done during PS-II : As an Entrepreneur in Residence at Grahith Learning LLP, I contributed to the end-to-end product lifecycle of an LMS/ERP platform. My role evolved from initial feature execution to strategic product ownership across three functional domains: Product Management, AI Integration, and Brand Strategy. In Product Management, I initially developed the 'Chess Hub' module and successfully launched an AI-integrated 'Announcement' feature. Post-midsemester, I took full ownership of core ERP operations, leading

the ground-up development of the 'Receptionist Desk' and 'Interaction Management' modules with modular architectures for scalability. I also executed a critical overhaul of the 'Finance Wing,' mapping complex logic for fee installments to streamline administrative workflows. In AI Integration, I established a custom AI evaluation framework and refined 'AI Tutor' prompts by implementing strict guardrails to ensure pedagogical safety. I further developed 'Post-Test Analytics' to generate qualitative insights from student assessment data. In Brand Strategy, I managed a client-facing project for 'Sankalp School,' executing a comprehensive marketing website from market research to content delivery. Leveraging the StoryBrand framework, I re-positioned the brand narrative to focus on student success. This tenure facilitated my transition from a developer to a versatile generalist capable of driving strategic business value.

Tool used (Development tools - H/w, S/w) : Front-End Development: React.js, HTML, CSS, JavaScript. No-Code & Prototyping: Lovable (Web generation), Whimsical (User Flows & Wireframing). UI/UX Design: Figma (High-fidelity design). AI & Prompt Engineering: OpenAI API/Playground, ChatGPT/Claude

Objectives of the project : Enhance User Workflows, Product Development, AI Integration, Strategic Branding

Major Learning Outcomes : Pre-Production Validation: Learned the critical importance of validating product logic and designs (PRDs and Wireframes) with stakeholders before development begins. This practice prevents costly code refactoring and ensures the final product meets user n

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at Grahith Learning LLP was exceptionally collaborative and growth-oriented. The leadership consistently prioritized my professional development, viewing every project assignment through the lens of the skills I would acquire rather than just immediate business output.

For projects involving domains that were new to me—such as the Client Website strategy or AI prompt engineering—there were no rigid deadlines. Instead, I was afforded ample time to

research, experiment, and ensure the delivery of a high-quality product. This approach fostered a psychological safety net that encouraged deep learning and "first-principles" thinking.
The primary expectation from the company was one of disciplined execution. As an early-stage startup, the workload inevitably consisted of both highly stimulating strategic tasks and mundane, repetitive operational tasks. The company expected me to drive these "boring" but necessary tasks to completion with the same rigor, ownership, and enthusiasm as the high-visibility product features. This balance taught me that true professionalism lies in maintaining quality regardless of the task's excitement level.

Academic courses relevant to the project : NA

PS-II Station : Grasim Industries, Nagda

Faculty

Name: Arun Maity .

Student

Name: PRABHALA SREEJIT .(2021B5A43175H)

Student Write-up

PS-II Project Title: Reduction of unplanned downtime of baling press

Short Summary of work done during PS-II : During the internship, a systematic study of the baling press section was carried out to understand breakdown patterns and downtime contributors. The operating mechanisms and major components of the baling presses were studied through repeated shop-floor visits and interactions with operators and maintenance staff. This helped in understanding actual operating conditions, common failure points, and practical

issues observed during machine operation. Historical breakdown data for all baling presses was collected from plant records along with the documented root causes. The data was reviewed and cleaned to remove inconsistencies and spelling variations. Similar failure modes were grouped under common root-cause categories to enable structured analysis and reduce redundancy in the dataset. For analysis, breakdown data from the financial year 2024–2025 was selected initially to establish the primary scope. This analysis helped identify machines contributing the highest downtime and the most frequent categories of failures over the year. In addition, breakdown data from the most recent four months was extracted and analyzed separately to study current trends and verify whether recent failure behavior was consistent with the yearly pattern. To support analysis, dashboards were created using Pareto charts, bar charts, and other KPI-based visualizations. These visual tools were used to compare machine-wise downtime contribution, identify dominant failure categories, and prioritize problem areas. Based on the insights obtained from the analysis, key baling presses and recurring issues were identified, forming the basis for recommending focused actions to reduce baling press downtime.

Tool used (Development tools - H/w, S/w) : Excel

Objectives of the project : To study and reduce the sudden stoppages of baling press

Major Learning Outcomes : Learnt how to analyze plant data and give insights to the team
Learnt how a plant functions and operations.

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The HR team and mentors are supportive and approachable, making it easy to interact and seek guidance. The working environment may feel harsh initially, but one gradually becomes accustomed to it. It is a suitable place for individuals seeking exposure to core plant operations.

Academic courses relevant to the project : Mechanics of solids
Thermodynamics
Heat transfer
Fluid Mechanics

PS-II Station : GRASIM Pulp & Fiber Innovation Center, Mumbai

Faculty

Name: Arun Maity .

Student

Name: VARUN MANOHAR CHITLANGE(2021B1A12733P)

Student Write-up

PS-II Project Title: Data-Driven Optimization and Digital Twin Development of Digester in Pulp Manufacturing Process

Short Summary of work done during PS-II : The internship project successfully demonstrated the potential of data-driven methodologies to enhance the operational understanding and optimization of the digester system at Grasim Industries. Through extensive data preprocessing, exploratory analysis, and application of multiple machine learning models—including Linear Regression, Random Forest, XGBoost, and Artificial Neural Networks—the project established a reliable framework for predicting the digester Main feature 2 and identifying key process drivers. The development of automated analytical tools, Excel-based outputs, and an interactive dashboard further contributed to improved visibility, faster decision-making, and streamlined analysis for plant personnel. Beyond predictive modeling, the project advanced foundational components required for future digital twin development by integrating real-time PI data, process variables, and historical information. The insights derived from feature importance analysis and trend evaluation provide valuable guidance for operational optimization and process control. The internship offered practical exposure to industrial data challenges, process engineering concepts, and digital transformation initiatives within the pulp and paper sector. The work carried out serves as a strong baseline for future enhancements, including real-time model deployment, hybrid digital

twins, advanced optimization algorithms, and expanded process monitoring systems. Overall, the project met its objectives and contributed meaningful technical value to the organization while offering significant learning and professional growth.

Tool used (Development tools - H/w, S/w) : Python (Including ML libraries), MS Excel, Spyder

Objectives of the project : The primary objective of this project is to develop a data-driven framework for optimizing the digester system and enabling digital twin development at Grasim Industries. The specific objectives of the work are as follows: 1. To understand the operational behavior of the digester system by performing detailed exploratory data analysis on historical and real-time process parameters. 2. To preprocess, clean, and integrate multi-source industrial datasets (key process parameters) for use in modeling and decision-making. 3. To evaluate the influence of key process variables— key process parameters —on the digester overall pulp quality. 4. To develop predictive models for the process parameter using multiple machine learning techniques, including Linear Regression, Random Forest, XGBoost, and Artificial Neural Networks (ANNs), and compare their performance. 5. To generate automated insights and analytical outputs through Python scripts that create periodic Excel files, summary sheets, and trend analyses used by process engineers. 6. To design and deploy an interactive dashboard using Dash and Plotly for real-time visualization of digester trends, prediction results, and operational indicators. 7. To support digital twin development by establishing a validated data-driven foundation that can be integrated with future mechanistic or hybrid modeling frameworks. 8. To review relevant scientific and industrial literature to align the modeling approach with established pulping kinetics, digester operation principles, and modern digital manufacturing strategies. 9. To provide practical recommendations that can help improve process stability, enhance pulp quality, and assist in data-centric decision-making for digester operations.

Major Learning Outcomes : During the course of this internship, several important technical and professional learnings were gained. These learnings span process understanding, data analysis, machine learning, and industrial exposure.
1. In-depth understanding of digester operation

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment during my Practice School was professional, collaborative, and conducive to learning. The organization fostered a culture where knowledge sharing and open communication were encouraged, making it easy to approach mentors and team members for guidance. Colleagues were supportive and receptive to new ideas, which created a positive learning atmosphere.

The company maintained clear expectations, emphasizing discipline, safety, quality of work, and adherence to industrial standards. Interns were expected to be proactive, responsible, and willing to learn, while delivering work with accuracy and professionalism. Adequate exposure was provided to real industrial problems, allowing theoretical knowledge to be applied in a practical setting.

There was a strong focus on continuous learning, both through hands-on involvement and regular technical discussions. Constructive feedback from supervisors helped in improving technical understanding and professional conduct. Overall, the organization provided a structured yet flexible environment that supported skill development, teamwork, and meaningful learning outcomes.

Academic courses relevant to the project : Chemical Process technology, Computer Programming, Chemical Process Calculations, Heat Transfer

Name: HARSH ACHARYA(2022A1PS1056P)

Student Write-up

PS-II Project Title: Digitalisation and Predictive Analysis for MSFE system

Short Summary of work done during PS-II : Developed an end-to-end Python-based digitisation and analytics framework for MSFE systems, covering cycle detection, data cleaning, utilisation analysis, predictive modelling, interpretability, and automated reporting to support data-driven process monitoring and future digital twin development.

Tool used (Development tools - H/w, S/w) : Python, Excel, ngrok

Objectives of the project : • To develop a structured digitisation and analytics framework for MSFE systems to improve monitoring, performance evaluation, and decision-making. • To enable cycle-wise analysis through robust data preprocessing, cleaning, and automated cycle detection. • To apply predictive analytics and machine learning for understanding key drivers of MSFE performance.

Major Learning Outcomes : Developed strong hands-on expertise in industrial data engineering, including SCADA data cleaning, cycle detection, and automation.
Applied machine learning and statistical techniques (RF, XGBoost, PCA, symbolic regression) to a real chemical engineering

Details of Papers/patents : N.A.

Brief Description of working environment, expectations from the company : The working environment at Grasim PFIC, ABSTC was highly professional, research-driven, and collaborative, with strong interaction between process engineers, researchers, and data analysts. The internship emphasized independent problem-solving, disciplined engineering thinking, and data-backed decision-making. Expectations included understanding real plant constraints, working with industrial SCADA data, developing robust and reproducible analytics, and regularly validating insights through discussions with mentors. The environment encouraged learning, iteration, and clear technical documentation, closely resembling real industrial R&D and digitisation workflows.

Academic courses relevant to the project : Heat Transfer
Mass Transfer Operations
Chemical Engineering Thermodynamics
Process Control
Numerical Methods for Chemical Engineering

PS-II Station : GreenFortune Windows and Doors - Product Strategy, Hyderabad

Faculty

Name: Rakesha Chandra Dash .

Student

Name: NISARG PATEL(2022A4PS1219G)

Student Write-up

PS-II Project Title: Product Strategy

Short Summary of work done during PS-II : Broadly worked across Supply Chain Management and Operations, contributing to the design and implementation of a Warehouse Management System using Odoo. Developed a sourcing strategy and cost analysis for raw materials used in manufacturing, and identified key areas with potential for cost reduction, supported by competitor trade analysis. Led data streamlining for UPVC profiles, which account for 70% of the business, by creating new internal codes and standardising item names and codes across all systems to enable accurate and consistent data recording. Supported the initiation of a cleaning kit project for customers by contacting OEMs, assessing various chemicals for feasibility and usage, and sourcing samples for internal evaluation. From October onwards, carried out demand planning for UPVC profiles, maintaining a master planning sheet to project sales and support inventory planning. Assisted in planning container orders to maintain sufficient stock levels and coordinated directly with the vendor point of contact to place these orders and track progress.

Tool used (Development tools - H/w, S/w) : Excel , Docs , PPT , odoo , Tally

Objectives of the project : Streamline supply chain and warehouse operations Implement an effective WMS (Odoo) Reduce raw material costs Standardise and clean master data Improve demand and inventory planning Support new value-added product initiatives (cleaning kit)

Major Learning Outcomes : Developed a practical understanding of Supply Chain and Operations integration, particularly how warehouse activities, sourcing decisions, and demand planning interconnect in a manufacturing environment.
Gained hands-on experience in Warehouse Management

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment was positive and supportive, with a respectful and cooperative culture. There was no strict dress code, and the working hours were reasonable, allowing for a comfortable routine. While the nature of my role required multiple visits to the factory, which was located at a considerable distance, this was the only minor challenge. Overall, the experience was smooth and enjoyable, with no major issues observed in the workplace culture or daily operations.

Academic courses relevant to the project : Manufacturing Management

PS-II Station : Greenlight, Bengaluru

Faculty

Name: Raja Vadhana Prabhakar .

Student

Name: DISHANT SURANA(2021B3A71114G)

Student Write-up

PS-II Project Title: Risk Agent Chatbot

Short Summary of work done during PS-II : Mentioned in the above section.

Tool used (Development tools - H/w, S/w) : Databricks

Objectives of the project : Support Risk Ops team by automating their investigation procedure via an AI agent.

Major Learning Outcomes : Learnt how to build scalable AI agentic solutions along with the dev work that goes behind agentic workflows.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Pretty flexible working environment, great team, flexible work policy (hybrid), interns are not treated like interns but rather like full-time employees (you'll be able to see your work going into production, not just working on POC's)

Academic courses relevant to the project : Nil

Name: PRANAV BHUSHAN AKULA .(2022A7PS0033H)

Student Write-up

PS-II Project Title: Backend development

Short Summary of work done during PS-II : Over this project, I contributed to several backend improvements focused on efficiency, security, and system reliability. I developed a portal for internal use, to automate backend workflow testing, reducing manual effort and speeding up validation processes. To improve user experience and system robustness, I implemented clearer error handling and custom exceptions while also strengthening overall security. I integrated machine learning model outputs into the backend rule engine, enabling data-driven decision-

making. Additionally, I added new database variables that support more flexible rule creation and help deliver a smoother user experience. Another major task was building new security focused APIs from scratch to prevent account takeover attempts. This included a dedicated API designed with strong validation checks and fraud-prevention mechanisms.

Tool used (Development tools - H/w, S/w) : Spring Boot and AWS

Objectives of the project : To contribute to backend development by implementing new features, fixing existing issues, and improving overall system functionality.

Major Learning Outcomes : Working on the backend gave me hands-on exposure to microservice architecture and helped me understand how multiple services connect and scale in a real application.

Details of Papers/patents : none

Brief Description of working environment, expectations from the company : The environment was friendly, and people were always open to helping whenever I got stuck. I was able to contribute to meaningful tasks, which helped me understand how things actually work in a live microservice setup. Overall, the experience helped me grow both technically and professionally, and it gave me a clearer idea of what working in corporate feels like.

Academic courses relevant to the project : OOP, DBMS

PS-II Station : H2e Power Systems Private Limited, Pune

Faculty

Name: Ravi Shrikrishna Reosekar .

Student

Name: SAMARTH SINHA(2022A1PS1514G)

Student Write-up

PS-II Project Title: Founders office

Short Summary of work done during PS-II : At h2e, I spearheaded the technical development of Solid Oxide Electrolyzer Cell (SOEC) stacks, focusing on maximizing hydrogen production efficiency. I led the end-to-end process of designing, assembling, and testing high-temperature electrochemical systems, where I successfully optimized thermal management and stack durability.

Tool used (Development tools - H/w, S/w) : sql, powerbi, python, excel

Objectives of the project : Maximize sales, diversify product distribution channels and research on MEA markets

Major Learning Outcomes : At h2e, I mastered the integration of solid oxide electrolyzer cells (SOEC) and fuel cell stacks, gaining deep expertise in high-temperature electrochemical systems. I led technical optimizations in hydrogen production efficiency and thermal management, w

Details of Papers/patents : --

Brief Description of working environment, expectations from the company : The company expected high levels of technical autonomy and a "first-principles" approach to problem-solving. Beyond engineering precision, there was a strong emphasis on cross-functional collaboration; I was expected to communicate complex electrochemical data to both manufacturing teams and stakeholders to ensure our SOEC solutions met stringent commercial scalability and durability targets.

Academic courses relevant to the project : none

PS-II Station : Habanero Labs - a subsidiary of Spicenet, Bengaluru

Faculty

Name: Shreyas Suresh Rao .

Student

Name: VARUN L .(2020A7PS0068P)

Student Write-up

PS-II Project Title: Building Spicedge

Short Summary of work done during PS-II : During my six-month internship at Spicenet Technologies, I worked as the Technical Head for the development of Spice Edge, a unified DeFi execution and cross-margining platform. My work involved designing and implementing core backend services, multi-venue execution modules, a portfolio-level cross-margin engine, and an intent-based execution framework. I also conducted research and prototyping around EIP-7702 for self-custodial, programmable accounts. In parallel, I built and optimized cloud infrastructure, messaging pipelines, and observability systems. This internship provided extensive experience in distributed systems, blockchain infrastructure, performance engineering, and large-scale system design.

Tool used (Development tools - H/w, S/w) : Rust (high-performance backend services, execution engine, intent compiler), TypeScript / JavaScript (API layers, tooling, integrations), Solidity (EIP-7702 validation contracts, smart contract prototyping), SQL (schema design and queries)

Objectives of the project : Build and productionise spicedge

Major Learning Outcomes : Use of Blockchain technology to bring together and solve chain fragmentation

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : At Spicenet Technologies, the work environment was highly friendly, collaborative, and supportive. Team members were approachable and always willing to help, which made it easy to ask questions and discuss ideas openly. Regular technical discussions and knowledge-sharing sessions encouraged continuous learning and innovation. Guidance from experienced mentors created a comfortable space to experiment, make mistakes, and improve without pressure. The culture emphasized teamwork, mutual respect, and ownership of work, helping maintain high motivation levels. Overall, the positive and inclusive atmosphere at Spicenet Technologies greatly contributed to both technical growth and a rewarding internship experience.

Academic courses relevant to the project : NA

PS-II Station : HEAPS HEALTH SOLUTIONS INDIA PVT. LTD - Customer Success- , Hyderabad

Faculty

Name: Bharathi R .

Student

Name: ADITI SANJAY PURI(2022A5PS1461P)

Student Write-up

PS-II Project Title: Client operations report and outcome analysis

Short Summary of work done during PS-II : Worked as a program manager for four international clients. Made daily and weekly operational reports along with end of the month analysis. Medical abstraction and miscellaneous tasks were also completed.

Tool used (Development tools - H/w, S/w) : Excel, company's software platform

Objectives of the project : Aim: To enforce a structured care coordination care management program for discharged patients (Insurance company members) through an A Objectives: To design and maintain structured operations reports for the PDCM program. To analyze monthly operational data across multiple clients. To assess program performance using predefined KPIs such as connectivity and productivity. To conduct root cause analysis for observed performance gaps and trends. To propose actionable and scalable operational solutions aligned with organizational strategy.

Major Learning Outcomes : Data analytics and program management along with effective and adaptive learning communication with international clients.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment is flexible as long as necessary work per day is completed. It is formal but friendly with help given when necessary, there is an expectation of slight flexibility with tasks and working hours, however it is not burdensome.

Academic courses relevant to the project : Principles of management

Name: RAKSHITA DAVE(2022A5PS1457P)

Student Write-up

PS-II Project Title: BUILDING PROGRAM MANAGEMENT EFFICIENCY THROUGH REPORTING, COORDINATION & LEARNING SYSTEMS

Short Summary of work done during PS-II : Worked on healthcare program operations by building and managing structured data-driven reports (weekly, monthly, reconciliation, readmission) using Excel analytics. Tracked vendor, client, and program performance using KPI metrics to support value-based healthcare delivery. Independently handled reporting for multiple client projects across Post-Discharge Care Management (PDCM) and Health Compliance & Risk Management (HCRM) programs. Also contributed to building LMS course modules to improve product, process training, and operational standardization across teams and vendors.

Tool used (Development tools - H/w, S/w) : Excel

Objectives of the project : To gain hands-on experience in healthcare operations and program management by using data-driven reporting, KPI measurement, and learning technology systems to improve operational efficiency, support quality healthcare delivery, and enable better performance tracking across vendors, clients, and care programs.

Major Learning Outcomes : 1. Data-Driven Healthcare Operations
Learned how structured reporting and analytics improve operational visibility, enable early gap detection, and support faster, data-backed decision-making in healthcare programs.
2. KPI-Based Performance Management
De

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The work environment was great , colleagues were very supportive . Company expects you to be sincere towards work.

Academic courses relevant to the project : NA

PS-II Station : HEAPS HEALTH SOLUTIONS INDIA PVT. LTD - Data Science, Bengaluru

Faculty

Name: Bharathi R .

Student

Name: ADITYA PRAKASH(2021B1A82684G)

Student Write-up

PS-II Project Title: Data Science Intern

Short Summary of work done during PS-II : During this period, I executed a comprehensive data analytics project, progressing from foundational training to delivering multiple end-to-end solutions. My work focused on two key internal initiatives: a Hospital Readmission Analysis and a Data Engineering Pipeline. For the readmission analysis, I advanced from an initial Excel assignment to querying the live, real-world database with SQL, culminating in a dynamic, interactive dashboard built in Apache Superset to provide strategic insights to the internal team. Concurrently, I engineered a data pipeline using Python to automatically scrape and extract data from highly complex, unstructured PDF documents (Standard Treatment Guidelines), successfully transforming them into a clean, structured, and queryable SQL database. Finally, I demonstrated project and stakeholder management skills by successfully delivering custom dashboards for three separate external clients. This involved gathering requirements, managing concurrent projects, and using both Excel and Apache Superset to build and present data-driven solutions that provided direct client value.

Tool used (Development tools - H/w, S/w) : Programming & Data Engineering: Python: Used for scripting, web scraping, and automating data extraction. Python Libraries: Pandas (for data

manipulation), PyPDF2/Camelot (for PDF parsing and table extraction). Code Editor: VS Code / Jupyter Notebook (

Objectives of the project : To Enhance Internal Product Strategy: Analyze historical patient data to identify the key drivers and statistical trends of hospital readmissions. The goal was to provide actionable, data-driven insights to the internal team to guide the future development of the Post-Discharge Care Management (PDCM) product. To Create a New, Reusable Data Asset: Engineer an automated data pipeline using Python to extract, clean, and structure critical information from inaccessible, complex public health documents (Standard Treatment Guidelines). The objective was to transform these unstructured PDFs into a queryable SQL database, creating a valuable new data asset for the company. To Deliver Client-Facing Analytical Solutions: Meet the bespoke analytical and reporting needs of multiple external clients by designing, developing, and delivering custom, interactive dashboards. This objective focused on using the best tool for the job (Excel or Apache Superset) to demonstrate and strengthen the company's value proposition as a data-driven partner.

Major Learning Outcomes : Microsoft Excel: Advanced from foundational skills to building client-ready dashboards using Pivot Tables, Slicers, and advanced functions.
SQL: Acquired practical proficiency in writing complex queries to extract, join, filter, and aggregate data from l

Details of Papers/patents : Not Applicable (N/A)

Brief Description of working environment, expectations from the company : The working environment was dynamic, results-oriented, and highly data-driven, operating at a fast pace. The culture was built on a foundation of rapid learning, where I was given the autonomy to apply new skills to progressively more complex, real-world business problems. It was a collaborative setting that involved direct engagement with mentors, internal product teams, and external clients, requiring clear communication and a focus on delivering value. The technical environment was modern, utilizing a stack that included Python, SQL, and Apache Superset.

Academic courses relevant to the project : Database Management Systems (DBMS): This course provides the foundational knowledge for all your SQL work, including database design, relational algebra, and writing complex queries.

PS-II Station : Hevo Technologies India Pvt. Ltd., Bengaluru

Faculty

Name: Jyotsana Grover

Student

Name: KUSHAGRA MISHRA .(2021B5A72970H)

Student Write-up

PS-II Project Title: Automation Frameworks and Connector Design

Short Summary of work done during PS-II : During my time at Hevo Data, I focused on building automation systems that strengthened the reliability, accuracy, and overall consistency of Hevo's data-ingestion connectors. I worked closely with internal engineering and QA teams to understand how connectors behaved in real customer environments, and I designed tools that automatically validated historical tasks, incremental loads, CDC patterns, and schema-sensitive workflows. A significant part of my work involved writing precise SQL-driven checks to monitor connector health—such as verifying minimum historical subtasks, detecting anomalies or gaps in task execution, and ensuring that incremental and CDC-based pipelines progressed within expected boundaries. To reduce manual intervention, I built internal scripts and utilities that automated connector validation end-to-end. These automation systems helped shorten QA cycles, improve deployment confidence, and catch issues before they reached production. I also optimized backend logic by replacing expensive n-log-n patterns with hash-based structures, resulting in faster validation and reduced load on internal databases. My work required frequent investigation of tricky edge cases, including partially overlapping intervals, incomplete historical loads,

unexpected schema drift, and inconsistent incremental task creation. I then updated validation frameworks to automatically detect and report these issues, improving overall connector stability. In addition to development, I collaborated with cross-functional teams to refine connector-level test plans, document recurring failure scenarios, and propose enhancements to connector behavior and monitoring. I also contributed to debugging complex customer-facing issues by analyzing logs, task metadata, and connector execution traces to identify root causes.

Tool used (Development tools - H/w, S/w) : Pytest, Kafka, Jenkins

Objectives of the project : Design new Connectors and set up of automation framework for the new platform

Major Learning Outcomes : Debugging skills, CI/CD concepts,

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : You are required to take ownership of the tasks and complete the tasks by the deadline (decided by yourself and manager). In case of any blockers call out in the stand ups.

Academic courses relevant to the project : DSA , OOPS

PS-II Station : Hubert Enviro Care Systems - R&D, Chennai

Faculty

Name: Gopalakrishnan Venkiteswaran .

Student

Name: SWAJEET SWAIN(2022A1PS1330P)

Student Write-up

PS-II Project Title: PSTP

Short Summary of work done during PS-II : . I prepared multiple Detailed Project Reports (DPRs) including Mediclear, Ecolaunder, General Hospital (100 KLD), and Kodungallur Temple (10 KLD). I developed complete technical BOQs, process descriptions, equipment lists, and sizing calculations for MBRs, tanks, pumps, blowers, and filtration units. I worked on adequacy reports, PFD/P&ID interpretation, hydraulic retention time calculations, sludge generation modelling, and recirculation assessments. I also assisted in the preparation of layouts, sections, and capacity design for PSTP/ETP modulesOverall, my internship involved end-to-end exposure to real project engineering, design drafting, technical evaluation, and environmental compliance support.

Tool used (Development tools - H/w, S/w) : Auto cad ,Ms office

Objectives of the project : Technical documentation and report

Major Learning Outcomes : During my PS-2 at HECS, I gained hands-on exposure to real-world wastewater treatment engineering, especially in packaged STP/PSTP design and process optimization. I developed strong skills in preparing DPRs, technical BOQs, hydraulic calculations, membra

Details of Papers/patents : none

Brief Description of working environment, expectations from the company : The environment encouraged both technical learning and practical exposure, combining desk-based engineering work with field visits to STP/ETP sites, fabrication yards, and client locations.The company expected punctuality, willingness to learn, professionalism in communication, and timely completion of assigned tasks.

Academic courses relevant to the project : Separation Processes,Engineering Drawing

PS-II Station : Hyrefox Consultants Ltd., Jaipur

Faculty

Name: Perumal Jayakumar

Student

Name: PARTH RANA(2021B1A12473P)

Student Write-up

PS-II Project Title: End to End Product and Marketing Lifecycle of a SaaS Product

Short Summary of work done during PS-II : During Practice School II at Hyrefox, I worked on multiple full-stack projects spanning web, mobile, and automation systems. I contributed to the AudioTour ecosystem by developing an ASP.NET MVC admin panel for managing tours, users, and content, a cross-platform React Native mobile application with audio-guided tours, maps, multilingual support, OAuth authentication, and Stripe payments, and a React-based travel blog web application. Additionally, I built automation pipelines using Python, AWS S3, and n8n for image processing, and developed a Flask-based YouTube automation platform implementing OAuth 2.0, REST APIs, and SQL Server integration. Across all projects, I followed modular architecture, version control, and documentation best practices.

Tool used (Development tools - H/w, S/w) : Testing on Android and iOS devices/emulators. Frontend development utilized React Native and React.js with TypeScript, JavaScript (ES6+), and modern HTML/CSS practices. Backend systems were built using ASP.NET MVC (C#) and Flask (Python), with SQL Server

Objectives of the project : Learn from scratch about the Product and Marketing Lifecycles

Major Learning Outcomes : 1. Product Lifecycle from end to end - w/o devops
2. Marketing Lifecycle - w/o devops
3. How to build a company from 0 to 1

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : It was a combination of Good amount of pressure, the one that helps you learn and meet deadlines. It was also very developing, helpful and one where i was nurtured and taken care of. The company's expectations were to deliver and build on the startup

Academic courses relevant to the project : -

PS-II Station : Ideaspring Capital Advisors LLP - , Bengaluru

Faculty

Name: Uma Nagarajan .

Student

Name: KHATRI HARSHVARDHAN KESHAV(2021B2A22160P)

Student Write-up

PS-II Project Title: Investment Analyst

Short Summary of work done during PS-II : Scouting startups, speaking to founders, analysing deals, doing market research, managing key updates from portfolio companies

Tool used (Development tools - H/w, S/w) : Tracxn, Excel, AI

Objectives of the project : Investment analysis, market research, thesis building, etc.

Major Learning Outcomes : Mental frameworks, communication skills, networking skills

Details of Papers/patents : Published 3 theses- 1 online, 2 internal. On Semiconductors, AI and Lifesciences

Brief Description of working environment, expectations from the company : Good and motivating working environment, high ownership opportunity

Academic courses relevant to the project : None

PS-II Station : IFB Industries, Goa

Faculty

Name: Pavan Kumar Potdar .

Student

Name: ARUNAV GARG(2022A4PS1301P)

Student Write-up

PS-II Project Title: Vertical Discharge Outdoor unit and Passive Dehumidication

Short Summary of work done during PS-II : Ideated, designed and validated addition of a sheet metal component in vertical discharge outdoor unit to increase airflow/cooling capacity. Tested effect of passive dehumidification modules in increasing energy efficiency.

Tool used (Development tools - H/w, S/w) : PTC Creo, Windchill PLM

Objectives of the project : Optimize a mass-production vertical discharge outdoor unit to replace standard horizontal discharge ones for cost effectiveness. Explore Passive Dehumidification in residential ACs to reduce Latent load.

Major Learning Outcomes : prototyping, market research, literature reviews, performance testing, product lifecycle management, CFD simulations

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : The team relies on physical prototypes and does not use modern CAE tools that are standard in the industry. The company is currently focused on cost-saving methods, so R&D projects won't receive much attention from the team. We were asked to choose research oriented projects which were out of scope of the team's knowledge, which led to insignificant progress. Its best to pressure the managers to communicate their current organizational goals, to ensure your projects are actually impactful.

In case you wish to work on novel ideas, common tools for rapid prototyping, such as 3D printers, will be extremely difficult to access (my team was quoted 1.8 lakhs for basic 3D prints, using internal facilities). The facility also lacks many basic items needed to fabricate prototypes (insulation tape, hacksaws, etc.). Work hours are a bit hectic (Monday to Saturday, 9 am to 6 pm). There are no paid leaves for interns, and any leave we took resulted in a pay cut. Also, expect at least a week's delay in receiving your stipend.

In general the team is quite unclear with their expectations, the internship program hasn't been given thought to unlike other stations at our CGPAs. Since PS2 is a crucial internship for placements, would highly recommend preferring other stations, even if they are not in your domain of choice.

Academic courses relevant to the project : Thermodynamics, Heat Transfer, CAD / Machine Drawing

PS-II Station : Impactsure Technologies Private Limited, Mumbai

Faculty

Name: Perumal Jayakumar

Student

Name: SHOURYA PRATAP SINGH .(2022AAPS0283H)

Student Write-up

PS-II Project Title: SDE-intern

Short Summary of work done during PS-II : I worked on the SureSanction project for South Indian Bank at Impactsure Technologies, where my primary focus was on backend development and automation for document generation. The project aimed to automate the creation of sanction letters and other banking documents using AI and data-driven processing. My responsibilities began with Python debugging and building APIs using the Django REST Framework to extract structured data from uploaded documents. This extracted data was then transmitted to the Java Spring Boot backend, where I contributed to managing the data flow, handling API integrations, and ensuring that the information was correctly processed and bound to the web application's user interface. I also worked extensively with SQL Developer connected to an Oracle Database, writing and optimizing queries to fetch document-specific information and maintain data consistency. Once the data was verified and processed, it was automatically mapped to predefined placeholders within standardized templates, completing the document generation process. Throughout this project, I collaborated with senior developers and client teams from

South Indian Bank, working under tight deadlines to deliver accurate and efficient outputs. This experience gave me a strong understanding of real-world enterprise systems, cross-team collaboration, and the integration of AI, Python, Java, and database technologies to build scalable automation solutions for the banking sector.

Tool used (Development tools - H/w, S/w) : Pycharm, python, spring boot

Objectives of the project : Software development

Major Learning Outcomes : Software development

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Very good working environment, flexible with leaves.

Academic courses relevant to the project : Ai-Ml, OOPS, DSA

PS-II Station : Incubrew Innovations Private Limited, Naini Tal

Faculty

Name: Sandeep Kayastha .

Student

Name: APOORV KAKAR(2022A4PS0680P)

Student Write-up

PS-II Project Title: Consulting + execution

Short Summary of work done during PS-II : The internship involved large-scale merchant segmentation, churn prediction, and customer behaviour analysis. Work included developing and refining a Random Forest churn model using MCC, geographic attributes, and website-scraped signals, resulting in significant accuracy improvement. Over 2,000 cold calls and 110+ detailed discovery conversations supported validation of Tiering, persona development, and opportunity assessment across SaaS, eCommerce, Affiliate, and Devshop segments. The role combined quantitative modelling with qualitative behavioural insights to strengthen segmentation logic, identify high-value merchants, and map churn-risk patterns. The internship provided hands-on experience in data analysis, feature engineering, customer research, and actionable insight generation.

Tool used (Development tools - H/w, S/w) : Hubspot

Objectives of the project : Strategizing USA expansion of an Indian startup and executing it

Major Learning Outcomes : Communication, CRM

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Decent

Academic courses relevant to the project : Data Science & Machine Learning
Statistics and Probability
Business Analytics
Database Management Systems
Python Programming
Marketing Management
Consumer Behaviour
Operations Research
Digital Marketing Fundamentals
Research Methodology
Quantita

PS-II Station : India Accelerator - Non Tech, Gurgaon

Faculty

Name: Sidharth Mishra .

Student

Name: ANOUSHKA BURMAN ROY(2022A1PS1115P)

Student Write-up

PS-II Project Title: Impact Investment Research, Startup Evaluation at India Accelerator

Short Summary of work done during PS-II : During my PS-II internship at India Accelerator, I worked closely with the investment and impact teams on startup evaluation, sector research, and accelerator program execution. My responsibilities included mapping startups across priority sectors such as sustainability, fintech, healthtech, and consumer infrastructure, and supporting the evaluation process by coordinating with mentors and domain experts. I assisted in managing accelerator programs by communicating with startup founders, scheduling mentor and evaluator calls, tracking progress, and ensuring timely completion of evaluation forms and CRM updates. I also contributed to market and investment thesis research by analyzing emerging subsectors, identifying trends, and supporting internal documentation for impact-focused initiatives. Additionally, I supported outreach efforts for investor and ecosystem events, including drafting structured communications and maintaining coordination across multiple stakeholders. Through this project, I gained practical exposure to how venture funds assess startups beyond financials, incorporating impact, scalability, and sustainability considerations into investment decisions.

Tool used (Development tools - H/w, S/w) : Software: MS Excel, Google Sheets, Canva, CRM tools, Email & Calendar tools Platforms: Tracxn, Pitch decks, Internal databases

Objectives of the project : To support early- and growth-stage startups through structured evaluation, sector research, and program execution. To assist the investment team in identifying high-potential impact-driven startups across priority sectors

Major Learning Outcomes : Gained hands-on exposure to venture capital and impact investment decision-making
Developed skills in startup evaluation, sector mapping, and qualitative/quantitative research

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : India Accelerator provided a fast-paced, professional, and collaborative working environment typical of an early-stage investment firm. Interns were expected to take ownership of assigned tasks, manage multiple stakeholders, and maintain high standards of accuracy and professionalism. The culture emphasized learning, initiative, and adaptability, with exposure to founders, mentors, investors, and internal leadership.
Clear communication, timely execution, and attention to detail were critical, especially while coordinating accelerator programs and managing startup evaluations. The environment encouraged analytical thinking, problem-solving, and proactive contribution to ongoing projects. Overall, the experience closely mirrored real-world venture capital and startup ecosystem dynamics.

Academic courses relevant to the project : Entrepreneurship & New Venture Creation
Financial Management
Economics
Business Analysis

PS-II Station : India Accelerator - Tech, Gurgaon

Faculty

Name: Uma Nagarajan .

Student

Name: IHA BHATIA(2022AAPS0021P)

Student Write-up

PS-II Project Title: Investment Analyst

Short Summary of work done during PS-II : Analysing and sourcing early stage startups for defence and space sector

Tool used (Development tools - H/w, S/w) : Microsoft tools, AI, google sheets etc

Objectives of the project : Analysing and sourcing early stage startups

Major Learning Outcomes : Learnt about VC and startup investing

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Good environment, learnt a lot about the VC and startup ecosystem

Academic courses relevant to the project : -

PS-II Station : Indira Gandhi Centre for Atomic Research,Kalpakkam, Kalpakkam

Faculty

Name: Madhuri Bayya .

Student

Name: YASH AMOL PATIL(2022A3PS0437P)

Student Write-up

PS-II Project Title: RTL Design Verification, Test Suite Development for Enhanced Design Coverage Analysis, Simulation of VHDL-Based TCP/IP Stack on Artix-7 FPGA Platform

Short Summary of work done during PS-II : My project at IGCAR was regarding the design verification of a TCP/IP protocol stack code which is in VHDL. The main aim was to verify the Ethernet MAC, ARP and TCP layers for FPGA implementation. Initially I had to analyze the existing legacy code to understand the architecture and flow since documentation was limited. After that i developed VHDL testbenches to simulate different network traffic scenarios. I worked on verifying the handshakes between MAC and IP layers and also the tcp connection state machines. I faced some issues with simulation deadlocks in Xilinx Vivado related to reset signals which i debugged successfully. Finally i generated the simulation waveforms to show successful packet transmission and submitted a detailed report on the analysis of the testbench.

Tool used (Development tools - H/w, S/w) : Artix-7 FPGA , Xilinx Vivado,

Objectives of the project : RTL Design Verification, Test Suite Development

Major Learning Outcomes : The PS-II provided exposure to the verification lifecycle of complex digital systems. Key takeaways include a deeper understanding of the Ethernet frame structure, the practical implementation of network protocols in hardware, and the importance of rigoro

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment at IGCAR is research-oriented. The project required a significant amount of independent study and self-reliance. Since the work involved proprietary legacy designs, the focus was largely on reverse-engineering the logic and creating new verification environments. It offers an opportunity for students who prefer working independently to develop their technical problem-solving skills.

Academic courses relevant to the project : Computer Architecture ,Embedded Systems,Computer Networks, Digital Design

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Name: MANTHAN HADIYA(2022AAPS0371G)

Student Write-up

PS-II Project Title: Simulation and Testing of post signal processing of fmcw radar

Short Summary of work done during PS-II : All dsp modules implemented in python and vivao

Tool used (Development tools - H/w, S/w) : H/w and S/w

Objectives of the project : Achieve accurate frequency response

Major Learning Outcomes : Dsp concepts

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Working environment is too good

Academic courses relevant to the project : Digital signal processing and Digital design

PS-II Station : IndusInd Bank, Gurgaon

Faculty

Name: Gaurav Nagpal .

Student

Name: VISHWAM AGGARWAL(2022A3PS1224P)

Student Write-up

PS-II Project Title: Home loan pre-approval model

Short Summary of work done during PS-II : This project focuses on building an end-to-end Home Loan (HL) Pre-Approval Model aimed at automating and enhancing the preliminary credit assessment process. The workflow spans ten structured notebooks, covering data extraction, cleaning, feature engineering, delinquency target creation, scoring, and final eligibility analysis. Internal datasets such as dimaccount, factbalmonthly_hist, and daily transactions were processed to create stable behavioural features, including account vintage, enrichment trends, and transaction activity metrics. These were combined with external bureau inputs—Inquiry (IQ) and Trade Line (TL) files—to form a comprehensive customer-level dataset. A waterfall methodology was applied to filter for mature, active, and financially consistent accounts, ensuring that only high-quality data was used for modelling. Bureau trade lines were analysed to classify existing loans, identify exposure patterns, and generate risk-relevant features such as credit mix, EMI burden, and inquiry behaviour. Delinquency history captured in dpd_string was parsed to create the final target variable and supporting DPD features. The consolidated score pipeline integrated

all engineered features to compute a final pre-approval score for each account. Business rules and score thresholds were then applied to determine customer eligibility for HL pre-approved offers. The final outputs included a scored dataset, eligibility flags, and portfolio-level insights. Overall, the project provided hands-on exposure to data engineering, credit analytics, and model development in a real-world banking context, demonstrating how structured analytical pipelines can support scalable and consistent lending decisions.

Tool used (Development tools - H/w, S/w) : Microsoft Azure, python, pyspark, pandas, sql, excel

Objectives of the project : To create home loan pre approval model

Major Learning Outcomes : Data analysis

Details of Papers/patents : na

Brief Description of working environment, expectations from the company : the comapny is good and accommodating

Academic courses relevant to the project : Data science

PS-II Station : InMobi Technologies Pvt Ltd - Business/ Product Analytics, Bengaluru

Faculty

Name: Seetha Parameswaran .

Student

Name: AMARDEEP SINGH GREWAL(2022A2PS0851P)

Student Write-up

PS-II Project Title: Sales operations optimization through salesforce

Short Summary of work done during PS-II : During my six-month Practice School-II internship at InMobi Technologies Pvt. Ltd., I worked with the Sales Effectiveness team to optimize sales operations through Salesforce-based solutions. The project focused on improving operational efficiency, data quality, and revenue enablement within InMobi's Go-To-Market (GTM) processes. Key initiatives included designing a structured GTM tool evaluation framework, restructuring Salesforce role hierarchies to correct approval workflows, and mapping over 4,000 advertising domains to their parent companies to improve publisher and client visibility. I customized Salesforce forecasting to automate quarterly goal allocation, significantly reducing manual effort for finance and incentive teams. I also contributed to testing and enabling Salesforce Einstein AI features, including Agentforce, AI case summaries, and AI dashboards, supported by structured training and documentation. Major product improvements included redesigning the Deals Portal UI, implementing product-specific opportunity flows with integrated credit approvals, and embedding Spekit for contextual, in-workflow guidance. Additionally, I developed role-specific IDSP dashboards for account managers and led a permission-set consolidation initiative to improve administrative efficiency and security governance. Overall, the work delivered measurable improvements in productivity, data governance, and sales cycle efficiency while providing strong exposure to AdTech operations and enterprise CRM systems.

Tool used (Development tools - H/w, S/w) : Salesforce CRM (Sales Cloud, Service Cloud) Salesforce Einstein (Agentforce, AI Dashboards, Case Summaries) Spekit (Sales Enablement Platform) Salesforce Lightning Reports & Dashboards Microsoft Excel, PowerPoint Internal GTM and Reporting Tools

Objectives of the project : To optimize sales operations at InMobi by leveraging Salesforce for process automation, data governance, and operational efficiency. To design and implement structured frameworks for GTM tool evaluation and onboarding. To restructure Salesforce role hierarchies and approval workflows for improved visibility and accountability. To automate forecasting and goal allocation processes to reduce manual effort and errors. To enhance client

and publisher visibility through adomain and agency hierarchy mapping. To test, validate, and enable Salesforce Einstein AI features for productivity improvement. To improve GTM workflows, reporting dashboards, and administrative efficiency.

Major Learning Outcomes : Gained hands-on experience in Salesforce administration, automation, and CRM optimization
Developed strong understanding of sales operations and GTM processes in an AdTech company
Learned systematic process optimization and workflow design
Acquired experience.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : InMobi provided a fast-paced, collaborative, and professionally structured working environment. The culture encouraged data-driven decision-making, ownership, and cross-functional collaboration. Teams worked closely across sales, engineering, finance, and operations, with regular reviews and feedback sessions. The environment promoted learning, innovation, and exposure to real-world business challenges in the AdTech industry.

Academic courses relevant to the project : NA

Name: HIMANSHI MALIK .(2022A5PS1240H)

Student Write-up

PS-II Project Title: Product Analyst Intern

Short Summary of work done during PS-II : I enhanced and widened the use of the internal organization-wide product funnel metric alerting system with its testing and optimization. I also owned a product to determine the possible bid prices for advertisers to determine better winning

and ad render rates in Header Bidding Markets. Apart from this, I have worked and done analytical optimization in ID graph for InMobi DSP's Mac and Apple based user store.

Tool used (Development tools - H/w, S/w) : Databricks, GitHub, Power BI, Looker, MS Excel, OpsGenie, Confluence, Jira, BigQuery Editor

Objectives of the project : 1. Test various versions and optimize the alerting system for various product teams in inmobi ssp. 2. Analysing inmobi dsp's ID graph creation metrics and overlap for the component analysis. 3. Building bid guidance project for campaign determination for new onboarded bidders and dsps.

Major Learning Outcomes : Product metric and funnel analysis, drop analysis and optimization, alerts setup and cross-team collaboration, Analytical thinking and data analysis and optimization techniques.

Details of Papers/patents : There weren't any such things involved.

Brief Description of working environment, expectations from the company : Good working environment and work-life balance. The company provides cab for women at night after 7pm and all meals on weekdays as well. The atmosphere is nice and very growth-forward.

Academic courses relevant to the project : Financial Management, FRAM, SAPM, Pharmaeconomics, Medicinal Chemistry

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Name: VAISHNAVI SINGHAL(2022B5PS1530P)

Student Write-up

PS-II Project Title: Migration of inmobi analytics from traditional dashboards to AI incorporated, managing dashboards

Short Summary of work done during PS-II : Handled dashboards, script writing- data validations automation, ai check and testing

Tool used (Development tools - H/w, S/w) : Data bricks, sql, power bi

Objectives of the project : To gain insights into real world analytics with ai, handling large scale databases working on collaborations and accountability

Major Learning Outcomes : Coorporate skills, presentation, accountability team management and time management

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Good environment.

Academic courses relevant to the project : Supply chain management, design thinking

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PS-II Station : InMobi Technologies Pvt Ltd - HR (Learning & Development), Bengaluru

Faculty

Name: Seetha Parameswaran .

Student

Name: KAVYA KASHISH(2022A5PS1426P)

Student Write-up

PS-II Project Title: Lateral and Leadership Learning Initiatives

Short Summary of work done during PS-II : During my Practice School–II at InMobi, I worked with the HR–Learning and Organizational Development (LnOD) team on Lateral and Leadership Learning Initiatives to enhance onboarding efficiency, managerial effectiveness, and leadership readiness. I supported the design and execution of a structured Lateral Bootcamp and a Manager Toolkit, developed Salesforce and DSP training modules to improve tool adoption, and contributed to the iLEAD leadership program through content curation and milestone tracking. I also conducted a benchmarking study of campus hiring practices using Mentimeter surveys and employee interviews, analyzing insights through Excel and Power BI. Overall, my work contributed to faster onboarding, improved tool adoption, effective leadership development tracking, and actionable improvements in campus hiring and learning initiatives at InMobi.

Tool used (Development tools - H/w, S/w) : MS Excel, Power BI, MS Teams, Skilljar, SuccessFactors, Mentimeter, Canva & MS PowerPoint

Objectives of the project : The objectives of the project were to design and implement a structured Lateral Bootcamp to enable faster and smoother onboarding of lateral hires, develop a Manager Toolkit to standardize people-management practices across teams, and create Salesforce and DSP training modules to improve tool adoption and operational efficiency. The project also aimed to support iLEAD leadership development through milestone tracking and content curation, while benchmarking campus hiring practices to identify improvement areas and enhance candidate onboarding and engagement.

Major Learning Outcomes : The project enabled a strong understanding of corporate learning and development frameworks and onboarding strategies, along with hands-on exposure to program design, execution and impact measurement. It also provided practical experience in HR analytics,

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : InMobi offered a highly collaborative, fast-paced and learning-oriented environment that strongly supported both

my professional and personal growth. The HR (L&OD) team encouraged ownership, open discussions and data-driven decision-making while the workplace culture was extremely warm, welcoming and supportive irrespective of designation. Colleagues were always approachable, motivating and willing to help and they consistently provided constructive feedback whenever I sought guidance on how to improve myself. This positive environment significantly enhanced my confidence, communication skills and overall personality, making the PS-II experience at InMobi truly enriching.

Academic courses relevant to the project : Human Resource Development, Essentials of Strategic Management, Principles of Management

PS-II Station : InMobi Technologies Pvt Ltd - Software Engineer, Bengaluru

Faculty

Name: Preethi N. G .

Student

Name: NIKHILESH .(2021B5A33166H)

Student Write-up

PS-II Project Title: Pilot Statistics Agent

Short Summary of work done during PS-II : The collective set of projects and enhancements outlined above represent a significant leap forward in the monitoring, validation, and operational management of UMP and CAS pilot environments. By systematically addressing gaps in observability, automation, and data integrity, these initiatives have transformed the pilot stats ecosystem into a robust, scalable, and highly automated platform. The integration of Prometheus-

based system metrics for both UMP and CAS has established a foundation for real-time, granular monitoring of critical infrastructure health indicators. This not only enables proactive detection of performance bottlenecks and anomalies but also ensures that operational teams have the visibility needed to maintain high reliability and rapid incident response. The move to a configuration-driven verification framework further enhances this by allowing for rapid, region-specific adjustments to validation logic, eliminating the rigidity and maintenance burden of hardcoded rules. This flexibility is crucial for supporting diverse deployment scenarios and evolving business requirements. Automated email alerting, tightly integrated with JIRA for dynamic recipient resolution, closes the loop between system health and stakeholder awareness. By ensuring that notifications are timely, accurate, and targeted, the system fosters accountability and accelerates the resolution of pilot issues. The addition of database flags to track notification state further guarantees that communication is both reliable and non-redundant, reducing noise and improving stakeholder trust. Refactoring the pilot stats agent to use absolute difference checks for key metrics, and to track raw counts for requests and exceptions, has dramatically reduced false positives and improved the signal-to-noise 25 ratio in pilot health assessments. This shift ensures that engineering resources are focused on genuine issues, streamlining debugging and supporting more confident, data-driven decision-making. The expansion of the stats pipeline to include Exchange Type and CTV statistics, with full support for both AMD and ARM architectures, demonstrates a commitment to comprehensive, architecture-aware analytics. These additions provide deeper insights into pilot performance across new dimensions, enabling more granular analysis and better optimization of ad delivery strategies. Perhaps most notably, the integration of in-house LLM (Jarvis) for automated review and summarization of pilot statistics marks a new era of explainable, scalable analytics. By leveraging AI to parse, summarize, and merge complex metric tables, the system not only reduces manual effort but also delivers clear, actionable insights to both technical and non-technical stakeholders. The modular, extensible design ensures that new metrics, thresholds, and review types can be incorporated with minimal friction, future-proofing the platform against evolving needs. In summary, these projects collectively deliver a modern, end-to-end solution for pilot stats management—one that is automated, explainable, and highly adaptable. The result is a system that empowers teams to monitor, validate, and optimize pilot deployments with unprecedented efficiency and confidence, supporting the ongoing evolution and reliability of UMP and CAS platforms in a dynamic advertising landscape.

Tool used (Development tools - H/w, S/w) : Prometheus, Bucket , BigTable , Docker, GKE Virtual machines, Python pandas / dataframes, Sendgrid

Objectives of the project : Reduced manual verification effort :Increased developer productivity, saving significant engineering time. Holistic evaluation : combining business performance with system health, we enable real-time monitoring and automated verification of these cost-impacting metrics. Fail Fast Notifications : automated email alerts to inform developers if a pilot fails after the first 3 hours of evaluation.

Major Learning Outcomes : Technical : How to work with Prometheus, Bucket , BigTable , Docker, GKE Virtual machines, Python pandas / dataframes, Sendgrid
Business : how an ad cycle works, how system metrics effect infrastructure spends

Details of Papers/patents : Null

Brief Description of working environment, expectations from the company : The environment at InMobi fostered collaboration, support, and continuous learning. The culture promoted open dialogue, encouraged taking initiative, and allowed for the free exchange of ideas. Expectations were well-communicated, and I was trusted to address challenges independently, with guidance available when necessary. The team combined high standards with a welcoming attitude, which helped me develop both technically and professionally. Overall, the workplace was transparent, inclusive, and inspiring, making it a great place to learn and make valuable contributions.

Academic courses relevant to the project : OOPS, FDSA

Name: SHOAIB KHAN .(2022A3PS0573H)

Student Write-up

PS-II Project Title: ML Based App Categorization

Short Summary of work done during PS-II : Created a ML based App Categorisation Model. Worked in the targeting segment to improve current models and fixed production errors.

Tool used (Development tools - H/w, S/w) : Pyspark, SQL, Databricks, Airflow

Objectives of the project : To create a ML based app categorisation to understand user behaviour.

Major Learning Outcomes : Machine Learning, Big Data Handling, Data Engineering

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Good culture!! Everyone is friendly and ready to help you learn and grow professionally.

Academic courses relevant to the project : Machine Learning, Game Theory, Econometrics, Optimisation,

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Name: SATYA NAGA DATTA HARSHITH ASAPU(2022A3PS0639H)

Student Write-up

PS-II Project Title: Attribution modelling

Short Summary of work done during PS-II : Built an lgbm model to better target users so that the unnecessary spends would be reduced

Tool used (Development tools - H/w, S/w) : Databricks, airflow, mlflow

Objectives of the project : To improve spends of inmobi dsp

Major Learning Outcomes : EDA, Modelling, Model evaluation

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Really flexible work hours, and a welcoming team that prioritises Personal Development of the individual along with the progress in work

Academic courses relevant to the project : Neural networks and fuzzy logic, Machine learning, data mining, game theory

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Name: VATSAL KAILASH HEDA(2022A3PS1205P)

Student Write-up

PS-II Project Title: AI Trading Agent

Short Summary of work done during PS-II : During PS-II, I focused on designing, developing, and deploying an AI Trading Agent to support traders in analyzing campaign performance and making data-driven decisions. I began by understanding InMobi's DSP ecosystem, campaign data sources, and the project's objectives, collaborating closely with stakeholders to define problem statements and key performance metrics. I built a demo agent using n8n and synthetic data to explore workflow design, data ingestion, and decision logic. Subsequently, I implemented a robust multi-agent system using Google's Vertex AI Agent Engine, leveraging Terraform for deployment and creating a ChatGPT-style interface to allow traders to query campaigns, receive insights, and drill down into data. Key components included Data Acquisition, Preprocessing, Reasoning, Recommendation, Query Response, Feedback Integration, Communication, and Orchestration Agents, enabling structured and automated analysis of large-scale campaign datasets. I integrated API-based data extraction from Dataverse, automated report generation via email, and fine-tuned output formatting for clarity and usability. The agent performs contextual analysis, root

cause identification, campaign drill-down, and provides actionable recommendations with justifications. Throughout the PS-II period, I gained practical experience in multi-agent orchestration, large-scale AI system deployment, prompt engineering, and interactive NLP interfaces. The project culminated in a production-ready AI Trading Agent capable of supporting traders in real-time campaign optimization while ensuring scalability, reliability, and maintainability.

Tool used (Development tools - H/w, S/w) : Google Cloud Platform (Vertex AI, Databricks, GCS) Terraform (for infrastructure as code and deployment) Python (data processing, scripting, API integration) SQL (Databricks & DBeaver for data extraction) n8n (initial workflow prototyping) LangChain

Objectives of the project : Build an AI Agent for Traders

Major Learning Outcomes : Gained hands-on experience in deploying agentic AI systems on Vertex AI for real-time trading analytics.
Learned to orchestrate multi-agent workflows, enabling parallel and sequential execution for efficient campaign analysis.
Developed skills in building

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at InMobi for PS-II was highly collaborative, dynamic, and innovation-driven. The team encouraged hands-on experimentation with cutting-edge AI and cloud technologies, fostering a culture of problem-solving and continuous learning. Daily interactions with mentors and colleagues provided clarity on project objectives, real-world challenges in digital advertising, and practical insights into data-driven decision-making. Access to tools like Databricks, Vertex AI, and GCP enabled working with large-scale datasets, building scalable AI solutions, and experimenting with agentic AI systems.
The company expected interns to take ownership of their projects, demonstrate initiative, and deliver functional solutions aligned with business objectives. Emphasis was placed on designing robust, production-ready systems, ensuring data integrity, and creating actionable insights for stakeholders. Clear documentation, structured workflows, and proactive communication were

valued to maintain transparency and collaboration. Interns were encouraged to integrate feedback, iterate quickly, and adopt best practices in coding, deployment, and system architecture. Overall, the environment combined technical rigor with practical exposure, fostering both professional growth and meaningful contributions to real-time trading and campaign optimization processes.

Academic courses relevant to the project : Artificial Intelligence and Machine Learning, Data Structures and Algorithms, Database Systems and SQL, Software Engineering / System Design

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Name: ANANT JAIN(2022A3PS1270G)

Student Write-up

PS-II Project Title: Probabilistic Data Structure / Linux Network Stack Optimization

Short Summary of work done during PS-II : I worked on developing a modern probabilistic data structure (filter) designed to replace the traditional Bloom filter. This involved studying research papers, implementing the approach, and validating it through experiments, which yielded positive results. My second project focused on optimizing the Linux network stack. The objective was to tune exposed system parameters based on our specific use case to achieve maximum efficiency.

Tool used (Development tools - H/w, S/w) : Java, Linux, Jenkins

Objectives of the project : To construct a faster and efficient probabilistic data structure that can replace the current one and tune the linux network stack to get maximum efficiency according to our usecase.

Major Learning Outcomes : I learned the complete lifecycle of a project, from initial planning and development to deployment in the production phase, and gained hands-on experience with each step involved.

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The work environment at InMobi is very positive. As an employee, you're given a great deal of freedom, which allows you to work efficiently. The people here are also very helpful and knowledgeable, and they genuinely enjoy teaching and sharing their expertise.

Academic courses relevant to the project : Object Oriented Programing, Operating Systems, FoDSA, Computer programing

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Name: ADITI GUPTA(2022A8PS0281G)

Student Write-up

PS-II Project Title: JARVIS

Short Summary of work done during PS-II : Jarvis is an AI-powered operational assistant built to enhance observability, automation, and on-call workflows at InMobi. It integrates with Grafana, Prometheus, and internal monitoring systems to deliver real-time insights, anomaly detection, and automated operational support. Through a natural chat interface, Jarvis allows engineers to query dashboards, fetch time-series data, compare metrics across days, generate summaries, and access DBRFC and release information—all without navigating multiple tools manually. My work on Jarvis spanned both technical engineering and operational problem-solving. I built integrations with Grafana MCP servers so Jarvis could fetch and interpret panel JSON, render dashboards, and retrieve consistent time-series data. I designed the logic for isolating "today" versus "yesterday" series, handled offset-based comparison queries correctly, and added retry mechanisms to minimize data truncation. I also optimized time-series extraction, supported asynchronous multi-panel analysis, and ensured Jarvis gracefully handled dashboards with unsupported or mixed data sources. Beyond metrics analysis, I strengthened Jarvis's automation capabilities. I added DBRFC automation, release-note retrieval, and operational summaries. I

contributed to UI and workflow enhancements, such as improving filters, fixing date-handling issues, and adding traceability for releases with PR links, Jira tickets, and deployer information. I also explored open-source MCP servers, built a custom Grafana render MCP server, and improved cron-based image capture workflows. Through this work, I gained deeper understanding of large-scale monitoring systems, the ad lifecycle, and how early anomaly detection helps prevent revenue dips—while also building strong skills across Prometheus, Grafana MCP, observability pipelines, and AI-driven operational automation.

Tool used (Development tools - H/w, S/w) : Python, Grafana, Prometheus, Grafana MCP servers, Docker, HTTPX, Linux (cron), Git/GitHub, VS Code/PyCharm, Grafana Render API, Prometheus Query API, FastMCP

Objectives of the project : Permanent automation of on-call and devops systems

Major Learning Outcomes : Full stack development

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The working environment at InMobi was supportive, collaborative, and highly conducive to learning. The culture encouraged asking questions, taking ownership, and exploring ideas freely. Expectations were clear, and I was given the autonomy to solve problems creatively while still receiving guidance when needed. The team maintained a balance of high performance and approachability, creating a positive space to grow technically and professionally. The overall work culture was transparent, inclusive, and motivating, making it an excellent environment to learn and contribute meaningfully. No

Academic courses relevant to the project : OOPs, DBMS, AI/ML, OS

Name: NIKITA GUPTA .(2022A8PS0554H)

Student Write-up

PS-II Project Title: Implement MAB in the current architecture for better and optimizes selection of creatives

Short Summary of work done during PS-II : -

Tool used (Development tools - H/w, S/w) : Databricks, dataverse, airflow, kafka, flink, aerospike, visionAPI

Objectives of the project : Reduce the cost

Major Learning Outcomes : ML, MAB, HLD, AWS, GCP

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Good environment and ambience

Academic courses relevant to the project : ML and AI

Name: SHIRISH PATEL(2022A8PS0709G)

Student Write-up

PS-II Project Title: Feature Extraction from Creatives and MAB

Short Summary of work done during PS-II : During PS-II, the primary work was to design and implement a creative feature extraction and analytics pipeline for ad images and videos. This involved selecting suitable models for face, object and emotion detection, extracting features from more than 10,000 creatives and correlating them with KPIs such as CTR and IPM. The initial

prototype was built in Google Colab and later migrated to Databricks for large-scale processing with batch-wise feature extraction and memory-optimized workflows. On the data engineering side, cloud infrastructure was set up to migrate creatives from Amazon S3 to GCP buckets, and a robust ETL pipeline was built using Airflow and custom Kubernetes pod operators. Hourly DAGs were developed to read new creatives from GCP, perform feature extraction and write results into non-prod and then production tables such as creativefeatureanalysis and creativefeaturemetadata. The work also included integrating these tables with Dataverse using proper schema design and join chains, fixing schema validation issues, and ensuring snapshots and Delta tables were generated correctly. In the later phase, the focus expanded to stream processing and platform comparisons. This included evaluating Google Vision, Azure Vision, Gemini and open-source models, adding features like color palette and CTA detection, and learning Apache Flink pipelines for near real-time analytics from Kafka to Aerospike. CI/CD issues with Maven and GitHub Actions were debugged, and documentation and HLDs for internal tools were prepared.

Tool used (Development tools - H/w, S/w) : Languages: Python, Java. Libraries: OpenCV, NumPy, Pandas, PySpark. Platforms: Databricks, Google Cloud Platform (GCS, service accounts), Amazon S3. Orchestration & Streaming: Apache Airflow, Apache Flink, Kafka, Kubernetes, Delta Lake. Databases/

Objectives of the project : Build an automated image and video feature extraction pipeline for ad creatives. Correlate creative features with business KPIs such as CTR, CVR and IPM. Productionize the pipeline using Databricks, Airflow and GCP for large-scale deployment.Understand the whole architecture then trying to figure out where and how to implement the MAB. Write a flink pipeline to maintiain real time user clicks

Major Learning Outcomes : Understood end-to-end creative analytics pipeline: feature extraction, correlation with KPIs, and deployment to production data systems.
Gained hands-on experience with large-scale data processing on Databricks, GCP buckets, Delta Lake and Dataverse.
Details of Papers/patents : No papers or patents were produced as part of this PS-II project.

Brief Description of working environment, expectations from the company : The working environment was a collaborative data and ad-tech engineering setup with close interaction

between product, data engineering and analytics teams. Work was structured around weekly goals documented in Jira/Confluence, with ownership of well-defined problem statements such as feature extraction, data pipeline hardening, schema design and production deployment. Regular sync-ups with mentors and product stakeholders helped refine feature requirements, validate results and prioritize tasks.

The company provided access to modern infrastructure including Databricks, Airflow, GCP, S3, Flink and Dataverse, which enabled real-world exposure to production-grade pipelines, CI/CD workflows and cloud security practices. There was a strong emphasis on code quality, documentation, and cross-team communication while shipping changes to QA and production.

From the company, the expectations were to contribute meaningfully to ongoing projects, take end-to-end ownership of assigned modules, proactively debug issues in data flows and deployments, and keep stakeholders updated through documentation and review meetings. In return, the environment encouraged learning new technologies like Flink, Delta Lake and API-based automation tools, while giving autonomy to explore design alternatives and performance optimizations.

Academic courses relevant to the project : Data Structures and Algorithms
Database Systems / DBMS
Machine Learning / Artificial Intelligence

Name: VISSWAAK REDDI THEEPIREDDY .(2022A8PS0820H)

Student Write-up

PS-II Project Title: Automated monthly publisher performance report

Short Summary of work done during PS-II : Using pyspark in Databricks, scrape the data from the catalog and transform into required tables and create a html page where we insert this table data in the html(use css to make it look professional) and then use python library playwright to convert this static webpage into pdf and then send out this pdf attached in mail using smtplib from Databricks.

Tool used (Development tools - H/w, S/w) : Java, pyspark, html, css, python,jenkins

Objectives of the project : Deliver a report to publishers every month

Major Learning Outcomes : Java, pyspark

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : They were expecting us to know the basics of the GitHub and java, nothing more. We just need to be curious enough to learn other things

Academic courses relevant to the project : OOPS and DBMS

PS-II Station : InMobi Technologies Pvt Ltd - Business Finance, Bengaluru

Faculty

Name: Seetha Parameswaran .

Student

Name: VAIBHAV JAIN(2021B3A21132P)

Student Write-up

PS-II Project Title: Optimization of operations in O1 India Pvt Ltd

Short Summary of work done during PS-II : 1. Helped design workflows for various tasks and operations. 2. Helped in setting up accounting at gross level.

Tool used (Development tools - H/w, S/w) : Excel, Word, MySQL

Objectives of the project : To improve the internal functions and enhance profitability of O1 India Pvt Ltd

Major Learning Outcomes : Understanding of the complex operations inside of an organization

Details of Papers/patents : .

Brief Description of working environment, expectations from the company : The working environment was excellent. Had friendly and helpful individuals in the company.

Academic courses relevant to the project : FOFA, POM, POE.

PS-II Station : Integra Design, Delhi

Faculty

Name: Eht E Sham

Student

Name: SAUMITRA(2021B2A83019G)

Student Write-up

PS-II Project Title: Redesign and Development of LaserTrac Android App, ANPR OCR model development

Short Summary of work done during PS-II : During the internship at Integra Design, I worked on the development of two Android applications—AlcoTrac and LaserTrac—which serve as the mobile interfaces for the company's breath analyzer and speed camera systems. My primary focus was on frontend development using Kotlin and Jetpack Compose, where I designed and implemented key screens such as onboarding, dashboards, settings, violation views, and device configuration workflows. These interfaces were built to be intuitive, responsive, and suitable for use by traffic enforcement officers in real-world conditions. In addition to frontend development, I contributed to the creation of an Automatic Number Plate Recognition (ANPR) module for the LaserTrac app. This involved training and integrating a YOLOv8-based number plate detection model combined with EasyOCR for text extraction, enabling automatic identification of vehicle registration numbers from captured images. The ANPR system achieved high detection accuracy and near real-time performance during testing. I also worked on basic navigation, state management, and data display mechanisms for both apps, ensuring smooth user experience and reliable rendering of device-generated data such as speed readings and breath test results. The work completed lays the foundation for the next phase of development, which will involve backend integration, database connectivity, and real-time communication with hardware devices.

Tool used (Development tools - H/w, S/w) : Android Studio – Primary IDE for developing and testing the AlcoTrac and LaserTrac Android applications. Kotlin – Programming language used for implementing application logic and UI components. Jetpack Compose – Modern UI toolkit used to design responsi

Objectives of the project : The primary objectives of the internship are: 1. To develop the Android frontend applications (AlcoTrac and LaserTrac) for the company's traffic enforcement hardware. 2. To implement the user interface and basic functionality for traffic violation tracking and challan generation, breath alcohol analysis and evidence collection. 3. To integrate, in future phases, the mobile applications with backend systems, databases, and company hardware for real-time data synchronization. 4. To gain practical experience in mobile application development, user interface design, and integration planning for embedded systems. 5. To ensure that the applications are scalable and can accommodate future enhancements and backend integration.

Major Learning Outcomes : During the course of this internship, I gained substantial technical and professional exposure through the development of the AlcoTrac and LaserTrac applications. I strengthened my skills in Android development using Kotlin and Jetpack Compose, learning t

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at Integra Design offered a balanced combination of technical learning, independence, and structured guidance.
The company provided access to the necessary tools, documentation, and development resources required for building Android applications and implementing the ANPR system.
Expectations from interns included the ability to learn quickly, contribute to real project components, follow good coding practices, and communicate progress effectively. There was an emphasis on writing clean, modular code, meeting internal development milestones, and aligning work with real-world use cases in traffic enforcement. The company encouraged independent exploration but also valued timely feedback and collaborative problem-solving.

Academic courses relevant to the project : Object Oriented Programming

PS-II Station : Integrated Active Monitoring Pvt. Ltd.,, Pune

Faculty

Name: Manoj Subhash Kakade .

Student

Name: SHIV ANAND(2022A3PS0502G)

Student Write-up

PS-II Project Title: Schedule-Based Energy Worker

Short Summary of work done during PS-II : Developed backend for UPS, Water Meter and Pump Utility for the new BMS portal and UI for Feel Temperature and IO. The above mentioned Schedule-Based Energy Worker

Tool used (Development tools - H/w, S/w) : Pycharm, Cursor and GitHub

Objectives of the project : Developing an energy worker to aggregate data for yearly, monthly, daily and hourly timeframe, energy consumption for 1000+ sites. Data was to be extracted from cloud to fasten the process of fetching data for the daily reports.

Major Learning Outcomes : Python(Pandas), PostgreSQL, GitHub, PyCharm.

Details of Papers/patents : N.A.

Brief Description of working environment, expectations from the company : The working environment is good but becomes tense as deadlines near and daily updates on the work done is to be given. Since we are from BITS, they expect a lot more from us than other interns they hire.

Academic courses relevant to the project : DBMS, OOPS.

PS-II Station : Intel - Hardware, Bengaluru

Faculty

Name: Swapna S Kulkarni

Student

Name: MARIVADA UDAY SANKAR(2021B3A30999G)

Student Write-up

PS-II Project Title: Synthesis and Quality checks of System On Chip(SoC).

Short Summary of work done during PS-II : My internship focused on the Front-End SoC design flow. I started by analyzing the synthesis flow, tools used and how the errors can be resolved. A major part of my work involved running and cleaning up rigorous Quality Checks. I handled Linting (fixing inferred latches, loops) and managed waivers to clean up block-level reports. I also worked on few post synthesis checks , resolving critical structural issues like logic on clock paths and missing timing arcs. To help the team save time, I developed two key automations: one that segregates thousands of cluttered log files into organized folders, and another that automatically reports high levels of logic to fix timing violations. Finally, I assisted in the official model release, ensuring the netlist was clean and ready for the backend team.

Tool used (Development tools - H/w, S/w) : Fusion Compiler, Primetime, SpyGlass, TCL, Python

Objectives of the project : To master the end-to-end SoC design flow by doing the physically-aware synthesis using tools, while simultaneously executing rigorous quality checks like Lint and developing automation scripts to optimize reporting and team efficiency.

Major Learning Outcomes : Usage of industry standard tools like fusion compiler, gained deep technical knowledge of the chip designing process and debugging complex structural violations. TCL and python scripting.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at Intel was very professional yet friendly and supportive. My manager and mentor maintained a productive atmosphere where asking questions was encouraged. There were daily

sync-up meetings to track progress and discuss technical challenges. The expectation was to not just execute tasks but to understand the "why" behind them and find ways to improve the flow, which led me to develop the automations. The team valued proactive communication and quality over speed.

Academic courses relevant to the project : Digital Design, Computer Architecture.

PS-II Station : IPG MEDIABRAND, Pune

Faculty

Name: Mrityunjay Kumar

Student

Name: PRANET UDAY NAIR(2022A4PS0845G)

Student Write-up

PS-II Project Title: The Digital Marketing Ecosystem at IPG Mediabrands

Short Summary of work done during PS-II : Over the course of my Practice School internship at IPG Mediabrands, I worked closely with the performance teams managing Dyson and Celebrity Cruises. My tasks spanned across data QA, insight generation, and dashboard automation. Initially, I conducted reconciliation of mismatched UTM IDs between Adobe and SA360, ensuring clean and consistent tracking. I then worked with an internal AI Agent, validating and refining its performance insights before they were shared with the client. For Dyson, I played a key role in analyzing impression share vs. CPC data to identify optimal investment thresholds through redline analysis. I also explored ways to increase regression fit (R^2) by cleaning outliers and segmenting structurally noisy data. Later, I built an Excel VBA-based automation tool for Dyson Social's QA

process, which streamlined weekly reporting by flagging inconsistencies across platforms. On the Celebrity Cruises account, I focused on funnel analysis and attribution evaluation, helping the team improve reporting alignment. Across all tasks, I consistently focused on delivering accurate, actionable insights while also enhancing the efficiency of internal workflows.

Tool used (Development tools - H/w, S/w) : Excel, Excel VBA, AI Console(Proprietary Tool)

Objectives of the project : To gain hands-on exposure to real-world digital marketing operations through structured client work. To understand the application of data analytics in performance marketing, especially through tools like Adobe Analytics, SA360, and Excel. To contribute to campaign performance monitoring, insight generation, and quality assurance for global clients. To develop reporting and automation solutions that enhance accuracy and efficiency in weekly campaign analysis.

Major Learning Outcomes : Developed a clear understanding of funnel-based campaign strategies and auction dynamics in paid media.
Gained experience in UTM-based data reconciliation across multiple platforms.
Learned to validate and refine AI-generated insights to make them clien

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : Colleagues are quite understanding and helpful, not a high pressure environment and the work is relatively simple.

Academic courses relevant to the project : N/A

PS-II Station : ITC Limited, Paperboards and Specialty Papers Division (PSPD), Tribeni (TBN), Kolkata

Faculty

Name: Panchagnula Jayaprakash Sharma .

Student

Name: AMAN ALI(2021B1A22735P)

Student Write-up

PS-II Project Title: Optimisation of TiO2 dosage

Short Summary of work done during PS-II : During my internship at ITC, I worked on two key projects spanning manufacturing process optimization and enterprise process automation, gaining exposure to both shop-floor operations and digital transformation initiatives. The first project focused on decorative paper manufacturing, where I studied the role of Titanium Dioxide (TiO_2) in achieving desired opacity and brightness. Through controlled trials and data-driven analysis, I evaluated the impact of varying TiO_2 dosages on product quality, run yield, and material consumption. The objective was to identify an optimal balance between performance and cost while maintaining consistency in production. This work helped improve process understanding, reduce wastage, and support more informed decision-making in large-scale manufacturing operations. In parallel, I designed and developed an internal audit automation portal to address inefficiencies in manually conducted, repetitive compliance checks. The portal digitized audit workflows by standardizing checklists, enabling structured data entry, and centralizing audit records. This significantly reduced manual effort, minimized human errors, and accelerated audit cycles. The system also improved traceability and made audit data more accessible for review and analysis, supporting faster corrective actions and better compliance tracking. Overall, the internship provided hands-on experience in process optimization, operational analytics, and workflow automation within a large enterprise environment. It strengthened my ability to translate operational challenges into scalable technical solutions while balancing quality, cost, and efficiency constraints.

Tool used (Development tools - H/w, S/w) : Python (numpy, streamlit, dash, flask, scipy, scikit-learn), SQL, excel

Objectives of the project : To reduce TiO2 dosage

Major Learning Outcomes : Data analytics, ML , data engineering pipeline, deployment cycle

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment at ITC was professional, disciplined, and strongly oriented toward operational excellence. The internship followed a six-day workweek with full work-from-office engagement, which enabled close interaction with teams and firsthand exposure to daily operations. This on-site setup helped in understanding real-time manufacturing processes, compliance practices, and enterprise workflows in a structured industrial environment.
The organization maintained high standards of safety, quality, and process adherence. Team members were approachable and supportive, fostering open communication and effective collaboration. Regular discussions and reviews ensured clarity of objectives and alignment with operational requirements. Interns were expected to demonstrate punctuality, accountability, and a strong sense of ownership over assigned tasks, while strictly following standard operating procedures and compliance norms.

Academic courses relevant to the project : M3, P&S, M2, optimization

PS-II Station : ITC- Printing and Packaging Business (PPB)- , Chennai

Faculty

Name: Panchagnula Jayaprakash Sharma .

Student

Name: MANAN GUPTA(2021B4A41689P)

Student Write-up

PS-II Project Title: RDC Tool Life monitoring and inventory management system

Short Summary of work done during PS-II : My task was to automate the current process of tool life tracking of RDC so that real time tracking can be done and centralized visibility is provided to all stakeholders.

Tool used (Development tools - H/w, S/w) : Full stack development, python, excel, powerpoint

Objectives of the project : Real time tracking of tools, centralized visibility

Major Learning Outcomes : Working in a factory setting, handling the project myself, having conversation with multiple people.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Great environment, a little hectic and company expects you to finish the given assignment. No pressure but expectations are high. People are very nice they are always ready to help you.

Academic courses relevant to the project : -

Name: DIVESH TIWARI(2022A4PS0624P)

Student Write-up

PS-II Project Title: Digital Forge Internship

Short Summary of work done during PS-II : My work at the PS-II station comprises of getting a detailed understanding of the current processes that were in place at the factory for various internal business use cases such as inter-department complaint management, idea/project management and sales funnel documentation. I thoroughly went through the current physical and virtual evidences available and conceptualised the major pain points. Next, I developed comprehensive solutions for the aforementioned operations which were digital in nature. The other domain in which i worked was process mapping of the current inventory management process of the factory and determine the current information and material flow and do a detailed mapping of each process from the procurement of raw material at the warehouse to the shopfloor.

Tool used (Development tools - H/w, S/w) : H/w: Personal Laptop; S/w: Github, Github Copilot, Cursor.ai, Figma, Lovable, Gamma.app, Napkin.ai, Microsoft Visio, Lucichart etc

Objectives of the project : 1. Create digital tools(web apps) to streamline and consolidate internal business critical operations and provide a common source of operational information to employees, digitising key workflows and business data flow. 2. Process mapping of inventory ingestion by the factory and comprehensive gap analysis in as-is process.

Major Learning Outcomes : Learned about current processes related to business operations and inventory management at firms like ITC, in the packaging and printing domain. Learned about as-is process mapping, gap analysis and to-be process mapping, development of web applications v

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment is welcoming with a great team of individuals to work with. The company expects you to get acquainted with the working environments and go to the depth of the problem and have a good understanding of the issue.

Academic courses relevant to the project : NA

PS-II Station : ITC- Printing and Packaging Business (PPB)- Nadiad, Gujrat, Nadiad

Faculty

Name: Panchagnula Jayaprakash Sharma .

Student

Name: ANISHA JAYANT JOSHI(2021B1A43042G)

Student Write-up

PS-II Project Title: Digital Forge Internship

Short Summary of work done during PS-II : I worked on multiple digital transformation and Industry 4.0 initiatives aimed at improving operational efficiency, transparency, and user adoption within the factory. I was actively involved in understanding shop-floor processes, interacting with operators, engineers, and management, and translating real operational gaps into practical digital solutions. A key contribution was driving the adoption and customization of Prinect Production Manager for sheetfed presses. I independently learned the system, streamlined action classifications, created operator-specific profiles, improved accuracy of time distribution data, and conducted operator training sessions. This enabled meaningful daily performance discussions and better decision-making. I also worked on the implementation of Smart Joules, coordinating with cross-functional teams during site visits, negotiations, and material ordering. I supported the installation planning phase by aligning technical requirements with on-ground constraints. Additionally, I conducted a TPM gap analysis and developed a TPM application from scratch using modern development tools such as Lovable, Cursor, Antigravity, and VS Code. The application digitizes audits, standardizes workflows, and is being deployed on the server for real-time usage. Overall, the internship strengthened my ability to combine engineering fundamentals, digital tools, and stakeholder collaboration to deliver scalable, user-centric solutions with measurable impact on shop-floor performance.

Tool used (Development tools - H/w, S/w) : Excel, cursor, Antigravity, VS code

Objectives of the project : User adoption of existing applications, identification of digitisation projects, development of BRD

Major Learning Outcomes : User adoption of existing applications, identification of digitisation projects, development of BRD

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment during my internship was highly collaborative, fast-paced, and centered around continuous improvement. I worked closely with cross-functional teams including production, maintenance, quality, IT, and management, which provided exposure to real-time shop-floor operations and decision-making processes. The culture encouraged open communication, problem-solving, and hands-on involvement, allowing interns to actively contribute rather than observe passively.

The factory environment emphasized safety, discipline, and standard operating procedures, while also being receptive to digital transformation and Industry 4.0 initiatives. Operators and engineers were approachable and supportive, especially during system understanding, trials, and implementation phases. Regular reviews, daily performance discussions, and data-driven meetings created a structured yet dynamic workflow.

There was strong emphasis on learning by doing—through site visits, machine observations, audits, and interaction with live systems. Guidance from mentors and senior engineers helped bridge the gap between theoretical knowledge and practical application. Overall, the environment fostered professional growth, technical learning, teamwork, and accountability, making it a valuable and enriching industrial experience.

Academic courses relevant to the project : Manufacturing Management

PS-II Station : IUDX Program Unit, Indian Institute of science - Data Kaveri,, Bengaluru

Faculty

Name: A Rekha .

Student

Name: SHIVEN SAIGAL(2021B4AA3035G)

Student Write-up

PS-II Project Title: Secure Multi Party computation

Short Summary of work done during PS-II : Build a brain tumor model on carbynestack

Tool used (Development tools - H/w, S/w) : ai/ml tools, pytorch, numpy, kubernetes

Objectives of the project : Produce a ml model that is production ready and deployed on carbynestack

Major Learning Outcomes : deep learning, kubernetes, python

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : The work environment is very good, people are helpful and they are always looking to help you. Work timings are good and have to come to office only 3 days.

Academic courses relevant to the project : Crytoraphy

Name: AYUSH GOYAT(2022AAPS0344P)

Student Write-up

PS-II Project Title: ETA Prediction System

Short Summary of work done during PS-II : During my Practice School-II internship at the Indian Urban Data Exchange (IUDX), IISc Bangalore, I worked on two independent projects focused on data-driven urban mobility and traffic analytics. In the first phase, I developed an automated multi-video, multi-FPS benchmarking pipeline for vehicle detection and tracking using YOLO-based models and clustering techniques. The system processed CCTV traffic videos, generated vehicle trajectories, classified turning movements, and benchmarked predicted vehicle counts against ground-truth data to study the impact of frame rate on tracking accuracy. In the second phase, I worked on building a stop-level ETA prediction system for BMTC bus services using historical GPS trajectories and stop-level data. I implemented an end-to-end data pipeline that included data cleaning, trip construction, stop matching, and learning typical stop-to-stop travel times under different time-of-day conditions. Using this model, total journey times were predicted for given routes and start times, and prediction accuracy was evaluated using metrics such as MSE and RMSE. Aggregated route–hour error matrices were generated to analyze reliability and variability across the network. Overall, the internship provided practical exposure to real-world urban data, end-to-end analytics pipeline design, performance evaluation, and the application of machine learning and data-driven modelling techniques to intelligent transportation systems.

Tool used (Development tools - H/w, S/w) : Hardware: The project was executed using institutional server infrastructure provided by IUDX/IISc Bangalore, which supported large-scale data processing and GPU-accelerated computation for modelling tasks. Software: The development was carried out using

Objectives of the project : Develop an ETA prediction system that estimates total journey time for a BMTC bus using the route ID and actual trip start time.

Major Learning Outcomes : Through this project, I gained hands-on experience in working with large-scale, real-world GPS and stop-level data from an urban public transport system, and learned how to design an end-to-end data pipeline for ETA prediction. The project helped me under

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at IUDX, IISc Bangalore was professional and collaborative, with strong support from mentors and team members. Mentors were highly supportive and provided regular guidance, helping in problem understanding and solution design. Interns were expected to take ownership of tasks, follow disciplined development practices, and communicate results clearly while working with real-world urban data.

Academic courses relevant to the project : Machine Learning, Transportation Data Analytics, Pattern Recognition

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PS-II Station : Joinditto, Bengaluru

Faculty

Name: Arindam Roy .

Student

Name: SPANDAN KAHATE(2022A7PS1123G)

Student Write-up

PS-II Project Title: AI FOR SCALABLE AND EFFICIENT TRAINING AT DITTO

Short Summary of work done during PS-II : 1. TMT - Training Mock Tool- Built AI-powered mock chat system to replace 35+ hours of manual facilitator work per batch. Drafted 120 prompts across 12 scenarios, tested with TAs, and launched in DH70 batch. **Impact:** 420 hours saved per batch projected. 2. NotebookLM Personalized Learning Assistant - Created personalized AI learning assistant for trainees struggling with 40+ hours of content. Trained 15 team members, rolled out across multiple batches, onboarded 4 TAs. **Impact:** Reduced repetitive facilitator questions, 24/7 trainee support, cross-team adoption by Tech team for advisor implementation. 3. Extended Forms (Anti-Cheating Solution)- Implemented automated anti-cheating system for quizzes. Migrated all quizzes, trained facilitators, resolved technical errors. **Impact:** Significantly reduced cheating, automated monitoring, improved assessment integrity. **4. Email Automation** Built Google Apps Script automation and redesigned email templates. **Impact:** Saved 6 hours per batch permanently. 5. Cross-Team Collaboration- Helped Product team implement NotebookLM for advisors by solving access-sharing blocker. Optimized HR operational processes for Ashmita Ghosh. **Impact:** Cross-functional knowledge sharing between Training, Product, and HR teams.

Tool used (Development tools - H/w, S/w) : Claude, Chat gpt, Google sheets

Objectives of the project : To explore, prototype, and recommend AI-driven solutions that improve the scalability, consistency, and efficiency of Ditto’s training operations

Major Learning Outcomes : Management skills, Communication Skills, AI, Prompt engineering

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Ditto Insurance maintains a relaxed and flexible work culture that prioritizes outcomes over rigid timelines. The company operates with a results-oriented approach—deadlines are framed as target weeks rather than strict cutoffs, giving interns autonomy to manage their workload effectively. This flexibility allows for deeper problem-solving and quality deliverables without unnecessary pressure.
The leadership team, including the founders, maintains an approachable and supportive atmosphere. They're invested in intern success and encourage open communication, making it

easy to seek guidance or clarify project scope. The office environment reflects this laid-back culture, featuring a well-equipped game room with pool, table tennis, and PS5, which serves as a great space for team bonding and mental breaks.

Expectations are clear but not restrictive: deliver measurable impact on assigned projects, maintain professional communication with team members, and take ownership of your work. The company values initiative and creative problem-solving over just task completion. For interns aiming for a PPO, the focus is on demonstrating tangible business value—quantifiable time savings, process improvements, or successful tool adoption—rather than simply meeting arbitrary checkboxes. Overall, the environment balances professional growth with a healthy work-life dynamic.

Academic courses relevant to the project : None

Name: SEHAJPREET SINGH SODHI(2022A8PS1250P)

Student Write-up

PS-II Project Title: CX-Data Analyst

Short Summary of work done during PS-II : During my PS-II internship, I worked across product operations, data analysis, process improvement, and customer experience functions. A major part of my work involved enhancing dashboards and automations, including implementing monthly triggers for API analysis, refining renewal flowcharts as per updated SOPs, and resolving issues related to Google Looker reporting and data pipelines. I also collaborated with team members to monitor billing workflows, assist in account migrations, and ensure seamless data usage tracking. On the customer experience side, I contributed to defining and improving Freshdesk workflows. This included drafting PRDs for features such as ticket pre-closure checks, contact detail widgets, private notes structure, and canned email responses. I analysed existing support flows, identified gaps, and recommended improvements to reduce ticket handling time and improve resolution quality. Additionally, I prepared Minutes of Meeting, weekly trackers, and summaries to streamline internal communication. I supported cross-functional discussions around customer

delight, policy explanation strategies, and QA-driven decision-making for call quality assessment. Overall, the internship strengthened my practical understanding of product management, data analytics, and support systems. It also improved my skills in documentation, stakeholder collaboration, requirement gathering, and translating business needs into actionable product logic.

Tool used (Development tools - H/w, S/w) : Google Looker Studio, AppScripts, API , Doc, Sheets, Slides

Objectives of the project : Data Analytics and CX Improvement

Major Learning Outcomes : Data Visualisation and Problem Solving in professional working environment

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment during my PS-II internship was collaborative, fast-paced, and supportive of learning. Open communication and cross-functional teamwork were encouraged, allowing me to contribute to real business problems. The company expected professionalism, ownership of tasks, timely delivery, and attention to detail. I was encouraged to work independently after initial guidance, follow defined processes, and document work clearly. A proactive approach—identifying gaps, suggesting improvements, and aligning work with business objectives—was valued, making the experience both practical and enriching.

Academic courses relevant to the project : Organizational Psychology, Strategy Management and Principle of Management

Name: HARSHIL NARESHBHAI CHAUDHARI(2022AAPS0338G)

Student Write-up

PS-II Project Title: HEALTH RENEWALS PROCESS OPTIMIZATION

Short Summary of work done during PS-II : Process improvement , consulting

Tool used (Development tools - H/w, S/w) : google sheet ,excel

Objectives of the project : PROCESS IMPROVEMENT

Major Learning Outcomes : CONSULTING

Details of Papers/patents : na

Brief Description of working environment, expectations from the company : good work culture

Academic courses relevant to the project : NA

PS-II Station : JPMC - Chief Data & Analytics Office, Mumbai

Faculty

Name: Gaurav Nagpal .

Student

Name: JENIL SUNIL SHAH(2021B5A73027G)

Student Write-up

PS-II Project Title: Ai powered backend system

Short Summary of work done during PS-II : Developed an Ai powered backend system for the global trade transaction system of the firm, majorly involving DocAi.

Tool used (Development tools - H/w, S/w) : Pytho, OpenAi, AWS S3, Apache Kafka, EKS

Objectives of the project : Develop an Ai powered backend system for the global trade transaction system of the firm, majorly involving DocAi.

Major Learning Outcomes : 1) Experience working with CXO's
2) Cloud services
3) Real world application scaling
4) System Design

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : N/A

Academic courses relevant to the project : Minor in Data Science, Object oriented programming, computer networks

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Name: RISHI BHARADWAJ .(2022A7PS2001H)

Student Write-up

PS-II Project Title: Payment Applied AI ML

Short Summary of work done during PS-II : Worked on automating existing workflows using classical ML and LLMs, mostly in the payments space

Tool used (Development tools - H/w, S/w) : Python, pandas excel.

Objectives of the project : Exploring automation using ai

Major Learning Outcomes : LLM advanced prompting experience

Details of Papers/patents : Na

Brief Description of working environment, expectations from the company : Very high learning curve.

Academic courses relevant to the project : Ml, gen-ai

PS-II Station : JPMC - CIB R&A - Banking, Mumbai

Faculty

Name: Sidharth Mishra .

Student

Name: ARPIT SRIVASTAVA(2022A1PS1454G)

Student Write-up

PS-II Project Title: Buy side pitch

Short Summary of work done during PS-II : Worked on pitchbdecks pitched to clients, bond pricing systems, spreaded comps and did the investor analysis

Tool used (Development tools - H/w, S/w) : Bloomberg,Factset, MS Office Suite

Objectives of the project : Covers almost the whole 6 months of internship learning

Major Learning Outcomes : Bond origination and execution

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Good env , majorly your attitude towards the work

Academic courses relevant to the project : Fin minor

Name: PARTH MAHESHWARI(2022A2PS1159P)

Student Write-up

PS-II Project Title: Sell Side M&A

Short Summary of work done during PS-II : Helped NY bankers in their ad-hoc requests, created a sell side M&A deck for a company including valuation by football field chart, formatting, spreading comps and other ad-hoc research

Tool used (Development tools - H/w, S/w) : PowerPoint, Factset, Excel

Objectives of the project : Pitching the sale of a branded lifestyle and apparel company to prospective buyers

Major Learning Outcomes : Valuation, Market Research, Broker Perspectives

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Environment is dependent on your team. Some teams have a lot of work whiles other don't. Some teams are very helpful, some are not.

Academic courses relevant to the project : Fin Minor

Name: SAMAR GUPTA(2022A4PS0856G)

Student Write-up

PS-II Project Title: BANKING

Short Summary of work done during PS-II : Helping the M&A APAC team with the regular weeklies and the add hoc work that came from the staffers

Tool used (Development tools - H/w, S/w) : Factset, Bloomberg, Excel, Dealogic

Objectives of the project : To learn and understand the basics of finance and how does deal structuring works

Major Learning Outcomes : Learning about M&A, different complex valuation models including LBO's

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Very helpful and interactive people, very supporting and very approachable

Academic courses relevant to the project : Finance minor courses

Name: ARYAN DAS .(2022A4PS1480H)

Student Write-up

PS-II Project Title: CIB-R&A Banking

Short Summary of work done during PS-II : During the internship, I supported front-end bankers in preparing client-facing pitch materials and investment presentations. My work involved assisting in the structuring of pitch decks, refining investment narratives, and ensuring that complex financial and market analysis was communicated clearly and concisely for clients. I contributed to improving the logical flow, clarity, and overall presentation quality of client deliverables. I worked closely with the team to align pitch content with client objectives, sector dynamics, and transaction rationale. This included reviewing assumptions, validating key messages, and ensuring consistency across financial analysis, valuation outputs, and strategic positioning. Attention to detail and accuracy was critical, given the client-facing nature of the materials. Through this role, I gained practical exposure to how front-end bankers develop and tailor pitches for different client types and transaction contexts, while operating under tight timelines. The experience strengthened my understanding of professional communication standards in finance and improved my ability to translate analytical insights into persuasive, client-ready content.

Tool used (Development tools - H/w, S/w) : Microsoft Excel and powerpoint

Objectives of the project : Support front-end bankers in delivering clear, compelling client pitches by strengthening messaging, structuring investment narratives, and translating complex financial analysis into concise, client-ready insights.

Major Learning Outcomes : • Structured client-ready pitch narratives from financial and market analysis.

- Supported front-end bankers in refining investment messaging and pitch decks.

- Improved professional communication and attention to detail in client-facing materials.

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : Work environment at JPMC is fast-paced but supportive. Interns are treated really well and are considered part of the team, not just observers. That said, they're expected to perform at their level best. Most of the work involves supporting full-time employees with real tasks, not dummy work, so accuracy and speed matter a lot. Mistakes are noticed, but guidance is always available if you're willing to learn and put in the effort. Overall, it's demanding but fair, and you learn a lot by being held to high standards.

Academic courses relevant to the project : None relevant to the project but finance minor is important for the interviews

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Name: PARVA BHARGAVA .(2022A4PS1731H)

Student Write-up

PS-II Project Title: CIB banking

Short Summary of work done during PS-II : Work involved preparing pitchbooks for investment banking and corporate banking deals

Tool used (Development tools - H/w, S/w) : Excel, Powerpoint, Factset

Objectives of the project : Gaining practical experience in financial analysis, valuation, and transaction support across M&A, ECM, or DCM deals, while understanding real deal workflows

Major Learning Outcomes : Foundation in financial modelling, valuation techniques, and deal execution processes through real transaction exposure. Others learnings include attention to detail, communication and financial statement analysis

Details of Papers/patents : N.A

Brief Description of working environment, expectations from the company : Company expectations and work pace is very high. Expect long hours

Academic courses relevant to the project : FOFA, BAV and FM

Name: KSHITIJ TAKALE(2022A7PS0739G)

Student Write-up

PS-II Project Title: Investment Banking

Short Summary of work done during PS-II : Helped the Mid Cap Investment Banking team to make decks and models for clients in NA (North America) region. The team helped on-shore bankers do the usual tasks in IB like company profiles, comps analysis etc.

Tool used (Development tools - H/w, S/w) : Excel, Power Point

Objectives of the project : To understand the working of an Investment Bank

Major Learning Outcomes : Understanding how the decks and excel models for various deals in IB like M&A, IPO or Debt raising are made.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : A very young workforce. People there were really supportive and helpful. The company doesn't expect much technical knowledge initially but requires the student to have consistency and quick adaptability to newer work streams.

Academic courses relevant to the project : Fundamentals of Finance and Accounting, Financial Management, Business Analysis and Valuation

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Name: DHRUBA RAY .(2022AAPS0326H)

Student Write-up

PS-II Project Title: Investment Banking

Short Summary of work done during PS-II : During my Practice School-II internship at JPMorgan Chase, Mumbai, I was part of the Diversified Industries coverage team within the Investment Banking Research & Analytics division. My work primarily supported onshore bankers across the Asia region on M&A and strategic advisory assignments spanning sectors such as logistics, shipping, airlines, manufacturing, chemicals, and infrastructure. My responsibilities included conducting industry and company research, preparing client-ready presentations, and supporting valuation analysis. I worked extensively on creating Public Information Books (PIBs), target company profiles, industry update pages, earnings summaries, newsletters, and hotsheet news updates. I also assisted in preparing share price performance charts, NTM multiple evolution charts, analyst recommendation pages, and other deal-related materials following JPMorgan's presentation standards. On the valuation front, I gained hands-on experience with trading comparables, transaction comparables, and discounted cash flow (DCF) analysis, including historical benchmarking, forecasting, WACC estimation, and sensitivity analysis. Additionally, I worked on a comprehensive sell-side coverage project on Badger Meter, where I applied end-to-end investment banking analysis to develop an investment thesis and valuation framework. Overall, the internship provided strong exposure to practical investment banking

workflows, strengthened my analytical and presentation skills, and enhanced my understanding of how financial analysis supports real-world strategic decision-making.

Tool used (Development tools - H/w, S/w) : Excel, PPT, Factset, Eikon

Objectives of the project : Learning the core work streams in Investment Banking

Major Learning Outcomes : Gained a comprehensive understanding of investment banking coverage and advisory workflows, particularly within the Diversified Industries sector across Asia. Developed strong hands-on exposure to industry research, valuation techniques (Trading Comps, T

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment at JPMorgan Chase was highly professional, collaborative, and supportive. Team members were approachable and encouraged open communication, making it easy to seek guidance and clarify expectations. The culture emphasized accuracy, discipline, and timely delivery, while also fostering learning through continuous feedback and mentorship. Expectations from the company were clearly communicated, with a strong focus on quality of work, attention to detail, and adherence to global standards. Overall, the environment was conducive to learning and enabled me to develop both technical and professional skills in a structured and supportive setting.

Academic courses relevant to the project : Finance Minor subjects

PS-II Station : JPMC - CIB R&A – Markets – Sales & CCAR, Mumbai

Faculty

Name: Bhamidipati Vaishali .

Student

Name: DEVARSHI SHAH(2022AAPS0552G)

Student Write-up

PS-II Project Title: CIB R&A - Markets Sales & CCAR

Short Summary of work done during PS-II : Learned the Business, Supported the Desk with Business as well as Automations. Automated all document generation on the desk along with few workflow automations.

Tool used (Development tools - H/w, S/w) : Jupyter, Excel, Blommberg, J.P Morgan Internal Tools

Objectives of the project : Real Life Exposure In Finance

Major Learning Outcomes : Deep understanding of derivatives,

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Friendly and Motivated Work Culture.

Academic courses relevant to the project : Derivatives & Risk Management, Security Analysis & Portfolio Management, Financial Management, Financial Risk Analysis & Management, Fundamentals of Fiannce & Accounting

PS-II Station : JPMC - GR&C WCR Portfolio Analytics- Analytics Strategy, Mumbai

Faculty

Name: Bhamidipati Vaishali .

Student

Name: GOURYSHETTY KHUSHI(2021B3A73042H)

Student Write-up

PS-II Project Title: Applied AI Projects

Short Summary of work done during PS-II : My work was mostly centered around leveraging the OpenAI models to build different RAG and GraphRAG pipelines.

Tool used (Development tools - H/w, S/w) : Vscode

Objectives of the project : Building applications for stakeholders that leverages the power if llms to automate various processes.

Major Learning Outcomes : git, understanding of llms, RAG.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Strict 5 days wfo, 9 hours

Academic courses relevant to the project : Machine Learning, Information Retrieval, OOPS, DBMS.

PS-II Station : JPMC - Risk Reporting & Middle Office/Risk Controller, Mumbai

Faculty

Name: Bhamidipati Vaishali .

Student

Name: NAMAN PATEL(2022ABPS1346P)

Student Write-up

PS-II Project Title: Risk Reporting

Short Summary of work done during PS-II : onboarded mutual and hedge funds by conducting credit reviews, performed annual reviews

Tool used (Development tools - H/w, S/w) : Alteryx, Tableau, Excel

Objectives of the project : Onboarding and Facilities Management

Major Learning Outcomes : Risk Mitigation, Exposure handling

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Great working environment

Academic courses relevant to the project : DRM, FRAM

PS-II Station : Kale Logistics Solutions- AI/ML, Thane

Faculty

Name: Sugata Ghosal .

Student

Name: AARYAN RAJESH SARAF(2022A8PS1239P)

Student Write-up

PS-II Project Title: AI for logistics SAAS Framework

Short Summary of work done during PS-II : Initially I was given the task of creating ground truth to evaluate the output of their OCR engine. I worked on creating a template web application which is entirely schema driven enabling teams to reuse ui components, layouts across services for faster deployment.

Tool used (Development tools - H/w, S/w) : Laptop, Code editor

Objectives of the project : Design and prototype an AI driven Logistics SAAS platform

Major Learning Outcomes : Learnt to develop production ready full stack web applications.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : It was a good learning environment, the manager was very supportive and helpful in providing assistance in solving problems.

Academic courses relevant to the project : OOP

PS-II Station : Kotak Mahindra Bank, Mumbai

Faculty

Name: Arindam Roy .

Student

Name: ARYAN KARAS .(2022A4PS1662H)

Student Write-up

PS-II Project Title: Automated CAMS Management

Short Summary of work done during PS-II : Made a automated tracking process for customers loan to increase the customers base and deal with current customers better.

Tool used (Development tools - H/w, S/w) : SQL,Python,Power BI

Objectives of the project : Make A automated Tracking Process for Customers

Major Learning Outcomes : SQL,Power BI,Python

Details of Papers/patents : None

Brief Description of working environment, expectations from the company :

Academic courses relevant to the project : DBMS

PS-II Station : KPMG G&PS – E&S, , Chennai

Faculty

Name: Parag Rastogi

Student

Name: THAKKALLAPALLY SRAVAN KUMAR .(2022A2PS1873H)

Student Write-up

PS-II Project Title: Strategic Consulting & Market Research

Short Summary of work done during PS-II : During my internship, I operated as a strategic consultant delivering high-impact projects for two distinct clients in the Education and Healthcare sectors. 1. Market Entry Strategy (Leading K-12 Education Group) I spearheaded a feasibility study for the client's expansion into a major metro city. To overcome census data scarcity, I utilized Government Voter Lists to accurately model the Total Addressable Market (TAM) and Serviceable Addressable Market (SAM). I mapped over 400 competitor schools, conducting on-ground field research and parent surveys to identify "White Spaces"—specific zones with high demand but low supply of premium curriculums. This analysis provided the client with a granular location strategy for new campuses. 2. Strategic Transformation (Renowned Non-Profit Healthcare Institute) I worked on restructuring a heritage hospital to ensure financial sustainability without compromising its social mission. I analyzed patient feedback and benchmarked staff compensation to diagnose operational gaps. My key contribution was developing a "Cross-Subsidization" pricing model, where revenue from premium services funds charitable care, alongside a restructured fundraising framework shifting donor focus toward strategic

infrastructure investments. Outcome: Successfully transitioned from raw data collection to strategic synthesis, delivering actionable, data-backed roadmaps for market growth and operational sustainability.

Tool used (Development tools - H/w, S/w) : Advanced Excel ,Advanced PowerPoint ,Python

Objectives of the project : Education Sector (client name is confidential) : To assess market feasibility and design a granular entry strategy for K-12 expansion in Chennai. Healthcare Sector (Client name is confidential) : To diagnose operational inefficiencies and develop a sustainable financial transformation roadmap.

Major Learning Outcomes : Mastered the ability to triangulate scarce data into actionable business strategies while navigating complex stakeholder dynamics.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Working Environment: The culture is collaborative and non-hierarchical, characterized by a "positive office ecosystem" where leadership is accessible and supportive. The environment is dynamic rather than desk-bound, encouraging active field immersion (e.g., site visits, surveys) alongside analytical work. It emphasizes team cohesion, evident through shared team dinners and a helpful peer network that fosters rapid learning.
Expectations from the Company:
High Ownership: Interns are expected to handle "end-to-end" responsibilities, acting as owners of their specific modules rather than just task-takers.
Client-Readiness: Deliverables must be structured, polished, and "client-convincing," requiring the ability to synthesize complex data into clear strategic narratives.
Agility: The expectation is to be versatile—equally comfortable leading high-level strategy discussions with management and conducting ground-level inquiries with stakeholders.

Academic courses relevant to the project : Finance minor was useful to some extent

Name: ABHIVANSH JAIN(2022ABPS1358P)

Student Write-up

PS-II Project Title: SAP S/4HANA Enablement

Short Summary of work done during PS-II : During my Practice School 2 at KPMG Chennai, I worked on the SAP S/4HANA implementation for Crescent Industries, focusing on MM and EWM processes while gaining hands on experience with procurement, warehouse workflows, SAP GUI, and Fiori apps. My key contribution was in SAP security, where I handled role mapping and built the authorization matrix by identifying user responsibilities, aligning them with the correct SAP roles, and validating access through T-Code extractions and structured Excel documentation. This work ensured clean, compliant access for users during go live and supported future audits. The project strengthened my functional understanding of SAP, improved my documentation and teamwork skills, and allowed me to contribute directly to successful deployments for the Mumbai and Chennai branches.

Tool used (Development tools - H/w, S/w) : SAP S/4HANA, SAP GUI, SAP Fiori Launchpad

Objectives of the project : Implementation of SAP S/4HANA

Major Learning Outcomes : Acquired hands on experience with SAP GUI, Fiori apps and role based access, including understanding individual tiles, catalogs, and system navigation.
Gained practical knowledge of MM processes, including purchase requisition, purchase orders, and vendor

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The working environment at KPMG Chennai was professional, organized, and very team driven. Everyone worked together across different groups like functional teams, security teams, and client representatives to keep the SAP S/4HANA project moving smoothly. The place expected me to stay focused, be clear with the communication, and keep the work neat and well documented.

The company expected me to learn quickly and understand the tasks properly. They wanted accuracy, consistency, and honesty in the work. Although I was an intern, I was treated like a proper team member, so they expected me to show professionalism, respect confidentiality, and contribute meaningfully to the project's golive activities.

Academic courses relevant to the project : Operations Management, Supply Chain Management

PS-II Station : KPMG G&PS – E&S, Gurugram, Gurgaon

Faculty

Name: Parag Rastogi

Student

Name: PATEL HET PANKAJKUMAR(2022A1PS0742P)

Student Write-up

PS-II Project Title: NEP 2020

Short Summary of work done during PS-II : My majority of the work was about finding relevant datapoints. Assistance on creation of presentation as well as working on Note creation about new policy recommendations

Tool used (Development tools - H/w, S/w) : Microsoft Office

Objectives of the project : The main objective of the project was to analyze the NEP 2020 implementation, find key metrics and analyze the impact of NEP 2020 on the Indian University

Major Learning Outcomes : Experience on the educational field and consulting experience

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The working environment was pretty flexible, it varied based upon the project deadline. The expectations from company were about providing some insights from education sector as we're in college and understand them.

Academic courses relevant to the project : None

PS-II Station : Localbuy Technologies Pvt Ltd (SuperK), Bengaluru

Faculty

Name: Atul Kumar Arora

Student

Name: ROHIT ROY KOMARAVATHI(2022A1PS1307G)

Student Write-up

PS-II Project Title: Gold Membership Growth

Short Summary of work done during PS-II : During my PS-II at SuperK, I worked closely with the growth and marketing teams to support the Gold Membership product using a product-oriented and data-driven approach. My work focused on understanding customer behavior across the membership lifecycle, including acquisition, activation, usage, renewal, and referrals. I

contributed to the design and execution of multiple CRM and growth campaigns across channels such as WhatsApp, IVR, and RCS to improve membership adoption and engagement. A key part of my role involved working on referral-based initiatives and limited-time offers to drive new user acquisition and encourage existing members to refer others. I also supported experiments such as simplified purchase flows and campaign variations to evaluate their impact on conversion.Additionally, I worked on reducing revenue leakage related to auto-renewals by identifying user drop-offs and designing targeted communication to improve activation. Overall, the PS-II experience helped me apply product growth thinking in a real-world setting, combining user insights, experimentation, and data analysis to contribute meaningfully to the growth of a subscription product.

Tool used (Development tools - H/w, S/w) : (Crm - yellow.ai,hgage,smartping),Metabase,Google sheets,canva,sql,python,eleven labs,davinci relsove

Objectives of the project : The main objective of the project was to drive growth of SuperK's Gold Membership product through improved acquisition, referrals, and retention. The project focused on understanding user behavior across the membership lifecycle purchase, activation, usage, renewal, and referral and identifying opportunities to improve conversion at each stage. A key objective was to strengthen the referral flow by designing and evaluating referral based campaigns and offers. Additionally, the project aimed to run small growth experiments using channels such as WhatsApp, IVR, and RCS, and measure their impact using data dashboards to support data-driven product growth decisions.

Major Learning Outcomes : Through this project, I gained a practical understanding of product growth and user-centric decision making in a real business environment. I learned how to analyze user behavior across the product lifecycle, identify growth opportunities, and design smal

Details of Papers/patents : nothing

Brief Description of working environment, expectations from the company : The working environment at SuperK was friendly and supportive. The founders and manager were encouraged me to learning and growth. They were given guidance and the freedom to ask questions and learn from real work. I expected an environment where I could learn practical skills and understand how a product-focused company works, and these expectations were met during my PS-II.

Academic courses relevant to the project : Creative Thinking ,Business Communication,

PS-II Station : Max Now Pte. Ltd. (Heymax.ai), Singapore

Faculty

Name: Raghavendra Singh

Student

Name: HRUDAY K(2022A7PS1161G)

Student Write-up

PS-II Project Title: App development

Short Summary of work done during PS-II : 1. native wind migration-convert tailwind css to altitude design. 2. Bug fixes-scaling issues, navigation bugs, functional bugs, link related bugs. 3.new features- referral history trackjng page, referral qr code implementation, flight search, reusable components like promotion timer, etc

Tool used (Development tools - H/w, S/w) : React native, avd, graphite, linear, postgres, statsig, typescript, python, uvicorn fastapi.

Objectives of the project : fullstack app development

Major Learning Outcomes : App development, frontend and backend.

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : Intense, expected to already know the tools used, quick adaptation, complete tasks quickly, office hours insufficient to complete tasks in expected time, need to work after endtime to meet expectations, expected to work independently and avoid seeking help.

Academic courses relevant to the project : App dev elective, Dbms, Oop

PS-II Station : Max TransTech Ltd - Financial Reports and Data Analysis, Gurgaon

Faculty

Name: Atul Kumar Arora

Student

Name: DISHITA GUPTA(2022B5PS1510P)

Student Write-up

PS-II Project Title: Intern

Short Summary of work done during PS-II : During first half at MTTL, I learnt about Financial management at company and during second half about incubator.

Tool used (Development tools - H/w, S/w) : Excel

Objectives of the project : Organising YC sessions

Major Learning Outcomes : How incubator works.

Details of Papers/patents : N.A.

Brief Description of working environment, expectations from the company :

Academic courses relevant to the project : Financial management.

PS-II Station : MBB Labs Private Limited (Maybank), Bengaluru

Faculty

Name: Pravin Yashwant Pawar .

Student

Name: EDSON GEORGE REBELLO(2021B2A81247G)

Student Write-up

PS-II Project Title: Product Engineering (Software)

Short Summary of work done during PS-II : Had to migrate the pages from JSP to React to speed up the site, based on clients requirements

Tool used (Development tools - H/w, S/w) : VS Code, Eclipse, React, Java

Objectives of the project : Make Software Products

Major Learning Outcomes : Learnt React, Springboot Java

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company :

Academic courses relevant to the project : OOPs and OS

Name: SUBHAM SHREYASH(2021B2A82381G)

Student Write-up

PS-II Project Title: Application enhancement and integration in Balance Sheet Management

Short Summary of work done during PS-II : During the internship, enhancements were made to the BSM system by implementing Single Instance architecture, improving backend stability through increased JUnit coverage, developing UI features for multi-country operations, addressing key frontend and backend change requests, and creating a comprehensive data dictionary to support system upgrades and multi-region deployment.

Tool used (Development tools - H/w, S/w) : Java – Backend development Spring Framework / Spring Boot – Application framework JUnit 4 – Unit testing and test coverage improvement Mockito – Mocking for backend testing Hibernate / JPA – ORM and database interaction Oracle SQL – Database queries

Objectives of the project : To enhance and integrate the BSM system by improving architecture, stability, UI functionality, and documentation to support accurate, maintainable, and multi-country deployment readiness.

Major Learning Outcomes : Gained hands-on experience in implementing and validating Single Instance (SI) architecture in an enterprise BSM system.
Improved understanding of backend stability and quality assurance through extensive JUnit testing and coverage enhancement.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at MBB Labs Pvt. Ltd. was professional, collaborative, and learning-oriented, encouraging adherence to enterprise coding standards and best practices. The company expected interns to understand business-critical financial systems, deliver high-quality and well-tested code, actively participate in change requests, maintain proper documentation, and collaborate effectively with cross-functional teams to meet project timelines and deployment goals.

Academic courses relevant to the project : OOPS and CP

Name: ANKITA BEHERA .(2021B2A83133H)

Student Write-up

PS-II Project Title: Developing and Documenting Data Functionalities

Short Summary of work done during PS-II : The job is mostly software engineering duties, including creating functionali- ties to fulfill business needs, enhancing existing systems, and contributing to the Master Data Management (MDM) team initiatives. The extent of my job has called for not just technical deployment, but also comprehension of intri- cate enterprise processes that dictate data consistency and system integration within a large banking setup.

Tool used (Development tools - H/w, S/w) : Excel, Powerpoint, SQL Developera, STS

Objectives of the project : SQL-based scripts (DDL, DML, and functions), creating technical documents, demonstrating products

Major Learning Outcomes : Got to learn SQL function building and documentation

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The environment is good.

Academic courses relevant to the project : none

PS-II Station : Metal Coatings India Limited, Ballabgarh

Faculty

Name: Benu Madhab Gedam .

Student

Name: VANSH RAJ S .(2022A4PS1852H)

Student Write-up

PS-II Project Title: Cycle time reduction.

Short Summary of work done during PS-II : -

Tool used (Development tools - H/w, S/w) : -

Objectives of the project : Reduce cycle time

Major Learning Outcomes : Project management, product management, communication

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Good

Academic courses relevant to the project : Mechanical

PS-II Station : MIPS Embedded Technologies Pvt. Ltd,, Bengaluru

Faculty

Name: Manoj Subhash Kakade .

Student

Name: SANIYA SHAHI .(2022A8PS0810H)

Student Write-up

PS-II Project Title: Design and Implementation of a RISC-V Embedded ML Framework: Bare-Metal Porting of TensorFlow Lite Micro and Development of a GUI-Enabled LLVM Code Generation Tool for TensorFlow Lite Models

Short Summary of work done during PS-II : This project involved porting TensorFlow Lite Micro to a bare-metal 32-bit RISC-V platform and improving an LLVM-based code generation tool for deploying Ten- sorFlow Lite models. The work included adapting the runtime, optimizing kernels, and developing a GUI for analyzing RISC-V vector instruction coverage. These contributions enhance the portability and performance of ML workloads on embedded RISC-V systems. The internship provided valuable exposure to embedded software, machine learning deployment, and compiler workflows

Tool used (Development tools - H/w, S/w) : Linux, toolchains, qemu, LLVM

Objectives of the project : 1. Creating a compiler based RISC-V code generation tool. 2. Porting popular frameworks to RISC-V boards

Major Learning Outcomes : Learnt to use GitHub, toolchains, simulators, documentation and register level debugging

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : It was a decent work environment with hybrid mode of work, but the structure should be structured and well managed.. Team was technically strong but very unstructured

Academic courses relevant to the project : Computer architecture, operating systems, FDA, computer programming

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PS-II Station : Morgan Stanley - IAD Data Analytics role, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: HRIDAY NITIN GADIA(2021B4AA2794H)

Student Write-up

PS-II Project Title: Data Analytics Intern

Short Summary of work done during PS-II : As Data Analyst Interns in the Internal Audit Department you automate tasks and help Auditors with their workflow. You also develop new projects as required to allow for continuous future use. I have worked with people across the globe to provide solutions, insights and data drive analysis to business owners. I have created multiple tools using Python, Gen AI and SQL to populate the Auditors Toolkit and automate majority of the work done.

Tool used (Development tools - H/w, S/w) : Python, PowerBI, Hugging Face Transformers, Jupyter Notebooks, SQL

Objectives of the project : To learn the workflow and data universe of a Financial Sector Company while generating insight and tools to analyze the same.

Major Learning Outcomes : 1) Industry knowledge of financial services and the financial data
2) Hands on experience with Python, newer GenAI works and more to gain insights into data
3) Learning about work culture and workspace interactions
4) Coordinating with teams across the gl

Details of Papers/patents : nil

Brief Description of working environment, expectations from the company : Morgan Stanley Internal Audit Department provides a very welcoming environment geared to providing a learning experience to its interns. You will be given meaningful tasks and projects to provide you with valuable hands on experience. The team is very open and answer all your questions with great details. We are given great opportunities to interact with business leaders across the globe even as interns. Working with teams across the globe helps us as interns to build an understanding of the workflow and be a part of inclusivity and diversity structure.

Academic courses relevant to the project : Data Mining, Artificial Intelligence, Machine Learning

PS-II Station : Morgan Stanley - IED GMG FE role, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: ABHINAV SRIVASTAVA .(2021B3AA1608H)

Student Write-up

PS-II Project Title: Financial Engineering - QIS Structuring

Short Summary of work done during PS-II : 1. First two months - Getting permissions, understanding business workflow and bunch of automation projects using Python. 2. Month 3-6 - Backtesting Client Directed Stragies, index deployment and management, working on idea implementation from research papers. The majority of the work involving the live trade deals came from the onshore team (Japan and HK) - this way I got to interact with a lot of different people involving the fellow FE team members, Sales and the upper management including the MDs.

Tool used (Development tools - H/w, S/w) : Python, Pycharm debugger.

Objectives of the project : To learn about the structured financial products - Backtesting strategies, indices deployment and management, being part of the live trade deals.

Major Learning Outcomes : I learned about how systematic trading strategies work along with real life implementation. I got to know a lot about Sales and Trading industry in general as well - what are the general expectations in different companies along with different roles. Most

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Being part of one of the very few revenue generating teams in the building, people would have few implicit expectations from you in terms of showing up on time, getting your work done properly, behave appropriately, etc - basic. People in the team are very helpful, smart, and professional. Upper management including the MDs are very approachable. A lot of the time, you'd be directly reporting to your MD for a project - so a level of professionalism in terms of interaction is required as well. But the most important factor, for you to be able to stay in the company while being part of high impact projects early on, is to ask appropriate questions, express curosity, and the ability to handle the overwhelming work flow with strict timeline sometimes.

Academic courses relevant to the project : DRM, FRAM, SAPM, Econom terics & Applied Econometrics, OOPS (fundamentals and implementation)

PS-II Station : Morgan Stanley FID Research roles, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: RUPESH YARLAGADDA(2021B3A70839G)

Student Write-up

PS-II Project Title: Fixed Income Research

Short Summary of work done during PS-II : Daily workflows, automation, fixed in code and publications.

Tool used (Development tools - H/w, S/w) : Python, Bloomberg, Excel, R, KDb, Git

Objectives of the project : BAUs, optimization

Major Learning Outcomes : How reports are generated.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Good environment to learn, more of self learning and implementation. Ownership and accountability are key.

Academic courses relevant to the project : FRAM, DRM, SAPM, BAAV

Name: TANISHKA PARTH SUGANDHI(2021B3A72143G)

Student Write-up

PS-II Project Title: FID Research

Short Summary of work done during PS-II : Assisted the team in analysis of real time data for visualisation and building insights used in publications, helped in business as usual activities which were used in client requests, helped in the integration of AI in credit analysis

Tool used (Development tools - H/w, S/w) : Python, Bloomberg, Excel, Q (KDB)

Objectives of the project : Analysis of certain fixed income asset classes and build insights used in publications

Major Learning Outcomes : Key aspects of research
Deeper understanding of financial markets and fixed income products

Details of Papers/patents : Cannot disclose

Brief Description of working environment, expectations from the company : Supportive environment which encourages growth and improvement, received guidance whenever required and had the opportunity to interact with the management and learn from them throughout.

Academic courses relevant to the project : BAAV, FuFA, FRAM, DRM

Name: ISHAN DEEPAK WANI(2021B3A72772P)

Student Write-up

PS-II Project Title: Fixed Income Research

Short Summary of work done during PS-II : Helped out with carrying out daily activities, worked on automation projects.

Tool used (Development tools - H/w, S/w) : Python,Bloomberg,Excel

Objectives of the project : Automation of existing workflows

Major Learning Outcomes : Automation pipelining process and Key aspects to research

Details of Papers/patents : Confidential

Brief Description of working environment, expectations from the company : Great environment to work, constant guidance received at every step or when in doubt.

Academic courses relevant to the project : Financial engineering, Financial management, FRAM

PS-II Station : Morgan Stanley IED GMG – QIS Strats role, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: AARJAV JAIN(2021B3A71178P)

Student Write-up

PS-II Project Title: Quantitative Investment Strategies

Short Summary of work done during PS-II : Building Strategies for clients

Tool used (Development tools - H/w, S/w) : Java

Objectives of the project : Building strategies for the clients

Major Learning Outcomes : Learnt to debug systems and understand thousands of lines of code

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Smart Computer Science graduates willing to learn

Academic courses relevant to the project : OOPS

PS-II Station : Morgan Stanley MRM role, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: ANMOL AGGARWAL(2021B3AA1056P)

Student Write-up

PS-II Project Title: Model Validations & Review

Short Summary of work done during PS-II : • Validated Swing Pricing through diagnostic and sensitivity analyses—varying input weights, using historical time-series for inputs/outputs, and benchmarking model behavior against baseline scenarios across market regimes. • Reviewed Monte Carlo simulation documentation by comparing Normal vs Johnson's S marginals, validating momentmatching for mean/vol/skew/kurtosis, and assessing distribution behavior under tail scenarios. • Evaluated dependence modeling by verifying Gaussian copula/NORTA correlation mapping, stability of cross-asset correlations, and alignment with governance thresholds for ACP and long-horizon projections.

Tool used (Development tools - H/w, S/w) : Python, Excel

Objectives of the project : To help validate and review various models across Wealth management, Investment management, PPNR, credits etc, find out the research gaps and test the model in various stress conditions.

Major Learning Outcomes : Learning to be a quant in a professional bank and getting used to corporate life

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : My immediate manager was nice, and the direct reporting managers were generally fine, but there was very little attention given to interns overall. We were made to feel like outsiders.

Academic courses relevant to the project : Econometrics method

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Name: SUJAL SHAILESH PIMPALE(2021B4A41067G)

Student Write-up

PS-II Project Title: Model Risk Management

Short Summary of work done during PS-II : I worked on models during the internship.

Tool used (Development tools - H/w, S/w) : Python

Objectives of the project : Validation of Models

Major Learning Outcomes : Financial knowledge, Python learnings

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The work is decent.

Academic courses relevant to the project : Nothing

PS-II Station : Morgan Stanley Portfolio Analytics, Mumbai

Faculty

Name: Swarna Chaudhary .

Student

Name: SIDHANT BHAT .(2021B3A73036H)

Student Write-up

PS-II Project Title: Alpha 3M Backtesting

Short Summary of work done during PS-II : Involved in understanding the MSCI Barra GEMLTL model and effects of factor tilts and it's reporting to the client. Providing adhoc analysis as mentioned above like Alpha 3M backtesting, apart from standard Brinson Report and other BAUs. Overall a lot of reporting work, at times adhoc analysis.

Tool used (Development tools - H/w, S/w) : R, excel.

Objectives of the project : To understand the behaviour of the idiosyncratic part of the factor equation, that is the Asset Selection upon high std dev with respect to it's mean.

Major Learning Outcomes : Understanding of MSCI Barra models and how fundamentals based hedge fund evaluate their portfolios.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Homely team, smart folks from both engineering and finance background. Team works 9 hours, WFH available but not for interns. Probably a very good learning internship if you are given a project with any of the NY folks, decent interactions. FTE work would be majorly reporting though, using R, python excel. Analysis are often very adhoc based. Hence, probably a good stepping stone.

Academic courses relevant to the project : SAPM, Applied Econometrics, DRM

PS-II Station : Morgan Stanley Primary Market Research role, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: AMOGH RAVI JOSHI .(2021B3A30605H)

Student Write-up

PS-II Project Title: Primary Market Research

Short Summary of work done during PS-II : During the PS-II internship at Morgan Stanley in the Primary Market Research team, the work involved active participation in the end-to-end survey research process supporting investment research. The role included assisting in the design and structuring of survey questionnaires aligned with specific research objectives and key investment themes. Surveys were programmed and tested to ensure logical accuracy, consistency, and quality before being deployed across global respondent panels. Throughout the data collection phase, responses were closely monitored to ensure completeness and adherence to quality standards. The collected datasets were subjected to rigorous quality checks, cleaning, and

validation to remove inconsistencies and outliers. Post-collection, the data was tabulated and analyzed using quantitative techniques to extract meaningful insights relevant to market and investor behavior. The internship also involved working with industry-standard market research tools such as Q Research and Qualtrics, along with extensive use of Microsoft Excel for data analysis and reporting. Research findings were summarized and presented in structured deliverables, including Excel tables, Word documents, and PowerPoint presentations, following established corporate reporting formats. In addition to technical work, the internship provided exposure to professional research practices, teamwork, and communication within a corporate environment, contributing to a strong understanding of how primary market research supports financial and investment decision-making.

Tool used (Development tools - H/w, S/w) : Q research Software, Qualtrics, SPSS, Excel, Word, Powerpoint

Objectives of the project : The objective of this project is to gain a comprehensive, hands-on understanding of the end-to-end primary market research process at Morgan Stanley, with emphasis on how primary data supports key investment research and decision-making. The project aims to develop practical skills in designing and preparing survey questionnaires, programming and quality-checking survey instruments, and managing survey deployment across global markets. It also focuses on monitoring data collection, ensuring data quality, and performing data cleaning, tabulation, and quantitative analysis using industry-standard tools such as Q Research and Qualtrics. Additionally, the project seeks to enhance proficiency in presenting research findings through professional deliverables in Excel, Word, and PowerPoint, while building analytical, organizational, communication, and collaboration skills through close interaction with market research specialists and senior stakeholders.

Major Learning Outcomes : Through this project, the student gains a clear understanding of the complete primary market research lifecycle, from survey conceptualization to final reporting. The project enables the development of practical skills in designing and programming survey

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : The working environment at Morgan Stanley is professional, structured, and collaborative, offering exposure

to a global financial research organization. The primary market research team functions in a fast-paced and detail-oriented setting where accuracy, data quality, and adherence to strict timelines are highly valued. Interns are integrated into ongoing research projects and encouraged to work closely with market research specialists and senior colleagues. Continuous learning is supported through structured training sessions, on-the-job guidance, and regular feedback, fostering both technical and professional development. The environment promotes teamwork, ethical research practices, and clear communication across teams and regions.

Expectations from the company include effective mentorship and supervision from experienced professionals, providing interns with a clear understanding of the end-to-end primary market research process. Access to industry-standard tools and software for survey programming, data analysis, and reporting is anticipated, along with opportunities to apply theoretical knowledge to real-world research problems. The company is also expected to assign meaningful responsibilities that contribute to live projects, enabling skill development in data handling, analysis, and professional reporting. Constructive performance feedback and exposure to corporate research standards are expected to help build analytical thinking, discipline, and professionalism, thereby preparing the intern for future roles in market research and analytics.

Academic courses relevant to the project : Principles of Management

PS-II Station : Morgan Stanley Research - Data Strats, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: ANUSHKA AGGARWAL(2021B1A32269P)

Student Write-up

PS-II Project Title: Research Data Strategy

Short Summary of work done during PS-II : Automation of excel files using python and creating research charts using plotly

Tool used (Development tools - H/w, S/w) : Linux, Pandas, Numpy, Python, Dash

Objectives of the project : Reduce time by automating regular tasks.

Major Learning Outcomes : Industry level code production and scalability thinking process with better awareness of corporate world.

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The experience was great. There was 2 month Python training to make all students become comfortable. The managers were helpful and approachable.

Academic courses relevant to the project : Database Management, Computer Programming, Object Oriented Programming

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Name: RAJUL BANGANI(2021B1A32739P)

Student Write-up

PS-II Project Title: Data processing and automation

Short Summary of work done during PS-II : Automated data using python and helped in its visualization on dashboard

Tool used (Development tools - H/w, S/w) : Python

Objectives of the project : Automating ETL processes

Major Learning Outcomes : Automation and data processing

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Good

Academic courses relevant to the project : CP OOP OS

Name: KUSHAGRA MALANI .(2021B5AA2274H)

Student Write-up

PS-II Project Title: Research Data Strats (Equity Strats)

Short Summary of work done during PS-II : During my internship at Morgan Stanley as a Research Data Strategy Intern, I worked on building and automating data-driven solutions to support investment research and analysis. A key part of my role involved developing an interactive dashboard to track performance and valuation metrics of Eurozone companies listed in the MSCI and STOXX 600 indices. I also automated multiple financial models using Python to analyze quantitative and macroeconomic factors sourced from platforms such as Bloomberg and FactSet.

Tool used (Development tools - H/w, S/w) : Python, Linux

Objectives of the project : Building backend data pipelines and custom APIs for automating financial models and interactive dashboards

Major Learning Outcomes : Gained hands-on experience building automated data pipelines and analytical workflows using Python.
Learned to work with large, real-world financial datasets from Bloomberg and FactSet.
Improved understanding of quantitative analysis, macroeconomic factor

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : Great work environment, helpful seniors

Academic courses relevant to the project : Nil

PS-II Station : MSCI Services Pvt. Ltd. - NPD - , Mumbai

Faculty

Name: Krishnamurthy Bindumadhavan .

Student

Name: ANIRUDH JAIMINI(2021B3A21192P)

Student Write-up

PS-II Project Title: Quant Index Research, Fixed Income

Short Summary of work done during PS-II : During my PS-II internship, I worked in the domain of financial index research and development with a primary focus on fixed income and multi-asset indices. The initial phase involved extensive training on internal platforms such as Workbench, Foxberry F9, Modular Assembly, and the Data Science Platform, along with building a strong

foundation in fixed income concepts and MSCI factor models. I applied Barra factor models to perform risk and return attribution for fixed income indices and developed portfolio check scripts to validate index methodologies and ensure correct implementation after rebalancing. I supported client simulations by making methodology adjustments and helped set up new custom indices on the Workbench platform, including adding and validating new modular datapoints. A key component of my work was developing a highly liquid custom fixed income index from scratch, which involved competitor analysis, bond universe selection, methodology design, backtesting, and preparation of final index snapshots and index levels for client delivery. Additionally, I conducted research on optimization-based multi-asset allocation strategies, created automated index rules on the OneMSCI platform, and developed a Sigma platform to display fixed income index characteristics. Toward the end of the internship, I worked on designing alpha-generating strategies for fixed income ESG and climate-focused indices, gaining end-to-end exposure to index creation, validation, and strategy research.

Tool used (Development tools - H/w, S/w) : Internal index development and analytics platforms including Workbench, Foxberry F9, Modular Assembly, Data Science Platform (DSP), OneMSCI, Barra Factor Models, MSCI Libraries, optimization and analytics tools, along with Powerpoint Presentation and spre

Objectives of the project : To develop practical expertise in fixed income and multi-asset index construction by applying factor models, backtesting methodologies, and validation checks, while supporting client-specific index solutions and researching data-driven and ESG-focused investment strategies.

Major Learning Outcomes : Developed practical experience in fixed income and multi-asset index construction, factor-based risk–return analysis, and the use of data science platforms for backtesting, validation, and ESG-focused strategy development.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment was professional, collaborative, and research-driven, with strong emphasis on accuracy, quality control, and adherence to well-defined processes. Team members were supportive and encouraged learning through hands-on tasks, regular feedback, and exposure to

real client-driven projects. The company expected a high level of analytical rigor, ownership of assigned tasks, timely delivery, and a clear understanding of financial concepts, while also encouraging continuous learning and adaptability to new tools and methodologies.

Academic courses relevant to the project : SAPM, FinMan, BAV

Name: ANANYAGOMATHI R .(2021B4AA1626H)

Student Write-up

PS-II Project Title: Automation and Creation of Real Estate methodology

Short Summary of work done during PS-II : Involved in automation of various calculation methods. Created Streamlit dashboards to analyse/visualise different scenarios and edge cases. Automated a blended index end to end with the required edge case handling.

Tool used (Development tools - H/w, S/w) : Python, Jupyter notebook, Streamlit, Excel

Objectives of the project : To automate financial methodologies and custom benchmark calculations

Major Learning Outcomes : How to streamline various methodologies in a single notebook using Python

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The people are very helpful and friendly. Interns are encouraged to ask a lot of questions, which are patiently answered. Collaborative environment with a good learning curve.

Academic courses relevant to the project : Computer programming, machine learning

PS-II Station : Multi Sales Pvt Ltd, Mumbai

Faculty

Name: Sameer Gupta .

Student

Name: SHAH KRISH BRIJESH(2022A3PS0377P)

Student Write-up

PS-II Project Title: IoT-Enabled Telecom Components Trading

Short Summary of work done during PS-II : Trained technical skills on: Excel, PPT, Business Strategy, Automation Tools. Researched electronics industry for GTM Plan. Executed business functions like sales, marketing, supply chain, finance, inventory.

Tool used (Development tools - H/w, S/w) : Excel, PPT, n8n

Objectives of the project : Develop a refined skillset, strategize a GTM plan, prepare business functions like sales, logistics, financials to a pre-operational stage.

Major Learning Outcomes : Excel, PPT, Business Strategy, Automation Tools

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Remote work. Pleasant working hours and company expectations.

Academic courses relevant to the project : FundaFin, Business Communication, MTN

PS-II Station : Munchable.tv - Non Tech, Bengaluru

Faculty

Name: Arindam Roy .

Student

Name: AYUSH SHANKAR MANDWAR(2022ABPS1048P)

Student Write-up

PS-II Project Title: Founder's Office

Short Summary of work done during PS-II : ----

Tool used (Development tools - H/w, S/w) : Freedcamp, google sheets

Objectives of the project : To help the company streamline their operations and centralize processes

Major Learning Outcomes : Learning to survive without structure

- Understanding how not to run strategy operations
- Exposure to poor management systems
- Emotional resilience and personal boundary-setting
- Realizing the difference between startups with vision and startups with c

Details of Papers/patents : None produced, none encouraged, and no research culture present.

Brief Description of working environment, expectations from the company : ----

Academic courses relevant to the project : Strategic Management, Principles of Management, Operations Management. Relevant only in theory, since the company's approach to "strategy" lacked actual structure.

PS-II Station : MyHQ - Non Tech, Gurugram, Gurgaon

Faculty

Name: Gaurav Nagpal .

Student

Name: SHASHWAT PANDEY(2021B1A12297P)

Student Write-up

PS-II Project Title: Quality Checking

Short Summary of work done during PS-II : Have done mostly the photo uploading thing on their website of different coworking and managed office spaces along with the commercial leasing properties.

Tool used (Development tools - H/w, S/w) : Google Sheets, Google Spreadsheets, CRM

Objectives of the project : How to clean already present data from the database.

Major Learning Outcomes : NA

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company :

Academic courses relevant to the project : NA

Name: SAUMYA KHANUJA(2021B2A43063G)

Student Write-up

PS-II Project Title: Product Dev/ Business Dev/ Sales

Short Summary of work done during PS-II : Charged with developing another channel of revenue.

Tool used (Development tools - H/w, S/w) : CRM

Objectives of the project : gain perspective- gained a lot

Major Learning Outcomes : gained a lot of perspective

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : It was good.

Academic courses relevant to the project : -

PS-II Station : Myntra Designs Pvt. Ltd, Bengaluru

Faculty

Name: Akanksha Bharadwaj .

Student

Name: SURAZ KUMAR(2021B2A71602G)

Student Write-up

PS-II Project Title: SWE intern

Short Summary of work done during PS-II : Built an Agentic AI tool for release using the Google ADK and Vertex AI that automates repetitive app release processes and reduces manual effort and improving team productivity in managing app release cycles, like creation of release calendars and managing sign offs. • Worked with product managers, QA, and release engineering teams to gather requirements, conduct demos, and integrate context-aware workflows for sub-agents which is built in a RAG-like fashion that processes natural language prompts and provides apt replies, • Currently deployed on Google Cloud Run in a docker container, exposing a http endpoint that is leveraged by official Slack channels at Myntra

Tool used (Development tools - H/w, S/w) : Google ADK, GCP tools, Postgresql, Docker

Objectives of the project : Automating and streamlining a few processes related to app release by the usage of agentic ai tools

Major Learning Outcomes : Got a good insight abiut developing LLM powered Agentic AI tools

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Very good working environment, decent expectations from the team

Academic courses relevant to the project : -

Name: CHAHAK RAKESH PUNAMIYA(2021B2A72355G)

Student Write-up

PS-II Project Title: Backend - SCM Outbound

Short Summary of work done during PS-II : The workload depends on your team, our team had a good amount of workload.

Tool used (Development tools - H/w, S/w) : Java

Objectives of the project : Working on the scm part of myntra

Major Learning Outcomes : -

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : -

Academic courses relevant to the project : -

Name: PURU GUPTA(2021B5A71748P)

Student Write-up

PS-II Project Title: Semantic Search on GlamStream

Short Summary of work done during PS-II : I developed a semantic search system for Myntra's GlamStream to help users find fashion videos using natural language, like "outfits for a summer brunch," even if the creator didn't provide specific tags. By using AI to "watch" and understand the visual content of millions of videos, the system moves beyond simple keyword matching to recognize styles, colors, and occasions. I built a high-speed pipeline that processes these videos efficiently and integrated a smart assistant to ensure search results are accurate and relevant. This project makes it much easier for shoppers to discover trendy content and reduces the frustration of finding exactly what they are looking for

Tool used (Development tools - H/w, S/w) : PyTorch, FFMpeg, Databricks, Gemini API, qDrant

Objectives of the project : To build a vector based search that understands context within user upload images/videos

Major Learning Outcomes : CLIP, PyTorch, Semantic Search, Vector DB

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment of Myntra is really good. The office building is amazing and the company culture is very modern. It's a fashion company so the vibe is really vibrant and most of the office is actually focussed on non-tech things. The cafe is pretty average. The work culture is not at all pressure inducing, the deadlines aren't very strict, and there is room for your input. Hackathons and Sale time is also very fun in the office.

Academic courses relevant to the project : Machine Learning, Computer Vision

Name: BIBHU KALYAN SAHOO(2022A7PS0138P)

Student Write-up

PS-II Project Title: Design and Development of a Unified Data Ingestion Gateway for Myntra's Communication Platform

Short Summary of work done during PS-II : The project focused on building a unified data ingestion gateway for Myntra's communication platform. Developed in Go, it serves as a REST API that validates, prioritizes, and routes campaign traffic to Kafka topics. The service was built to be stateless, utilizing Aerospike for request tracking to allow for horizontal scaling. To ensure production readiness, I implemented multi-tiered rate limiting and integrated Myntra's Switch Service for real-time configuration changes.A significant portion of the work involved load testing using Apache Bench, where Blaze demonstrated a P99 latency of 67ms at ~4,700 RPS, surpassing the target of <100ms. Furthermore, I enhanced the Batch Processor by implementing an LRU caching layer with negative caching, which significantly reduced redundant API calls to internal services. The final service was containerized using secure distroless images and deployed via Kubernetes

Tool used (Development tools - H/w, S/w) : Languages: Go (1.19) and Java Databases/Caching: Aerospike, In-memory TTL cache, LRU Cache Infrastructure: Apache Kafka, Docker, Kubernetes (K8s) Tools: Switch Service (Configuration), Gradle (Build), Apache Bench (Testing)

Objectives of the project : To design and develop a highly available and low-latency REST API service to act as a central data ingestion gateway for Myntra's unified communication platform and also To optimize the caching layer for the Batch Processor to reduce load on internal dependencies and improve processing efficiency.

Major Learning Outcomes : Developed a high-throughput microservice in Go capable of handling 4,800 RPS per pod.
Implemented stateless status tracking using Aerospike and dynamic configuration via Switch Service.
Gained experience in production hardening, including multi-tiered rat

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The project was conducted within Myntra's Traffic Management and Communication Team. The environment was professional and involved solving real-world industry problems by modernizing legacy systems. The company expected the delivery of a proper production service, meaning the work had to be highly available, resilient, and secure, utilizing modern DevOps practices like CI/CD and containerization. From a WLB point of view Myntra is one of the best in my opinion with 2 days WFH and flexible hours and overall a supportive organization.

Academic courses relevant to the project : Computer Networks, OOP, DSA, DBMS

PS-II Station : National Institute of Science Communication and Policy Research (NIScPR), New Delhi

Faculty

Name: Rajesh Kumar Tiwary .

Student

Name: TANISHQ AGARWAL(2022A4PS1465G)

Student Write-up

PS-II Project Title: A Dynamic Index for Patent Quality: Unveiling the Value of Scientific Advances and Commercial Potential

Short Summary of work done during PS-II : During my Practice School–II internship at CSIR–NIScPR, I worked on developing a data-driven framework to assess patent quality across emerging and frontier technology domains. The core objective of the project was to move beyond traditional citation-based metrics and construct a multidimensional patent quality index that captures scientific, commercial, and legal value. I curated and analyzed large-scale patent datasets (100,000+ patents) from the Derwent Innovations Index, covering FinTech, Sodium-Ion Batteries, Carbon Capture (CCUS), Metal-Organic Frameworks, and mRNA Vaccines. Using Dynamic Factor Analysis, I modeled patent quality as a latent variable derived from ten established indicators. To validate and enhance the analysis, I implemented multiple machine learning classifiers, including Logistic Regression, Random Forest, Decision Tree, and AdaBoost, for high-quality patent classification. The study revealed strong domain-specific differences in quality drivers, highlighting the limitations of one-size-fits-all patent metrics. The findings were synthesized into policy-relevant insights, emphasizing the need for sector-specific evaluation frameworks and quality-focused innovation strategies. The internship strengthened my skills in machine learning, statistical modeling, patent analytics, and research communication, while contributing to applied policy research in innovation and intellectual property.

Tool used (Development tools - H/w, S/w) : Python (NumPy, Pandas, Scikit-learn), XGBoost, Matplotlib/Seaborn, SQL, Derwent Innovations Index, Jupyter Notebook, Microsoft Excel, LaTeX/Word for documentation.

Objectives of the project : To create a methodology to predict high quality patents using Machine Learning models and statistical methods

Major Learning Outcomes : The internship enabled me to develop a strong understanding of patent quality assessment using data-driven and machine learning approaches. I gained hands-on experience in working with large-scale patent datasets, applying Dynamic Factor Analysis and ML m

Details of Papers/patents : 2 Research papers were communicated with me as lead author

1) Nature Scientific Reports
2) Science Magazine

Brief Description of working environment, expectations from the company : The working environment at CSIR–NIScPR was research-oriented, collaborative, and intellectually stimulating, with a strong emphasis on data-driven analysis and policy relevance. I worked closely with scientists and researchers from interdisciplinary backgrounds, which encouraged rigorous discussion, critical thinking, and adherence to high academic standards. Regular reviews and mentor interactions ensured clarity of objectives, methodological soundness, and continuous feedback throughout the internship.

The organization expected interns to be self-driven, analytically rigorous, and capable of handling large and complex datasets independently. Emphasis was placed on producing reproducible research, maintaining data integrity, and drawing insights that could inform real-world policy and strategic decision-making. Interns were also expected to communicate findings clearly through technical documentation and presentations, bridging the gap between advanced analytics and policy interpretation.

Academic courses relevant to the project : Machine Learning, Computer Programming

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PS-II Station : NAVATA ROAD TRANSPORT, Hyderabad

Faculty

Name: Sandeep Kayastha .

Student

Name: SARTHAK GUPTA(2022A4PS0615P)

Student Write-up

PS-II Project Title: Product Management + Business Analyst Intern

Short Summary of work done during PS-II : During my PS-II internship, I contributed to ongoing projects by analysing requirements, conducting research, and preparing structured reports to support decision-making. I worked closely with my team to analyse data, identify key insights, and help develop practical solutions aligned with project goals. I assisted in creating documentation, presentations, and workflow improvements, while also participating in review meetings and incorporating feedback. The internship helped me understand real-world organisational processes, enhanced my technical and analytical skills, and strengthened my ability to work collaboratively in a professional setting. Overall, the PS-II experience allowed me to apply academic knowledge to practical tasks and add meaningful value to the organisation.

Tool used (Development tools - H/w, S/w) : Excel, Transport Management Software, Trello, Power BI

Objectives of the project : To conduct daily tasks of a Product Manager and Business Analayst

Major Learning Outcomes : Applied theoretical concepts to real-world projects, improving technical and analytical skills.
Developed professional communication, teamwork, and problem-solving abilities.
Gained practical understanding of organisational workflows, deadlines.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : It was okay.

Academic courses relevant to the project : Business Communication, Professional Ethics

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Name: PRABHAV SRIVASTAVA(2022A4PS1523G)

Student Write-up

PS-II Project Title: Product Management & Business Analytics: TMS Enhancement, Revenue Assurance, and Strategic Network Expansion

Short Summary of work done during PS-II : During my Practice School-II internship at Navata Supply Chain Solutions, I operated at the intersection of Product Management, Systems Engineering, and Strategic Operations. My primary mandate focused on the lifecycle management of the Transport Management System (TMS). I spearheaded the TMS Server Migration Project, validating complex commercial contract data to ensure zero downtime and billing continuity for the client base. Additionally, I conducted a comprehensive User Experience (UX) Audit, documenting 12 distinct user personas to identify operational friction points, which directly influenced the development of the "Express Transport" module. Beyond product engineering, I executed a rigorous Billing Reconciliation Initiative, auditing thousands of Airway Bills to identify and rectify root causes of revenue leakage, such as ODA miscalculations and base rate discrepancies. In the domain of strategic operations, I performed a data-driven Comparative Market Analysis to scout new warehouse infrastructure in Hyderabad and Coimbatore. I also led an asset monetization project for the Vijayawada facility, deploying a multi-channel digital listing strategy to generate revenue from dormant assets

Tool used (Development tools - H/w, S/w) : S/w: Transport Management System, MS Excel, Google Sheet, MarketPe, Real Estate Aggregators. H/w: Android mobile device for app testing, Windows Laptop for Web Portal

Objectives of the project : The primary objective of this internship project at Navata Supply Chain Solutions (NSCS) was to optimize the company's digital infrastructure and operational efficiency through a multi-disciplinary approach bridging Product Management, Systems Engineering, and Strategic Operations. The core mandate involved the "roots-up" lifecycle management and validation of the Transport Management System (TMS), specifically ensuring the stability of critical workflows like "Trip Creation" and leading the TMS Server Migration Project to guarantee zero downtime for client billing. Concurrently, the project aimed to enforce financial integrity through a rigorous Billing Reconciliation Initiative to plug revenue leakage and supported the company's strategic growth via data-driven Comparative Market Analyses for infrastructure expansion and asset monetization in key logistics hubs

Major Learning Outcomes : Bridging Theory and Practice (Operational Mastery): The internship provided a practical understanding of the physical logistics lifecycle, moving from theoretical knowledge to ground-level reality. This included learning specific operational details like

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The first four months of my internship in the Product Management vertical were highly positive and smooth. Under the mentorship of my Project Manager, the working environment was structured and supportive, allowing me to take ownership of complex technical projects like the TMS server migration and billing reconciliation with a high degree of autonomy. This phase was professionally nurturing and met my expectations for a productive learning experience.
However, the dynamics changed significantly in the final month following an abrupt transition to the Sales and Network Expansion team. Unlike the earlier phase, this role lacked clear operational guidance or mentorship. The management style in this division was intensely results oriented, with high pressure to deliver immediate outcomes in vendor procurement and infrastructure acquisition regardless of constraints. While the majority of my tenure was professionally rewarding, the final weeks were challenging due to the sudden lack of direction and rigid expectations. Overall, it was a valuable lesson in adapting to contrasting management styles within the same organization.

Academic courses relevant to the project : Supply Chain Management, Operations Research, Production Planning & Control, Quality Control, Assurance & Reliability, Principles of Management

PS-II Station : Necessa Security & Integrated Services Pvt Ltd - Non Tech, Gurgaon

Faculty

Name: Sandeep Kayastha .

Student

Name: JYOTIRADITYA VAISH(2021B1A42280P)

Student Write-up

PS-II Project Title: Digital Transformation and Investor Readiness Structure

Short Summary of work done during PS-II : During my PS-II internship, I contributed to building both the digital infrastructure and investor readiness engine of Necessa Security & Integrated Services. I began by consolidating scattered manpower and client data into a single validated master dataset, which improved operational visibility and created a strong foundation for future automation and analytics. I then designed CRM workflows that captured every stage of the client lifecycle including inquiry, qualification, allocation and closure, supported by structured SOPs and segmentation across industry, region and manpower requirements. To establish a digital identity, I worked on the website planning process by conducting requirement-gathering sessions with leadership, drafting content for core pages, creating wireframes, and developing multiple preview designs that the company reviewed for finalisation. In the later phase of the internship, I extended this transformation into an investor-focused direction by creating a pitch deck narrative that communicates Necessa's value proposition, digital maturity, operational strengths and scale-up potential. Alongside this, I developed a data-compilation structure to organise confidential business information for future due diligence, and a structured financial model template suitable for the manpower outsourcing sector. Collectively, the project outcomes positioned the company as a structured, process-driven and investor-ready organisation prepared for upcoming growth initiatives.

Tool used (Development tools - H/w, S/w) : Google Workspace, AI Tools

Objectives of the project : The primary objective of the project was to drive digital transformation at Necessa Security & Integrated Services by organising fragmented operational data, creating CRM workflows that improve client lifecycle visibility, and designing the initial structure of the

company's first official website. Alongside operational enhancement, a major focus was developing the company's fundraising and investor readiness capabilities by creating an investor pitch deck narrative, a structured data-compilation framework, and a scalable financial model outline that showcases the firm as a digitally enabled and expansion-ready manpower organisation. The project also aimed at documenting process optimisation and scalability systems that will support market expansion and future investor interactions.

Major Learning Outcomes : During this internship, I learned how to transform academic knowledge in data systems, process workflows, and UX design into business deliverables that contribute directly to investor readiness, such as a structured pitch deck and financial model. I devel

Details of Papers/patents : No research papers or patents were generated as part of this internship.

Brief Description of working environment, expectations from the company : The working environment at Necessa Security & Integrated Services was dynamic and operationally intensive, given the company's role in manpower outsourcing and security services where reliability and timely response are critical. My work required regular interaction with leadership and operations teams to understand on-ground challenges and introduce technology that could improve structure, data visibility, and efficiency.

The company expected practical, business-focused outcomes that supported digital transformation through including clean data foundations, CRM workflows, process documentation, and strengthening the firm's digital presence through website planning. I also contributed to investor readiness by creating the pitch deck narrative and structuring the data compilation framework. There was strong emphasis on ownership, confidentiality, and delivering solutions that teams could realistically adopt.

Overall, the environment combined collaboration with high accountability, offering exposure to both operational decision-making and strategic roadmap discussions, while allowing me to independently lead key work-streams that created tangible organisational impact.

Academic courses relevant to the project : Supply chain management

Analytics for supply chain
Organisational Psychology
Create & Lead Entrepreneurial Organisations

Name: PIYAAL CHAUDHARY(2022ABPS1035P)

Student Write-up

PS-II Project Title: Digital Transformation and Investor Readiness Structure

Short Summary of work done during PS-II : During my PS-II internship, I contributed to building both the digital infrastructure and investor readiness engine of Necessa Security & Integrated Services. I began by consolidating scattered manpower and client data into a single validated master dataset, which improved operational visibility and created a strong foundation for future automation and analytics. I then designed CRM workflows that captured every stage of the client lifecycle including inquiry, qualification, allocation and closure, supported by structured SOPs and segmentation across industry, region and manpower requirements. To establish a digital identity, I worked on the website planning process by conducting requirement-gathering sessions with leadership, drafting content for core pages, creating wireframes, and developing multiple preview designs that the company reviewed for finalisation. In the later phase of the internship, I extended this transformation into an investor-focused direction by creating a pitch deck narrative that communicates Necessa's value proposition, digital maturity, operational strengths and scale-up potential. Alongside this, I developed a data-compilation structure to organise confidential business information for future due diligence, and a structured financial model template suitable for the manpower outsourcing sector. Collectively, the project outcomes positioned the company as a structured, process-driven and investor-ready organisation prepared for upcoming growth initiatives.

Tool used (Development tools - H/w, S/w) : Google Workspace, AI Tools(Lovable,etc)

Objectives of the project : The primary objective of the project was to drive digital transformation at Necessa Security & Integrated Services by organising fragmented operational data, creating CRM workflows that improve client lifecycle visibility, and designing the initial structure of the company's first official website. Alongside operational enhancement, a major focus was developing the company's fundraising and investor readiness capabilities by creating an investor pitch deck narrative, a structured data-compilation framework, and a scalable financial model outline that showcases the firm as a digitally enabled and expansion-ready manpower organisation. The project also aimed at documenting process optimisation and scalability systems that will support market expansion and future investor interactions. Mention few keywords corresponding to your project Digital Transformation, Data Consolidation, CRM Workflow Design, Website Strategy, Operational Dashboards, Process Standardisation, Fundraising & Investor Readiness, Pitch Deck, Data Compilation, Financial Model Framework, Process Optimisation, Scalability Systems, Market Expansion, Partnership Blueprint.

Major Learning Outcomes : During this internship, I learned how to transform academic knowledge in data systems, process workflows, and UX design into business deliverables that contribute directly to investor readiness, such as a structured pitch deck and financial model.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at Necessa Security & Integrated Services was dynamic and operationally intensive, given the company's role in manpower outsourcing and security services where reliability and timely response are critical. My work required regular interaction with leadership and operations teams to understand on-ground challenges and introduce technology that could improve structure, data visibility, and efficiency.

The company expected practical, business-focused outcomes that supported digital transformation through including clean data foundations, CRM workflows, process documentation, and strengthening the firm's digital presence through website planning. I also contributed to investor readiness by creating the pitch deck narrative and structuring the data compilation framework. There was strong emphasis on ownership, confidentiality, and delivering solutions that teams could realistically adopt.

Overall, the environment combined collaboration with high accountability, offering exposure to both operational decision-making and strategic roadmap discussions, while allowing me to independently lead key work-streams that created tangible organisational impact.

Academic courses relevant to the project : Supply chain management
Analytics for supply chain
Organisational Psychology
Create & Lead Entrepreneurial Organisations

PS-II Station : Necessa Security & Integrated Services Pvt Ltd - Tech, Gurgaon

Faculty

Name: Gaurav Nagpal .

Student

Name: ROHAN RAN VIJAY(2022A7PS0067P)

Student Write-up

PS-II Project Title: Digital Transformation and Investor Readiness Structure

Short Summary of work done during PS-II : During my PS-II internship, I contributed to building both the digital infrastructure and investor readiness engine of Necessa Security & Integrated Services. I began by consolidating scattered manpower and client data into a single validated master dataset, which improved operational visibility and created a strong foundation for future automation and analytics. I then designed CRM workflows that captured every stage of the client lifecycle including inquiry, qualification, allocation and closure, supported by structured SOPs and segmentation across industry, region and manpower requirements. To establish a digital identity,

I worked on the website planning process by conducting requirement-gathering sessions with leadership, drafting content for core pages, creating wireframes, and developing multiple preview designs that the company reviewed for finalisation. In the later phase of the internship, I extended this transformation into an investor-focused direction by creating a pitch deck narrative that communicates Necessa's value proposition, digital maturity, operational strengths and scale-up potential. Alongside this, I developed a data-compilation structure to organise confidential business information for future due diligence, and a structured financial model template suitable for the manpower outsourcing sector. Collectively, the project outcomes positioned the company as a structured, process-driven and investor-ready organisation prepared for upcoming growth initiatives.

Tool used (Development tools - H/w, S/w) : Google Workspace, AI Tools

Objectives of the project : The primary objective of the project was to drive digital transformation at Necessa Security & Integrated Services by organising fragmented operational data, creating CRM workflows that improve client lifecycle visibility, and designing the initial structure of the company's first official website. Alongside operational enhancement, a major focus was developing the company's fundraising and investor readiness capabilities by creating an investor pitch deck narrative, a structured data-compilation framework, and a scalable financial model outline that showcases the firm as a digitally enabled and expansion-ready manpower organisation. The project also aimed at documenting process optimisation and scalability systems that will support market expansion and future investor interactions.

Major Learning Outcomes : During this internship, I learned how to transform academic knowledge in data systems, process workflows, and UX design into business deliverables that contribute directly to investor readiness, such as a structured pitch deck and financial model.

Details of Papers/patents : No research papers or patents were generated as part of this internship.

Brief Description of working environment, expectations from the company : The working environment at Necessa Security & Integrated Services was dynamic and operationally intensive, given the company's role in manpower outsourcing and security services where reliability and timely response are critical. My work required regular interaction with leadership and operations

teams to understand on-ground challenges and introduce technology that could improve structure, data visibility, and efficiency.

The company expected practical, business-focused outcomes that supported digital transformation through including clean data foundations, CRM workflows, process documentation, and strengthening the firm's digital presence through website planning. I also contributed to investor readiness by creating the pitch deck narrative and structuring the data compilation framework. There was strong emphasis on ownership, confidentiality, and delivering solutions that teams could realistically adopt.

Overall, the environment combined collaboration with high accountability, offering exposure to both operational decision-making and strategic roadmap discussions, while allowing me to independently lead key work-streams that created tangible organisational impact.

Academic courses relevant to the project : Database Management Systems
OOP
Supply chain management
Analytics for supply chain
Organisational Psychology
Create & Lead Entrepreneurial Organisations

Name: PARUL SRIVASTAVA(2022A7PS0185P)

Student Write-up

PS-II Project Title: Digital Transformation and Investor Readiness Structure

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segmentation across industry, region and manpower requirements. To establish a digital identity, I worked on the website planning process by conducting requirement-gathering sessions with leadership, drafting content for core pages, creating wireframes, and developing multiple preview designs that the company reviewed for finalisation. In the later phase of the internship, I extended this transformation into an investor-focused direction by creating a pitch deck narrative that communicates Necessa's value proposition, digital maturity, operational strengths and scale-up potential. Alongside this, I developed a data-compilation structure to organise confidential business information for future due diligence, and a structured financial model template suitable for the manpower outsourcing sector. Collectively, the project outcomes positioned the company as a structured, process-driven and investor-ready organisation prepared for upcoming growth initiatives.

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Academic courses relevant to the project : Database Management Systems
OOP
Supply chain management
Analytics for supply chain
Organisational Psychology
Create & Lead Entrepreneurial Organisations

PS-II Station : NetApp India Pvt ltd, Bengaluru

Faculty

Name: Chennupati Rakesh Prasanna .

Student

Name: MANGLE SOHAM SUHAS(2021B3A71068H)

Student Write-up

PS-II Project Title: Volume database scaling

Short Summary of work done during PS-II : During my internship at NetApp India Pvt. Ltd., I had the opportunity to contribute to several impactful projects focused on enhancing volume and directory management within the ONTAP operating system. My responsibilities spanned software development, system optimization, and the application of machine learning to address complex challenges in enterprise storage environments. One of my key tasks involved exposing historical space metrics at the cluster level using REST API and CLI, specifically targeting volume and directory usage. This provided users with granular insights into how volumes and directories were utilized over time, supporting better resource planning and operational efficiency. I also played a crucial role in exposing and validating the limits of the volume database, rigorously testing its reliability and scalability. By successfully scaling the volume database to accommodate up to 350,000 entries, I helped ensure ONTAP could meet the demands of large-scale enterprise deployments. Additionally, I leveraged NetApp's GenAI model to develop a chatbot that analyzes log files and assists with triaging. This solution streamlined the troubleshooting process, enabling faster identification of issues and more efficient support workflows. Throughout the internship, I maintained a strong focus on code quality, writing comprehensive unit tests to ensure reliability and simplify future maintenance. I also addressed various defect reports and enhancement requests, contributing to improved stability and user satisfaction. Overall, my internship at NetApp was a valuable learning experience in system-level programming, volume and directory optimization, and large-scale software development. It allowed me to make meaningful contributions to the ONTAP ecosystem while honing my technical and collaborative skills.

Tool used (Development tools - H/w, S/w) : Vsim, sksim, vim

Objectives of the project : Poc/ testing

Major Learning Outcomes : Understanding codebase

Details of Papers/patents : Can't share

Brief Description of working environment, expectations from the company : Excellent working culture very supportive colleagues. Great expectations

Academic courses relevant to the project : Os

Name: AVIRAL AGARWAL(2021B3A71285P)

Student Write-up

PS-II Project Title: Development and Enhancement of Console Billing Platform for NetApp Keystone

Short Summary of work done during PS-II : During my internship with the NetApp Keystone team, I contributed to the Console Billing Platform by working across multiple backend services. I started by learning Golang and writing unit tests for the subscription-service, which handles customer subscription data. Gradually, I expanded my work to other services such as adaptor-service, alerts-service, and jobs-service, fixing bugs and handling sub-tasks. I also played a key role in supporting demo mode, creating demo data, and resolving customer issues, which required in-depth investigation of collector responses and data flows. My responsibilities included updating Swagger documentation for all services and collaborating with a wide range of team members. Throughout the internship, I gained hands-on experience with various tools and technologies, including Postgres, Trino, Postman, and OpenLens. This experience not only strengthened my technical skills but also improved my ability to work effectively in a team and adapt quickly to new challenges.

Tool used (Development tools - H/w, S/w) : Programming Language: Golang, Python JavaScript. Databases: Postgres, Trino. API Tools: Postman. Kubernetes Management: OpenLens. Documentation: Swagger. Version Control: Git, GitHub

Objectives of the project : To develop, maintain, and enhance the Console Billing Platform for NetApp Keystone. To ensure accurate and efficient retrieval of customer subscription information. To improve platform reliability through comprehensive unit testing and bug fixes. To support demo mode and resolve customer issues by collaborating across multiple services.

Major Learning Outcomes : 1. Proficiency in Golang and backend service development.
2. Hands-on experience with microservices and cloud-based architectures.
3. Improved skills in debugging, unit testing, and API documentation.
4. Exposure to tools like Postgres, Trino, Postman, an

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment at NetApp, especially in the Keystone Console team, was very good and flexible. Everyone was friendly and always greeted me with a smile. My work was genuinely appreciated, and whenever I made a mistake, my teammates just helped me understand what went wrong without ever scolding me. The atmosphere was positive and supportive, making it easy to learn and grow. I always felt comfortable asking questions or seeking help, and the encouragement I received motivated me to do my best. Overall, it was a very happy and welcoming environment, and I really enjoyed being part of the team.

Academic courses relevant to the project : 1. Data Structures and Algorithms
2. Database Management Systems
3. Machine Learning
But I felt like a lack of such an important web development course in our CDC curriculum even though being from CS.

Name: BURAD PARAM MAHAVIR(2021B3A72113H)

Student Write-up

PS-II Project Title: WAFL ARP: Efficient Attack Detection

Short Summary of work done during PS-II : During PS-II, I worked as part of the WAFL team. The work primarily focused on detecting potential security attacks, analyzing system behavior, and supporting recovery mechanisms using machine learning–based approaches. I was involved in understanding the existing system architecture and contributing to system-level development using C and C++. Python was used for scripting, experimentation, and integrating machine learning models where required. A significant part of the work involved improving system efficiency and performance by exploring multithreading and hyperthreading techniques to better utilize available hardware resources. I collaborated closely with team members to analyze attack patterns, evaluate detection strategies, and improve the robustness and reliability of the response framework. Emphasis was placed on writing efficient, maintainable code and adhering to best practices followed in production environments.

Tool used (Development tools - H/w, S/w) : C, C++, Python, Linux

Objectives of the project : To design and enhance an attack detection and response framework within the WAFL platform. To analyze system and network behavior for identifying potential security threats using machine learning models.

Major Learning Outcomes : Improved understanding of system-level programming and performance optimization using C/C++.
Learned to apply machine learning techniques for attack detection and anomaly analysis.
Acquired knowledge of multithreading and hyperthreading to enhance system

Details of Papers/patents : _

Brief Description of working environment, expectations from the company : The working environment during PS-II was professional, collaborative, and learning-oriented. The team followed structured development practices, including code reviews, discussions, and regular updates. Guidance was provided by mentors and senior team members, allowing gradual understanding of complex systems and security workflows.
The company expected interns to be proactive, adaptable, and willing to learn new technologies. Emphasis was placed on writing efficient and reliable code, understanding system-level behavior,

and following best practices in software development. Interns were encouraged to ask questions, explore solutions independently, and contribute meaningfully to the team's objectives.
The environment promoted teamwork and problem-solving, while also allowing individuals to take ownership of assigned tasks. Overall, it provided a good balance of technical challenge, mentorship, and real-world exposure to industry-level projects.

Academic courses relevant to the project : Operating Systems, Computer Architecture, Machine Learning

Name: GUDIPUDI VENKATA SURYASHASHANK(2021B3AA0866H)

Student Write-up

PS-II Project Title: DPU Integration in ONTAP

Short Summary of work done during PS-II : During my project at NetApp, I worked on a proof-of-concept (POC) to integrate a new Data Processing Unit (DPU) into the ONTAP storage stack. This effort required a deep understanding of ONTAP's internal data paths, especially how the WAFL (Write Anywhere File Layout) filesystem interacts with underlying hardware to deliver high-performance, resilient storage. I studied key WAFL mechanisms such as snapshot consistency, block allocation, RAID-DP/RAID-TEC protection, and the write-anywhere design that enables efficient metadata handling and near-instantaneous cloning. A substantial part of the project involved understanding the role of existing DPUs used in NetApp systems. These hardware accelerators perform inline data reduction tasks including compression, decompression, and deduplication. I examined how ONTAP dispatches these operations to the DPU pipeline, how workloads are scheduled, and how the system balances CPU–DPU interactions to maintain predictable latency. The goal of the POC was to evaluate how the DPU could be integrated into ONTAP. This involved analyzing itshardware capabilities like high-bandwidth compression engines, enhanced inline deduplication support, and offload architecture to determine mapping points within ONTAP's existing modules. The POC ultimately demonstrated the feasibility of

leveraging the DPU to further accelerate ONTAP's data-reduction stack, reduce CPU overhead, and support future high-throughput workloads.

Tool used (Development tools - H/w, S/w) : Linux, Perforce, ONTAP CLI, Next Gen DPU

Objectives of the project : To integrate a next gen DPU into ONTAP as a POC

Major Learning Outcomes : I gained a solid understanding of how WAFL in ONTAP performs data reduction and storage optimization through compression, compaction, deduplication, and cloning. I first learned how WAFL uses its write anywhere design to place blocks efficiently and to su

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The working environment at NetApp Bangalore is very supportive and welcoming. People across the team are approachable, patient, and always ready to help.
Ramp up in the WAFL team takes some time, usually around one and a half months, because the system is large and filled with many complex and interconnected components. The team understands this and provides plenty of guidance, documentation, and one-on-one help so new engineers can settle in comfortably. You are expected to be curious, willing to dive deep into problems, and open to continuous learning.
If you enjoy Operating Systems, filesystems, and systems programming, this is an exciting place to work. You get hands-on exposure to real storage internals, performance-critical code, and large-scale system design. The expectation is that you take ownership, ask questions when needed, and steadily build your understanding of the system.
Overall, the environment is chill, collaborative, and technically enriching, making it a great place to grow and explore complex system-level engineering.

Academic courses relevant to the project : Operating Systems, Object Oriented Programming, Information Theory and Coding,

PS-II Station : NetNet Fintech Pvt Ltd - Non Tech, Bengaluru

Faculty

Name: Perumal Jayakumar

Student

Name: SUPARSHAV JAIN(2022A8PS1249P)

Student Write-up

PS-II Project Title: Rigorous Backtesting and Performance Analysis of Novel Trading Algorithms

Short Summary of work done during PS-II : This project focuses on the enhancement and application of a robust back testing framework to rigorously evaluate novel algorithmic trading strategies. Using Python and key data science libraries such as Pandas and NumPy. The core of the work will be to create a pipeline that ingests financial data, executes a given trading strategy, and generates comprehensive performance metrics. This includes calculating key profitability.

Tool used (Development tools - H/w, S/w) : phython, ms excel, trello, slack

Objectives of the project : backtesting of trading strategy

Major Learning Outcomes : This project enabled me to develop a strong understanding of designing and applying a robust backtesting framework for evaluating algorithmic trading strategies. I gained hands-on experience in building end-to-end pipelines that ingest and process financi

Details of Papers/patents : n/a

Brief Description of working environment, expectations from the company : The working environment was professional, collaborative, and focused on analytical rigor and continuous learning. I worked with team members who valued clear communication, structured workflows, and data-driven decision making. The company expected a high level of responsibility, accuracy, and ownership in assigned tasks, especially while handling financial data and performance analysis. Independence in execution, openness to feedback, and timely delivery were strongly emphasized. Overall, the environment encouraged practical application of concepts, systematic problem solving, and steady professional growth while aligning individual contributions with organizational goals.

Academic courses relevant to the project : Fiance minor

PS-II Station : Nexstem Pvt Ltd, Bengaluru

Faculty

Name: Mohammad Saleem Bagewadi .

Student

Name: ABHISHEK TIWARI(2020B2A42118G)

Student Write-up

PS-II Project Title: Frontend Development

Short Summary of work done during PS-II : During my PS-II at Nexstem India Pvt. Ltd., I worked as a Frontend Development Intern on real-time EEG-based brain–computer interface (BCI) applications. My core responsibility was to design, develop, and optimize scalable frontend modules for live EEG visualization, device connectivity, and data-driven dashboards using React,

Electron, Zustand, and TanStack Query. I actively contributed to building real-time data pipelines for EEG and FFT visualization with sub-100 ms latency, ensuring smooth, high-frequency signal rendering. I implemented robust state management architectures with modular Zustand slices and integrated persistent session handling for uninterrupted workflows. I also developed responsive UIs for device connection, configuration, streaming, and recording systems while collaborating closely with SDK and backend teams. A significant part of my work involved performance optimization and codebase refactoring, including unifying multiple legacy tables into reusable components and reducing redundant logic. I strengthened system reliability through error handling, fallback UI states, and automated SDK testing support within the CI pipeline. This internship provided me with hands-on experience in product-scale frontend engineering, real-time systems, cross-platform application development, and high-performance visualization, strengthening both my technical and architectural skills in a deep-tech environment.

Tool used (Development tools - H/w, S/w) : Hardware: EEG Headsets (Bluetooth/Wi-Fi enabled) Development Laptop/Desktop Multi-device EEG testing setup Software: Frontend Frameworks: React.js, Electron, React Native State Management: Zustand Data Fetching & Caching: TanStack Query Visualizat

Objectives of the project : To design and develop scalable frontend architectures for real-time EEG data visualization using React and Electron. To implement robust state management and asynchronous data handling using Zustand and TanStack Query. To ensure reliable device connectivity, error handling, and fallback UI flows for uninterrupted EEG streaming. To optimize performance for high-frequency, low-latency signal rendering across multi-device environments. To build reusable, cross-platform logic and UI components for consistent behavior across desktop and web applications.

Major Learning Outcomes : Gained hands-on experience in building real-time, data-intensive frontend systems for EEG-based applications.
Developed strong proficiency in state management, asynchronous data flows, and caching using Zustand and TanStack Query.
Learned to design modu

Details of Papers/patents : Not Applicable

Brief Description of working environment, expectations from the company : The working environment at Nexstem India Pvt. Ltd. was highly professional, collaborative, and innovation-driven. Engineers from frontend, backend, SDK, and hardware teams worked closely to build real-time EEG-based applications in an agile development setup. Open communication, regular technical discussions, and continuous feedback ensured smooth coordination and fast problem resolution.

The company expected interns to be proactive, responsible, and technically sound, with a strong focus on writing clean, scalable, and high-performance code. Emphasis was placed on real-time system reliability, performance optimization, and modular architecture. Interns were encouraged to take ownership of tasks, actively participate in development, and continuously upskill.

Overall, the environment was both demanding and supportive, providing strong exposure to product-level development and professional engineering practices.

Academic courses relevant to the project : Data Structures and Algorithms (First Year – Common Core Course)

PS-II Station : Nielsen - , Bengaluru

Faculty

Name: A Michael Alphonse

Student

Name: ASTIK GAUR(2021B2A82286P)

Student Write-up

PS-II Project Title: ADVANCING AUDIENCE MEASUREMENT THROUGH ARIANNA ENHANCEMENT

Short Summary of work done during PS-II : During PS-II, work was focused on the Arianna audience measurement platform, a Windows-based analytics application built primarily in Visual C++ with MFC, COM, and supporting technologies. The initial phase involved understanding the existing architecture, build system, and module interactions within a large legacy codebase. This included studying core components responsible for data processing, calculations, and UI rendering. Subsequently, the work shifted to implementing concrete technical tasks: reproducing and fixing defects in various modules, refactoring selected components to improve readability and maintainability, and optimizing specific code paths to reduce execution time for heavy analytical workloads. Typical activities included using the debugger to trace logic, analyzing call stacks, inspecting memory usage, and modifying C++ classes and interfaces while preserving backward compatibility. Alongside bug fixing and optimization, effort was put into adding or improving unit and regression tests to ensure that changes did not introduce regressions. Exposure to supporting technologies such as C#, SQL, and Javascript was gained where they interfaced with the core C++ components. Overall, the internship provided end-to-end experience of working in a professional software development environment on a mission-critical analytics product.

Tool used (Development tools - H/w, S/w) : Languages: C++, C#, Javascript, HTML, CSS. Frameworks/Technologies: MFC, COM, ATL, STL, .NET Framework. Environment/OS: Windows, Win32 API, Windows system programming concepts. IDEs/Tools: Microsoft Visual Studio, integrated debugger, build systems usi

Objectives of the project : Enhance and maintain the Arianna audience measurement platform through bug fixing, refactoring, and performance optimization while ensuring correctness and robustness of analytics workflows, strengthening understanding of enterprise software architectures and deployment pipelines, and improving code quality through systematic testing, debugging, and adherence to coding standards.

Major Learning Outcomes : Ability to work productively with a mature legacy C++/MFC/COM codebase while improving debugging and profiling skills, gaining experience in writing clean and maintainable code, and strengthening understanding of software engineering practices such as ver

Details of Papers/patents : No external papers or patents were generated. The work was focused on internal software development, maintenance, optimization, and quality improvement of the Arianna platform.

Brief Description of working environment, expectations from the company : The working environment was typical of a professional software product team dealing with a large, production-grade codebase. Development centered around Microsoft Visual Studio on Windows, with established build pipelines, coding standards, and review processes. Regular interactions with senior developers helped in understanding historical design decisions, legacy constraints, and patterns used throughout the codebase.

Expectations from the organization were clearly oriented around software engineering best practices: understanding requirements for a given change, making minimal and safe modifications to a stable product, following team conventions for naming, structure, and documentation, and always validating changes through appropriate testing. There was an emphasis on making changes that were both technically correct and maintainable, given the long lifetime and wide usage of the platform.

The environment also reinforced disciplined use of version control, careful handling of branches, and clear commit messages. Access to internal documentation and technical guidelines enabled independent exploration and learning. Overall, it was a focused, technically challenging setting designed to expose interns to real-world software development on a complex product.

Academic courses relevant to the project : Object-Oriented Programming , Operating Systems

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Name: KABRA AADITYA BHARAT(2021B3AA2773P)

Student Write-up

PS-II Project Title: MIgration of Data Processing Servers

Short Summary of work done during PS-II : The internship at Nielsen Media focused on three primary projects aimed at modernizing the backend infrastructure and improving operational

efficiency. The central initiative was the migration of legacy backend servers (eXtream and eXpresso) from a monolithic Java codebase to a distributed PySpark framework. This involved analyzing undocumented legacy logic, re-architecting data flows for parallel processing on Amazon EMR, and ensuring identical data output to solve scalability bottlenecks. Parallel to this, the DataIn Configuration Management Pipeline was enhanced. A basic webhook system was upgraded to a robust GitLab CI/CD pipeline using Python and PostgreSQL, ensuring 100% audit compliance and reducing deployment risks. Additionally, an Engineering Metrics Dashboard was developed using FastAPI to extract and visualize project performance metrics from the GitLab API. These initiatives collectively improved system scalability, automated manual workflows, and increased deployment velocity.

Tool used (Development tools - H/w, S/w) : Languages & Frameworks: Python, PySpark, Java (Legacy analysis), FastAPI, SQL. Cloud & Infrastructure: Amazon Web Services (AWS), Amazon S3 (Data Lake), Amazon EMR (Elastic MapReduce), Amazon CloudWatch. DevOps & Automation: GitLab CI/CD, Docker (implie

Objectives of the project : To rewrite and migrate a terabyte scale data processing server from JAVA to PySpark

Major Learning Outcomes : Python, Apache Spark, Backend Development.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment within the Serving Team at Nielsen Marketing Cloud is described as dynamic, collaborative, and highly skilled. The culture emphasizes "egoless programming," where code reviews are treated as quality control and mentorship opportunities rather than personal critiques. The team operates on an Agile methodology with daily stand-ups and sprint cycles, fostering transparency and quick problem-solving.

Academic courses relevant to the project : Object-Oriented Programming (OOP): Essential for understanding and reverse-engineering the legacy Java codebase.
Database Management Systems (DBMS): Applied in designing schemas and managing data consistency in PostgreSQL.

Name: AARYA NIREN PAI(2021B4A30046G)

Student Write-up

PS-II Project Title: AWS S3 concatenator

Short Summary of work done during PS-II : Write backend code to automate certain tasks

Tool used (Development tools - H/w, S/w) : -

Objectives of the project : Writing Backend code

Major Learning Outcomes : Python, AWS S3, FFMPEG, Boto3

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Giving regular updates on the project you are working on and doing efficient work.

Academic courses relevant to the project : Object oriented programming, data structures and algorithms

Name: ABHINAY AGARWAL(2021B5A82953G)

Student Write-up

PS-II Project Title: There wasn't a specific project , worked on different tasks as and when required

Short Summary of work done during PS-II : I was entitled to do different tasks during the course of internship, Did make data -enginnering pipelines for the ETL process with the help of airflow, Worked on analysis of code failure through python programming . Worked on low code development in PEGA .

Tool used (Development tools - H/w, S/w) : Airflow , Postman, PEGA

Objectives of the project : NA

Major Learning Outcomes : Data engineering, python , open source tools

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Working Environment and work Culture is good . people in my team were very inclusive and welcoming . the company does not expect much from a intern , you need to be present in office when required and complete your tasks appropriately . Be good in communication and a team member.

Academic courses relevant to the project : Object Oriented Programming , OS, python.

PS-II Station : Nielsen - , Hyderabad

Faculty

Name: Venkateswara Rao Thunuguntla .

Student

Name: ADITYA JAISWAL .(2022A3PS0410H)

Student Write-up

PS-II Project Title: ECATI migration task

Short Summary of work done during PS-II : I had a really good time in Nielsen as an SDE intern. The work assigned to me was Web Application Development using the industry standard frameworks. We chose SpringBoot with React as our tech stack with K8s/Docker for deployment. The task emphasised the shift of the call centre service platform to a cloud based service using AWS Connect.

Tool used (Development tools - H/w, S/w) : Amazon Connect, Spring boot, Java, React, Docker/K8s, REST APIs

Objectives of the project : To migrate from a third party CATI service to an in house application that acts as an interface for RI agents in the US to make/receive calls from customers across USA.

Major Learning Outcomes : Learned about a user life cycle by extensively working on User Management APIs
Learned about Amazon Connect and other AWS services like EC2 and S3
Learned Spring Boot, Java and Docker
Methods to write clean and industry standard code
Created a whole P

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Working environment offered by Nielsen is pretty good and balanced but one can expect hikes in the work load depending on the task deadlines of a project.

Academic courses relevant to the project : OOPS, OS, DBMS

PS-II Station : Nielsen - Gurgaon, Gurgaon

Faculty

Name: Harish Kumar Aggarwal .

Student

Name: BIDWAI VARAD LAXMIKANT(2021B5A72345P)

Student Write-up

PS-II Project Title: Backend development and operations automation

Short Summary of work done during PS-II : During my Practice School-II internship at Nielsen Media, I worked with the Panel Management team, dividing my responsibilities between backend feature development and critical operations automation. My primary development project involved architecting a secure OTP-based authentication service for the Nielsen Engage App. Utilizing a stack of Node.js, Express.js, Redis, and PostgreSQL, I built a scalable login flow that replaced legacy mechanisms. This included implementing a high-speed caching layer for credentials and integrating AWS Parameter Store to eliminate hardcoded secrets. I also developed a specialized "proxy login" feature, enabling Field Representatives to securely access panelist accounts for troubleshooting purposes. On the operational front, I served as the On-Call Engineer for US TAM data pipelines. I monitored Apache Airflow DAGs daily, ensuring the timely delivery of audience metrics. I successfully performed Root Cause Analysis (RCA) on 12 critical job failures, resolving data inconsistencies through complex SQL remediation scripts. Additionally, I contributed to legacy system modernization by reviving the Recruitment Processing Backend. I resolved severe Gradle dependency conflicts and version mismatches in the Java-

based repository, successfully restoring the CI/CD pipeline for deployment to the UAT environment. This experience provided comprehensive exposure to the full software engineering lifecycle, from code creation to production maintenance.

Tool used (Development tools - H/w, S/w) : Programming Languages & Runtimes: Node.js: Primary runtime for the Engage App backend. Java (JDK): Used for the legacy Recruitment Processing Backend. SQL: Used for querying PostgreSQL and MSM databases. JavaScript (ES6+): For backend controller logic

Objectives of the project : 1. Secure Authentication Architecture To design and implement a robust One-Time Password (OTP) authentication flow for the Nielsen Engage App. The objective was to replace legacy login methods with a secure, stateless architecture using Node.js for logic processing, Redis for temporary credential caching, and AWS Parameter Store for secure secret management. 2. Enhancement of Field Operations To streamline the workflow for Field Representatives (FRs) by developing a "Proxy Login" feature. The goal was to modify the backend logic to allow FRs to access panelist accounts securely using dual-email validation, enabling efficient troubleshooting without requiring the panelist's physical device. 3. Operational Reliability and Data Integrity To ensure the high availability of critical US TAM (Television Audience Measurement) data pipelines. This involved establishing a daily monitoring protocol for Apache Airflow jobs, performing Root Cause Analysis (RCA) on production failures, and executing SQL-based remediation to guarantee data freshness for downstream analytics. 4. Legacy Infrastructure Modernization To restore the Continuous Integration (CI) capabilities of the legacy Recruitment Processing Backend. The objective was to resolve complex dependency conflicts and build failures by upgrading the Java environment and Gradle build configurations, ensuring the service could be successfully deployed to the UAT environment.

Major Learning Outcomes : Root Cause Analysis (RCA) & Debugging, Operational Observability and DataOps, Build Systems and Dependency Management

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Decent workspace, nice culture too. good for those who wish to enjoy their work and time spent in office.

Academic courses relevant to the project : NA

Name: MOHD ABDULLAH WASIF(2022A4PS1279P)

Student Write-up

PS-II Project Title: Data Science Intern

Short Summary of work done during PS-II : During my PS-II at Nielsen, I worked as a Data Science Intern supporting analytics and internal platform development teams. My responsibilities included working with large datasets, validating data pipelines, and assisting in backend and frontend testing of internal tools. I contributed to improving data accuracy, writing scripts for automation, and verifying outputs across different stages of the pipeline. Additionally, I documented workflows and created walkthrough videos for pipelines and tools developed during my tenure to ensure smooth knowledge transfer. I participated in knowledge transfer (KT) sessions and cross-team discussions, gaining exposure to industry-standard practices in data engineering and analytics. I also assisted with database-related tasks and helped test new features before deployment. Overall, the internship provided strong hands-on exposure to applied data science in a corporate environment.

Tool used (Development tools - H/w, S/w) : Python, SQL, Git, Jupyter Notebook, VS Code, PostgreSQL, Internal Nielsen Analytics Platforms, Microsoft Teams, Jira

Objectives of the project : Ask Nielsen Chatbot tteam

Major Learning Outcomes : Backend and frontend testing, data pipeline validation, automation scripting, collaborative development, documentation and knowledge transfer

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Nielsen provided a professional and collaborative working environment with a strong emphasis on data quality, documentation, and teamwork. Interns were expected to be proactive, adhere to deadlines, and maintain high standards of data integrity. The organization encouraged continuous learning, clear communication, and ownership of assigned tasks. Regular team meetings and mentor interactions helped align expectations and ensured steady progress throughout the internship

Academic courses relevant to the project : .Foundations of Data Science, Machine Learning, Applied Statistical Methods, Database Systems

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Name: SAARTH CHAHAL(2022A4PS1296P)

Student Write-up

PS-II Project Title: FULL-STACK ANDROID DEVELOPMENT & BACKEND INTEGRATION

Short Summary of work done during PS-II : Over six months, the project progressed from an initial concept to a functional, production-ready mobile application. The internship delivered hands-on experience across the full software development lifecycle, spanning backend data processing, UI/UX design, system integration, analytics instrumentation, and end-to-end testing. Key outcomes included building a complete Python-based data processing pipeline with automated validation and structured outputs; developing a modern Android app using Kotlin and Jetpack Compose aligned with the MVVM architecture; and implementing core product features such as authentication, permission handling, onboarding, and profile management. The app also integrated Firebase Analytics to enable real-time event tracking and data-driven evaluation of user engagement. Finally, extensive test coverage was established to improve stability, scalability, and long-term maintainability.

Tool used (Development tools - H/w, S/w) : Android Studio, Git, Firebase,Python

Objectives of the project : Gaining exposure to real-world software-delivery practices—from requirements analysis to testing and release.

Major Learning Outcomes : The internship offered valuable exposure to professional software development practices—version control, agile collaboration, and continuous improvement

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Relaxed working environment and transparent work culture. Work is expected to be done in a timely manner. Teammates are helpful in boosting productivity.

Academic courses relevant to the project : DSA, OOP, Computer Programming

PS-II Station : Nirmaan Organization - Tech, Hyderabad

Faculty

Name: Perumal Jayakumar

Student

Name: ENNAM NAVYA SRI .(2022A7PS0001H)

Student Write-up

PS-II Project Title: Nirmaan Skill Portal, Nirmaan Volunteer Portal

Short Summary of work done during PS-II : During PS-II at Nirmaan Organisation, I worked on the design, development, and enhancement of the Nirmaan Skill Portal, a web-based platform

aimed at supporting student skill development and mentorship. My work involved analyzing existing system workflows, fixing functional issues, and implementing new features to improve usability and system efficiency.Overall, PS-II provided hands-on experience in full-stack web development, real-world problem solving, system design, and collaboration. The work strengthened my technical skills and understanding of building scalable digital platforms for education and mentorship.

Tool used (Development tools - H/w, S/w) : Hardware Tools Laptop Server (Localhost using XAMPP) Internet Connectivity Software Tools PHP (Backend Development) MySQL / MariaDB (Database Management)

Objectives of the project : Bridge the gap between students and mentors by providing a structured mentorship platform.

Major Learning Outcomes : Gained hands-on experience in designing and developing a full-stack web application

Details of Papers/patents : This PS-II work focused on practical software development and system enhancement rather than research publications or patents.

Brief Description of working environment, expectations from the company : The working environment at Nirmaan Organisation was collaborative, supportive, and focused on practical problem-solving. The team encouraged open communication and knowledge sharing, which helped in understanding real-world software development workflows. Regular interactions with mentors and team members provided clarity on project requirements and enabled continuous learning. The organization maintained a balance between technical rigor and social impact, making the work both meaningful and technically enriching.
Overall, the environment fostered professional growth by exposing interns to real-world development challenges, collaborative teamwork, and responsibility-driven tasks. The experience helped in strengthening technical skills, improving problem-solving abilities, and understanding how software solutions can be designed to support educational and mentorship initiatives

Academic courses relevant to the project : Database Management Systems (DBMS)

Concepts of relational databases, SQL, normalization, and data modeling used in designing the Skill Portal database.

PS-II Station : Nomura Finance Division, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: KHUSHI SONI(2022A1PS0903P)

Student Write-up

PS-II Project Title: Cost Reporting & Analytics

Short Summary of work done during PS-II : During my internship, I worked on preparing and releasing monthly cost reports by collecting, cleaning, and organising data to ensure accuracy. I also helped automate repetitive steps in the reporting workflow to make tasks quicker and reduce manual effort. In addition to this, I supported stakeholders with ad-hoc analysis whenever needed, mainly involving cost trends, variances, and simple comparisons.

Tool used (Development tools - H/w, S/w) : Power BI, Oracle Essbase, Alteryx, MS Excel

Objectives of the project : The objective of the project was to streamline and automate the cost reporting workflow to reduce manual effort and errors. The aim was to improve the consistency of recurring reports by building simple templates and analytics that made cost trends easier for teams to understand and use.

Major Learning Outcomes : The main learning was understanding how to work with data more accurately and interpret it to create structured, usable reports. I became more comfortable handling real datasets, fixing errors, and automating parts of the workflow to make the process smoo

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment was welcoming and supportive. My colleagues were approachable and always willing to help whenever I was stuck or needed clarification, which made it much easier to settle into the role. My manager encouraged asking questions and understanding the concepts behind each task rather than just completing them quickly. The company also provided good facilities, including transport, food, and other essentials, which made the overall experience smooth.

Academic courses relevant to the project : No courses required as such, learning to use tools like Excel and Power BI would be helpful though.

PS-II Station : Nomura Fintech - India Innovation Office, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: PRANAY SANDEEP JALAN(2022A8PS1719P)

Student Write-up

PS-II Project Title: Digital Transformation

Short Summary of work done during PS-II : I worked with Nomura's International AI Centre of Excellence and Digital Company teams, contributing to company-wide AI and GenAI initiatives. My role involved building and scaling enterprise-grade AI systems focused on automation, operational efficiency, and knowledge management. I worked on integrating multiple enterprise knowledge stores and developing Agentic RAG solutions to enable dynamic knowledge base creation within Nomura's core AI platform built on AWS Bedrock. I contributed to the design and release of internal AI tools used across banking, risk, legal, compliance, corporate IT, and investment banking functions. One of the features I worked on was successfully launched firm-wide and is actively used by over 9,000 employees, demonstrating significant real-world business impact. Additionally, I supported AI strategy decks and conducted research on applied GenAI use cases across multiple enterprise domains.

Tool used (Development tools - H/w, S/w) : Python, VS code, Github Copilot

Objectives of the project : Automate manual work through Generative AI

Major Learning Outcomes : Full Stack development, presentation skills

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Nice working environment, Good people to work with

Academic courses relevant to the project : Object Oriented Programming

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PS-II Station : Nomura Global Markets Analyst Internship, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: RIYA RAJESH AGRAWAL(2021B3A70996H)

Student Write-up

PS-II Project Title: Structuring Intern

Short Summary of work done during PS-II : I am involved in pricing the structured products .

Tool used (Development tools - H/w, S/w) : Internal Nomura Tools

Objectives of the project : To learn about the Rates , FX and Credit Markets

Major Learning Outcomes : Rates Trading and Structuring , Credit Trading and Structuring

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Working environment is really good. The hours range from around 9-10 . The company expects that you would know financial concepts .

Academic courses relevant to the project : FRAM,DRM

Name: LADDHA MANAV HARISH(2021B3A71053G)

Student Write-up

PS-II Project Title: Global Markets Intern

Short Summary of work done during PS-II : During my PS-II internship at Nomura, I worked with the Securitized Products Research team, primarily covering the US markets. My work focused on US agency MBS, non-agency securitized products, and collateralized loan obligations (CLOs). I assisted in analyzing deal structures, tranche hierarchies, cash flow waterfalls, and key risk factors such as prepayment, credit, extension, and interest rate risk. I supported the team by updating market data, tracking spreads, yields, and relative value across products, and monitoring macroeconomic and policy developments affecting securitized markets. I also contributed to preparing research materials, summaries, and internal notes used for investment analysis and client communication. Through this role, I gained hands-on exposure to structured finance instruments, learned how securitized products are valued and compared, and developed a practical understanding of how research supports trading and investment decisions in fixed income markets.

Tool used (Development tools - H/w, S/w) : Bloomberg Terminal, Microsoft Excel, PowerPoint, internal research databases, financial models, market data analytics tools(like levfininsights), SQL,Python,R

Objectives of the project : To analyze US securitized products—agency MBS, non-agency securities, and CLOs—by evaluating structure, risk, cash flows, and market performance to support investment and research decisions.

Major Learning Outcomes : Understanding securitized product structures, analyzing cash flows and risks, evaluating spreads and performance, gaining exposure to US fixed-income markets, and developing research and analytical skills.

Details of Papers/patents : Not applicable (no papers or patents were published during the PS-II period).

Brief Description of working environment, expectations from the company : The working environment at Nomura was professional, fast-paced, and demanding, reflecting the pace of a global investment bank. The role involved long working hours and a high degree of micromanagement, with strong emphasis on precision, accountability, and adherence to strict

deadlines. Attention to detail and accuracy were critical, especially given the sensitivity of financial data and research outputs.

Academic courses relevant to the project : Macroeconomics, DRM, SAPM,

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Name: HURSH SANDEEP SETHIYA(2021B3A71878G)

Student Write-up

PS-II Project Title: Equity Derivatives Structuring Team

Short Summary of work done during PS-II : Worked in a accommodative and supportive environment in a very early stage of career and understood the importance of knowledge in derivatives and automation.

Tool used (Development tools - H/w, S/w) : Excel, Python

Objectives of the project : Pricing of Structures and Automation using Python

Major Learning Outcomes : Derivative Pricing and Application of Oython Libraries

Details of Papers/patents : ..

Brief Description of working environment, expectations from the company : Work environment is good. Exposure is high. People are understanding.

Academic courses relevant to the project : DRM

PS-II Station : Nomura Global Wholesale Strategy, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: MALU AKSHAY PRAMOD(2021B3A71721P)

Student Write-up

PS-II Project Title: Wholesale Strategy Intern

Short Summary of work done during PS-II : Supporting the team in doing the business as usual and also projects that come throughout the year. You also get sole ownership of Adhoc projects at times.

Tool used (Development tools - H/w, S/w) : MS Excel and MS Powerpoint

Objectives of the project : Optimization and supporting the Global Wholesale Strategy Division.

Major Learning Outcomes : Great learning in terms of soft skills, time management and people management. Learning also involves advanced excel and powerpoint

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The role expects you to be adaptive to fast paced environment and quick turn arounds with a 100% precision.

Academic courses relevant to the project : Finance Minor courses (FinMan and BAV especially)

PS-II Station : Nomura ITD International Wealth Management (IWM) division, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: SAMAAHITH G OKKUNDA(2021B4A72431G)

Student Write-up

PS-II Project Title: International Wealth Managament Technology Intern

Short Summary of work done during PS-II : I worked on designing a modular and agentic testing workbench that combined structured retrieval pipelines such as text and vision RAG with autonomous agentic workflows built using LangChain and LangGraph to generate, retrieve, validate, and score complex financial test scenarios end to end. The modular layer handled multi-source knowledge-base retrieval, chunking, and grounding of financial data, while the agentic layer used graph state reasoning, tool call orchestration, and dynamic workflow generation to autonomously create and execute scenario tests for upgraded trading and financial applications. I also developed LLM evaluation modules that scored these scenarios using research-backed metrics designed to assess non-benchmarked LLM behaviour. Additionally, I contributed to firmwide financial application data modelling and Front Office to Back Office trade settlement workflows using proprietary financial platforms.

Tool used (Development tools - H/w, S/w) : Python, SQL, GraphQL, Postman, Grafana, LangChain, LangGraph, React.js, Excel, Power BI

Objectives of the project : Build Agentic applications to test financial applications and proprietary tools

Major Learning Outcomes : Agentic and RAG Implementation, machine learning methods, trading and testing lifecycles

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment was fast paced, research oriented, and highly collaborative. The work culture was positive, and the team offered strong support despite the project being quite demanding. Work hours were longer than average, but the exposure to advanced technology and the encouragement to use research-based methodologies made the experience very rewarding.

Academic courses relevant to the project : Applies statistical methods, artificial intelligence, machine learning, OOP, Operating systems, DBMS, Foundations of Data Science

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Name: RUSHI PATEL .(2022A7PS1382H)

Student Write-up

PS-II Project Title: Verify agent

Short Summary of work done during PS-II : Not Allowed under NDA

Tool used (Development tools - H/w, S/w) : Langraph, langchain, python

Objectives of the project : Automate QA work for Nomura

Major Learning Outcomes : Learned end to end development of agentic AI applications

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Good work culture, helpful seniors, not unrealistic expectations and good working hours

Academic courses relevant to the project : OOPS, DBMS

PS-II Station : Nomura Market Risk, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: SONIT SRIVASTAVA .(2022A2PS1716H)

Student Write-up

PS-II Project Title: Market Risk - Interest Rates, CVA & FRTB PLA TEST

Short Summary of work done during PS-II : Tail Date & Market Moves Dashboard : to capture impact of market shocks since 2008 on our current portfolio. Made 2 versions of it, first shows the impact and dates for Closure of Business Date, meanwhile version 2 allows to compare any 2 dates with their impacts. Made a global PnL dashboars for rates asset class, showing the PnL across regions and desks. Did multiple report conciliation for CVA team, including a detailed

report with my comments on unsecured fundings sensitivity and their counterparties. Worked on aligning Front office hypothetical PnL with Risk Theoretical PnL for passing the FRTB PLA test

Tool used (Development tools - H/w, S/w) : PowerBI, Python, SQL, Excel, Internal Risk Engines & other tools

Objectives of the project : Dashboard for Rates PnL and Market Moves. Support CVA : Global/EMEA Level. FRTB PLA Test Signoffs

Major Learning Outcomes : Learned in depth about risk management, PowerBI, how to make sense of the risk numbers and their implications. Enhanced Python, excel and sql skills.

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : It is a hybrid work culture with few days WFH. Culture is pretty good with regards to approaching anyone within team or outside. People are helpful but you are required to work long hours.

Academic courses relevant to the project : Finance and Maths

PS-II Station : Nomura Regional CEO Office, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: RUDRAKSH GULHATI(2021B3AA1580G)

Student Write-up

PS-II Project Title: Regional CEO's office - AeJ region

Short Summary of work done during PS-II : Supported the Regional CEO Office on strategic initiatives across Asia ex-Japan, including market research, competitive analysis, and preparation of executive briefs. Worked cross-functionally with business and support teams to track key regional priorities, synthesize insights for senior leadership, and assist in coordinating high-level meetings and projects.

Tool used (Development tools - H/w, S/w) : Powerpoint, Excel, Illustrator, Sharepoint

Objectives of the project : Assisting the regional CEO Nags Sankaranarayanan execute his strategy and achieve his goals

Major Learning Outcomes : Tangibles - limited - only work on PPT, excel & Illustrator. Intangibles - vast

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Really good working environment, great people, extremely kind and supportive, extremely compassionate managers and coworkers

Academic courses relevant to the project : Business analysis and valuation, Fundamentals of finance and accounting, macroeconomics

PS-II Station : Nomura Risk Management - CEM, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: HARSH BHATIA(2021B3AA1060P)

Student Write-up

PS-II Project Title: Replacement Risk

Short Summary of work done during PS-II : I helped the organisation in daily BAUs such as validating exposure numbers of SFT business and in a project related to Replacement Risk

Tool used (Development tools - H/w, S/w) : BO, python

Objectives of the project : Streamlining the existing report and make the thresholds dynamic

Major Learning Outcomes : Learnt how to use BO.

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The organisation have high standards that helps students push and grasp concepts quickly.

Academic courses relevant to the project : All the courses in Finance had contribution to the work we do. Hence helping us work better.

PS-II Station : Nomura Risk Management - Risk Infrastructure, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: AMAN JAISWAL .(2022A4PS0742H)

Student Write-up

PS-II Project Title: Risk Analyst

Short Summary of work done during PS-II : During my internship at Nomura, I worked within the Risk Infrastructure team supporting global markets, where my primary responsibility was to ensure the accuracy, reliability, and timeliness of post-trade valuation and stress-testing controls. I owned several BAU risk control activities, including full valuation checks, unexplained P&L analysis, stress adjustments, and exposure validations across hedge fund portfolios. A significant part of my role involved investigating valuation breaks and data discrepancies, performing root-cause analysis, and coordinating with risk managers and downstream teams to resolve issues and support timely risk sign-offs. I also conducted regular data validations and reconciliations to ensure consistency across upstream trading systems and downstream risk and reporting platforms. Beyond BAU responsibilities, I built Python-based End-User Computing (EUC) tools to automate stress current exposure and stress loss adjustment checks, reducing manual effort and improving control efficiency. I also contributed to designing a strategic enhancement to the stress full valuation control framework by rethinking static, manual checks into more dynamic, data-driven workflows. Overall, the role gave me hands-on exposure to post-trade controls, exception management, and cross-team coordination in a high-risk, time-sensitive environment, which closely aligns with transaction services and securities processing roles.

Tool used (Development tools - H/w, S/w) : Python, SQL , Decisions, ML algos

Objectives of the project : Automations and Data Analytics

Major Learning Outcomes : Python , ML , Stress and exposures calculations , Hedge Funds limits, ratings and exposures

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Work environment was relaxed but learning was slow and limited .

Academic courses relevant to the project : Finance minor

Name: ARNAV GUPTA .(2022A7PS0063H)

Student Write-up

PS-II Project Title: Risk Infrastructure Intern

Short Summary of work done during PS-II : During my internship, I worked on financial automation projects focused on streamlining manual processes and improving efficiency within the risk and finance workflow. I automated key tasks such as data extraction, transformation, validation, and report generation using Python, Decisions, Power BI, SQL, etc. The project reduced manual effort, minimized errors, and improved turnaround time for recurring financial operations.

Tool used (Development tools - H/w, S/w) : Python, Decisions, Power BI, SQL, BO, Outlook, Takara, Sharepoint

Objectives of the project : To automate financial processes of the firm

Major Learning Outcomes : How an IB works, and how can we integrate automations into the downstream workflow

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Good work life balance and overall culture

Academic courses relevant to the project : FRAM, SAPM

PS-II Station : NOMURA RISK MANAGEMENT - STRESS TESTING, Mumbai

Faculty

Name: Ambatipudi Vamsidhar .

Student

Name: KEYA NEHAL SHAH(2022ABPS1080P)

Student Write-up

PS-II Project Title: Market Risk and CCR

Short Summary of work done during PS-II : market risk reporting and counterparty credit risk

Tool used (Development tools - H/w, S/w) : powerbi, python,sql

Objectives of the project : reporting

Major Learning Outcomes : powerbi, python,sql

Details of Papers/patents : n-a

Brief Description of working environment, expectations from the company : good work enviornment.

Academic courses relevant to the project : finance minor courses, drm,fram

PS-II Station : Nurix Labs Private Limited - Growth- , Bengaluru

Faculty

Name: Seetha Parameswaran .

Student

Name: TANU SINGH BHUEE .(2022A1PS1723H)

Student Write-up

PS-II Project Title: Growth (India)

Short Summary of work done during PS-II : My work at Nurix AI primarily spanned three areas: client-facing activities, collateral and demo creation, and growth operations, with an additional focus on technical integrations and India deal analysis.A major portion of my work supported the BFSI Go-To-Market initiative, where I built company databases, segmented prospects (NBFCs, fintechs, banks, lenders), and executed multi-channel outreach through LinkedIn, email, and calls. This effort helped secure meetings with high-value clients and contributed to the refinement of the team's action pipeline. On the technical side, I implemented agentic actions like email triggers, outbound number calling, and dynamic variable handling using APIs.Finally, I conducted a comprehensive India deal analysis by importing HubSpot data, segmenting deals by sector and

source, mapping funnel stages, and generating insights on conversion performance. This analysis helped identify strong sectors, weak segments, and opportunities to improve outreach strategy.

Tool used (Development tools - H/w, S/w) : Agent X (Nurix's in house software to build voice agents), HubSpot, Zoominfo,Apollo, tracxn, MS Excel and Word

Objectives of the project : 1) Focus on creating client demos for all the prospect clients, India Deal Analysis based on past data of last 2 quarters, BFSI GTM Strategy and Industry tap-in

Major Learning Outcomes : During my six-month Practice School-II internship at Nurix AI, I gained comprehensive exposure across the Voice AI domain, enterprise sales, and the end-to-end lifecycle of building and deploying AI agents.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The company environment is genuinely good, the mentors (which got alloted to each individual intern) were really supportive. The company however expects you to work long hours. Sometimes, we had calls at 12:30 am or 1:00 am as well. The cross-functionality across the various teams is really good. Everyone is more than willing to help you. But, they will get most of the work done from interns.

Academic courses relevant to the project : Business Analysis and Valuation (BAV), no other courses as such

PS-II Station : Nurix Labs Private Limited - Tech, Bengaluru

Faculty

Name: Seetha Parameswaran .

Student

Name: JAYANT AGGARWAL(2021B4AA2324P)

Student Write-up

PS-II Project Title: Enterprise RAG

Short Summary of work done during PS-II : Enabled enterprise level RAG for both voice and text agents, enabled rescheduling of calls, helped in debugging exisitng issues

Tool used (Development tools - H/w, S/w) : Python, FastAPI, SQL, Claude Code

Objectives of the project : Integrate RAG for both voice and text agents

Major Learning Outcomes : Architected end-to-end RAG pipeline with custom chunking and parallelized async processing for text/voice agents.– Built scalable serverless ingestion stack (Airbyte, S3, SQS, Lambda) with DLQ error handling and SQL logging.– Implemented tool-call retriev

Details of Papers/patents : Used custom agentic chunking

Brief Description of working environment, expectations from the company : People are helpful , though since startup wprk load is on higher side only

Academic courses relevant to the project : Object Oriented Programming, Communication Networks

PS-II Station : Nutanix, Bengaluru

Faculty

Name: Chandra Shekar R K .

Student

Name: SARTHAK SOMANI .(2021B1A70793H)

Student Write-up

PS-II Project Title: Resource Spec Consolidator

Short Summary of work done during PS-II : Built a package for consolidating resource specs. For testing purpose, differents tests have different resource requirements. Identicals are clubbed of course using hash map. But they can be reduced if we look for range based comparision of some parameters. Lesser the resource specs, more deployments can be done hence parallelization comes into the part.

Tool used (Development tools - H/w, S/w) : H/w - Laptop, S/w - python, react

Objectives of the project : To consolidate the similiar resource specs based on some parameters.

Major Learning Outcomes : Researched about different algorithms for classification like DB Scan, K Means.

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : They were really helpful. I had to work with different teams for integrating the package in their tools.

Academic courses relevant to the project : oops

Name: AKHIL KUMAR MISHRA .(2021B3A70929H)

Student Write-up

PS-II Project Title: Optimization

Short Summary of work done during PS-II : The work mainly involved creating Unit Tests for various services to search for potential improvements in performance and also cover all the edge cases. Also got the opportunity to introduce new features in the existing code for more control on the product.

Tool used (Development tools - H/w, S/w) : S/w: IDE, Terminal

Objectives of the project : Optimization of the Current Code workflows to help increase the performance.

Major Learning Outcomes : System Architecture

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment at the company was very supportive with the mentor and other fellow employees always ready for discussions and problem/doubt solving sessions. They always shared their experience with me and gave tips to improve myself.

Academic courses relevant to the project : Operating Systems, Computer Networks, Object Oriented Programming

Name: SWAPNIL YADAV(2021B3A72770P)

Student Write-up

PS-II Project Title: Agentic AI for triaging build failures

Short Summary of work done during PS-II : The work involves developing an automated Unit Test (UT) Auto-Triaging Tool to reduce the manual effort required to analyze UT (PTest) failures. Currently, engineers manually inspect highly verbose Jenkins-Harbinger logs to identify root causes, which is time-consuming and slows down build and test resolution. Nutanix's existing Auto-Triage framework is effective for functional tests but does not support PTest failures. To address this gap, a dedicated UT triaging tool has been designed. The tool is implemented as an MCP server and uses LLMs via Cursor to generate root cause analysis. It automatically queries JIRA tickets, extracts UT log URLs, parses and summarizes Jenkins-Harbinger logs using pattern-based keyword matching, and removes duplicate error entries to reduce noise and LLM hallucinations. Additional sources of information, like the list of commits included in the build, code diff of files in each commit, are also provided to the LLM for increased accuracy. The project is currently in development and would be continued in the next semester as well.

Tool used (Development tools - H/w, S/w) : API endpoints for LLMs and Software platforms, Cursor, FastMCP

Objectives of the project : Creation of an agentic framework that would automate the task of debugging/traiging build failures using LLMs

Major Learning Outcomes : The project provided me with the knowledge to create agentic workflows, MCP servers and their integration with AI-powered IDEs (e.g. Cursor). Through the project, I also got insights into how production level code is built and tested at various stages and

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment in Nutanix is good. The working hours are flexible and the employees are supportive and helpful. The company offers a good work-life-balance.

Academic courses relevant to the project : Introduction of LLMs, Foundations of Data Science.

Name: SIDDHARTH YOHAN CERI .(2021B4A73145H)

Student Write-up

PS-II Project Title: Projects 2.0 - Flow Network Security

Short Summary of work done during PS-II : Enhanced the current Flow Network Security (FNS) implementation to add Project support and multi-tenancy. This involved: - Understanding the current FNS code and services. - Understanding what multi-tenancy and project support is. - Working with every FNS entity to make sure they are project aware. Nutanix runs IT and cloud infrastructure for companies through virtualisation. This is done through clusters (hardware). Projects is a way to provide Logical Isolation to a cluster. This is for Service Provider use cases.

Tool used (Development tools - H/w, S/w) : Python, Java, Go, Cursor, Postman, RPC's

Objectives of the project : To build a multi-tenant environment for the Flow Network Security entities to serve service provider customers.

Major Learning Outcomes : Understanding a large codebase, learning how to write production code, Building on uncertain information - iteration and experimenting.

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Couldn't have asked for a better culture. I was part of a team who were always ready to help, filled with some really smart people I learnt so much from and still have a lot to learn. A team where it was also fun just hanging out. A great manager too.
Expectations were to get work done and communicate effectively.

Academic courses relevant to the project : Computer Networking, DSA, OS, Computer Architecture, Effective Public Speaking

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Name: MANAV PAHWA(2021B5A72796P)

Student Write-up

PS-II Project Title: Nutanix Infrastructure Manager

Short Summary of work done during PS-II : During my PS-II internship at Nutanix, I worked as a Member of Technical Staff Intern on the NIM (Nutanix Infrastructure Management) service, which is responsible for provisioning and managing infrastructure components such as App Domains. A major part of my work involved extending the service to support concurrent App Domain creation. Previously, the system allowed only a single App Domain to be created at a time due to a single-flight execution model. I redesigned this workflow using goroutine-based parallel execution, enabling multiple App Domains to be provisioned concurrently and significantly improving throughput. I also implemented a crash-resilient task recovery mechanism to detect App Domain operations stuck in a running state after service restarts and safely resume them without duplicate execution. To further improve reliability, I added idempotency guarantees to App Domain and Management Domain APIs, ensuring consistent behavior under retries. Additionally, I designed and integrated a dynamic configuration registry in Golang, replacing hardcoded constants with a config-map-driven architecture that supports runtime updates to service endpoints, constants, and file paths. Overall, the internship provided deep exposure to production-scale distributed systems, emphasizing correctness, scalability, and maintainability.

Tool used (Development tools - H/w, S/w) : Golang Git Linux REST APIs Internal Nutanix frameworks and services

Objectives of the project : To improve scalability and throughput of the NIM (Nutanix Infrastructure Management) service. To enable safe concurrent provisioning of App Domains. To enhance system reliability through crash-resilient task recovery and idempotent APIs. To make the service more configurable and maintainable via dynamic configuration management.

Major Learning Outcomes : Gained hands-on experience designing concurrent backend systems using Golang primitives.
Learned how to build fault-tolerant services that can recover safely from crashes and restarts.
Understood the importance of idempotency in large-scale distributed

Details of Papers/patents : N.A.

Brief Description of working environment, expectations from the company : The working environment at Nutanix was highly collaborative and engineering-driven, closely resembling a real-world production team setup. I worked alongside experienced engineers who emphasized clean code, design discussions, and rigorous reviews. Tasks were aligned with actual product requirements rather than isolated intern projects, which significantly raised the quality and impact of my contributions.
The company expected interns to take end-to-end ownership of assigned components—starting from understanding existing systems, identifying bottlenecks, proposing design changes, implementing solutions, and validating them through testing. There was a strong focus on code correctness, scalability, and long-term maintainability.
Regular discussions with mentors helped me improve my system-level thinking, especially around distributed workflows, failure handling, and concurrency. The environment encouraged asking questions, documenting decisions, and learning best practices used in large-scale backend systems. Overall, Nutanix provided a professional yet supportive environment that closely mirrors industry expectations for full-time engineers.

Academic courses relevant to the project : Operating Systems
Computer Networks
Data Structures and Algorithms

Name: VUDUMULA DATTA SAI SHASHANK REDDY(2021B5A72951G)

Student Write-up

PS-II Project Title: MTS Intern

Short Summary of work done during PS-II : During my PS-II at Nutanix, I worked on Nutanix Database Service (NDB), contributing to the development of a new internal feature to streamline database operations. I also fixed critical issues and optimized core services and driver-level components to improve performance, reduce latency, and enhance system stability. My work involved improving key NDB workflows such as provisioning, cloning, patching, and backup recovery while working with a large, production-grade codebase and following standard development and code-review practices.

Tool used (Development tools - H/w, S/w) : Nutanix Database Service (NDB) platform; Java, Python, Bash scripting, Ansible; Git; Linux/Unix environments; internal build, testing, and debugging tools.

Objectives of the project : To enhance the performance, stability, and reliability of Nutanix Database Service (NDB) by optimizing core services, fixing driver-level issues

Major Learning Outcomes : Gained hands-on experience in working with large-scale production codebases, improving system performance and reliability through debugging, optimization, and low-level driver and service enhancements in a hybrid DBaaS environment.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : its good

Academic courses relevant to the project : CP, OOPS, OS, CN etc

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Name: RIA KHATONIAR(2021B5A73028G)

Student Write-up

PS-II Project Title: Implementing Batch Inferencing for NAI platform

Short Summary of work done during PS-II : I implemented a batch inferencing feature on the Nutanix AI platform

Tool used (Development tools - H/w, S/w) : Golang, Open AI compatible APIs, Postman API , Kubernetes

Objectives of the project : To build batch inferencing system for the Nutanix AI platform

Major Learning Outcomes : I learnt about system design, qa testing, corporate culture, communication and team work

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Working environment was good, not too hectic but right before releases, I had to work almost throughout the day. My team is Nutanix AI Org which is a recent team and so the work is fast paced

Academic courses relevant to the project : NA

Name: RANA KASHYAP CHITRANG(2022A3PS0448P)

Student Write-up

PS-II Project Title: Study of Virtual Networking Components: OVN, OVS, and Conntrack

Short Summary of work done during PS-II : During my PS-II internship, I worked on understanding and contributing to the virtual networking stack, with a primary focus on Open Virtual Network (OVN), Open vSwitch (OVS), and the conntrack module. My work involved studying the architecture and packet flow across these components, analyzing how logical networking abstractions in OVN are translated into OVS flows, and understanding stateful connection tracking using conntrack. I also worked on debugging network flows, analyzing packet paths, and gaining hands-on exposure to virtualized networking concepts used in large-scale distributed systems.

Tool used (Development tools - H/w, S/w) : Software: Linux (Ubuntu), Open Virtual Network (OVN), Open vSwitch (OVS), Conntrack, Git, Bash/Shell scripting, Wireshark, tcpdump Hardware: Standard x86-based development systems / servers

Objectives of the project : To understand the architecture and working of virtualized networking components such as OVN and Open vSwitch. To study and analyze packet flow and connection tracking mechanisms in software-defined networking environments. To gain hands-on experience in debugging, analyzing, and validating network behavior in distributed systems.

Major Learning Outcomes : Gained strong understanding of virtualized networking concepts, including OVN, OVS, and connection tracking mechanisms.
Learned to analyze packet flows, debug network issues, and understand system-level behavior in distributed environments.

Details of Papers/patents : NONE

Brief Description of working environment, expectations from the company : The working environment during my PS-II internship was highly professional, collaborative, and learning-oriented. I worked as part of a technically strong team where open discussions, code reviews,

and knowledge sharing were actively encouraged. The organization followed structured engineering practices, including version control, documentation, and systematic debugging approaches, which helped me understand industry-grade software development workflows.

I was given exposure to real-world systems used in production environments, particularly in the domain of virtualized networking. The expectations from the company were clearly defined, focusing on developing a strong understanding of system architecture, independently exploring assigned modules, and contributing through analysis, debugging, and implementation tasks. Regular interactions with mentors and team members helped align my work with project goals and provided constructive feedback for continuous improvement.

The company emphasized ownership, accountability, and continuous learning, encouraging interns to ask questions, experiment responsibly, and deepen their technical understanding. Overall, the environment fostered both technical growth and professional development, enabling me to gain hands-on experience with complex distributed systems while adapting to industry standards and expectations.

Academic courses relevant to the project : Computer Networks
Operating Systems
Data Communication
Distributed Systems
Neural Networks and Fuzzy Logic
Data Science (Minor)

Name: SAMARTH SANJAY LANDE(2022A7PS0096P)

Student Write-up

PS-II Project Title: NuTriage: Agentic AI for analysing build failures

Short Summary of work done during PS-II : The project focuses on building an automated Unit Test (PTest) auto-triaging tool to reduce the manual effort involved in analyzing UT failures. Currently, engineers must manually sift through highly verbose Jenkins-Harbinger logs to identify

root causes, making build and test resolution slow and inefficient. While Nutanix's existing Auto-Triage framework handles functional tests well, it does not support PTest failures, creating a clear gap. To address this, a dedicated UT triaging tool is being developed. Implemented as an MCP server, it integrates with LLMs via Cursor to generate root-cause analysis. The tool automatically queries JIRA tickets, fetches UT log URLs, parses and summarizes Jenkins-Harbinger logs using pattern-based keyword matching, and removes duplicate error entries to reduce noise and minimize LLM hallucinations. It also supplies additional context—such as the list of commits in a build and code diffs for each commit—to improve analysis accuracy. The project is currently under development and will be continued in the next semester.

Tool used (Development tools - H/w, S/w) : MCP Server, Cursor, Jira Webhooks

Objectives of the project : Creation of an agentic framework that would automate the task of debugging/traiging build failures using LLMs

Major Learning Outcomes : The project equipped me with hands-on experience in building agentic workflows, developing MCP servers, and integrating them with AI-powered IDEs such as Cursor. It also gave me insight into how production-grade code is designed, tested across multiple st

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Good work- life balance. Good culture. Great learning environment.

Academic courses relevant to the project : DSA, OOPS

PS-II Station : Nykaa - Analytics, Bengaluru

Faculty

Name: Swarna Chaudhary .

Student

Name: HARSH SRISRIMAL(2022A8PS0577G)

Student Write-up

PS-II Project Title: Data Driven Brand Intelligence

Short Summary of work done during PS-II : I worked on multiple data analytics initiatives focused on improving visibility, control, and decision-making across brand and product operations. A key part of my work involved setting up an automated MIS pipeline, where I first developed a strong understanding of the underlying data tables and data flows. Based on this, I customized and built 34+ MIS reports for a brand, covering critical business, operational, and performance metrics, and ensured the pipeline was scalable, consistent, and reliable for regular reporting. In parallel, I conducted a detailed root cause analysis of operational leakages, with a specific focus on returns, cancellations, and RTO. This analysis involved deep-diving into the data across multiple dimensions, including customer behavior, brand-level patterns, and geographic trends, to identify high-risk segments and key drivers contributing to leakages. The insights from this exercise helped bring clarity on where and why losses were occurring. Additionally, I tracked the product funnel on a daily basis, closely monitoring user engagement and conversion metrics across different stages of the funnel. This enabled early detection of performance drops, better understanding of user behavior, and data-backed discussions around funnel optimization and conversion improvement.

Tool used (Development tools - H/w, S/w) : SQL, Python,R Studio,Mixpanel, Databricks, Tableau

Objectives of the project : To enable data-driven decision-making by building scalable analytics systems, automating reporting pipelines, diagnosing performance leakages through root cause analysis, and tracking end-to-end product and customer funnels.

Major Learning Outcomes : Through these projects, I developed hands-on experience in building scalable, automated MIS pipelines, performing structured root cause analysis to identify operational leakages, and tracking end-to-end product and customer funnels. I strengthened my abil

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment was collaborative and fast-paced, involving close coordination with multiple cross-functional teams across business, product, and operations. I was expected to take ownership of my work, independently drive analysis and execution, and ensure timely delivery of assigned tasks. Regular check-in calls were held to review progress, discuss findings, and align on next steps. In addition to core responsibilities, I actively participated in hackathons and problem-solving initiatives, which encouraged innovation, teamwork, and practical application of analytical skills.

Academic courses relevant to the project : NA

PS-II Station : Nykaa - Data Science, Bengaluru

Faculty

Name: Swarna Chaudhary .

Student

Name: EKANSH ARYAN SINHA .(2021B3AA3038H)

Student Write-up

PS-II Project Title: Multiple Projects - Making multiple internal tools to be used at Nykaa

Short Summary of work done during PS-II : During my internship, I gained valuable hands-on experience in designing and building scalable software systems while strengthening my fundamentals in full-stack development. I worked on multiple real-world projects that required understanding problem statements, breaking them into smaller components, and delivering reliable solutions within defined timelines. This experience helped me bridge the gap between academic knowledge and industry-level expectations.

Tool used (Development tools - H/w, S/w) : Vscode, GitHub, Python, Java, FastAPI, React, NextJs, TailwindCSS, Deepgram

Objectives of the project : Data Collection, analysis and reducing time for testing responses when an API call is done

Major Learning Outcomes : To work in a production level environment, creating MCP Servers

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment was professional and supportive, encouraging collaboration and learning. The company maintained clear expectations regarding discipline and commitment.

Academic courses relevant to the project : DBMS, OOPS, OS

PS-II Station : Nykaa - Engineering, Bengaluru

Faculty

Name: Swarna Chaudhary .

Student

Name: DEVANSH NANDWANI(2021B4AA1937G)

Student Write-up

PS-II Project Title: CI Scraper

Short Summary of work done during PS-II : This internship project at Nykaa focused on modernizing the analytics infrastructure for the Search and Analytics team. Addressing the bottlenecks of manual data extraction and delayed decision-making, the project delivered three core automated solutions leveraging Databricks, PySpark, and Tableau. Experiment Dashboard: A centralized, self-serve interface was built to track A/B test performance in real-time. It processes massive clickstream data to calculate key metrics (CTR, CVR, Lift) and automatically computes statistical significance, replacing static manual reports. Competitive Index Scraper: A custom Python pipeline (using Selenium) was developed to benchmark pricing and assortment against competitors like Amazon, Flipkart, and Sephora (UAE). A key technical innovation involved using Fuzzy Logic and NLP to accurately map "messy" competitor product titles to Nykaa's internal catalog. Process Automation: Daily automated email alerts were set up via Databricks jobs to push critical metric changes directly to Product Managers.

Tool used (Development tools - H/w, S/w) : Databricks, Tableau, Pyspark SQL

Objectives of the project : Building a Scraper for Competitor Landscape Analaysis

Major Learning Outcomes : Databricks, Tableau, Pyspark SQL

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : Good Environment, Helpful Mentors and Managers

Academic courses relevant to the project : Computer Programming

Name: ARYA KULKARNI(2022A8PS0557G)

Student Write-up

PS-II Project Title: Compare Ui

Short Summary of work done during PS-II : Improve compare ui, an internal tool used for comparison and analysis of search listing pages.

Tool used (Development tools - H/w, S/w) : SW- CRA, Tailwindcss, python, docker, jenkins

Objectives of the project : Improve an internal tool called compare ui.

Major Learning Outcomes : Learnt how to make production ready software

Details of Papers/patents : Na

Brief Description of working environment, expectations from the company : Very good environment. Are supposed to show results at the end of every sprint, can work at your own pace.

Academic courses relevant to the project : Computer programming, OOP, OS

PS-II Station : Nykaa - Product, Gurgaon

Faculty

Name: Swarna Chaudhary .

Student

Name: MUMUKSHU AGRAWAL(2022AAPS0271G)

Student Write-up

PS-II Project Title: Compare User Interface (UI) – An internal debugging tool

Short Summary of work done during PS-II : During my internship at Nykaa, I worked within the Product Search and Discovery team to engineer the "Compare UI," a pivotal internal analytics and debugging tool. The core problem I identified was the operational inefficiency caused by a lack of visibility into product ranking logic; teams were unable to effectively compare slate variants across Nykaa's Beauty and Fashion verticals without depending on manual data analytics. This gap hindered the optimization of search relevance and slowed down critical decision-making processes for Business Managers and Data Scientists alike. To resolve this, I designed a comprehensive platform that facilitates side-by-side testing of Product Listing Pages (PLPs) and Category Landing Pages (CLPs). The tool features advanced capabilities such as "Split Search" for comparing semantically similar queries, a "Past Date Data" module for retrospective analysis of the top 10,000 search queries, and granular breakdowns of Search Elastic Scores to decode ranking logic. I focused heavily on user experience, incorporating sticky headers and collapsible filters to streamline navigation. The strategic impact was measurable and significant: the Compare UI reduced the time required for business decisions and decreased the setup time for internal A/B experiments, proving that robust internal tooling is essential for maintaining a competitive edge in e-commerce.

Tool used (Development tools - H/w, S/w) : DataBricks, Tableau, Mixpanel, Jenkins, Google Docs, Google Sheets, Coda

Objectives of the project : 1. Allow full side by side testing of PLP/CLP/BLP variants. 2. Compare multiple algorithms and filters (including cohort wise).3. Provide detailed product metadata and relevance and elastic search scores of all listed products 4. Offer an easy-to-use interface for various stakeholders.

Major Learning Outcomes : During my internship at Nykaa's Product Search and Discovery team, I learned the critical value of internal tooling in driving e-commerce optimization. By developing the "Compare UI" debugging tool, I bridged the gap between complex ranking algorithms and

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : My experience at Nykaa was defined by a supportive and collaborative environment where mentorship was central to my professional growth. The transition into the team was smooth, fostering a culture where knowledge about the latest product advancements was freely shared among teammates and leadership. Despite this welcoming atmosphere, the expectations were rigorous; I was tasked with delivering a strategic internal tool that would not only resolve immediate debugging limitations but also secure long-term operational efficiency. The company expected me to take full ownership—from conducting user research to defining a comprehensive roadmap—ensuring the final product delivered a measurable impact on business performance. Ultimately, I was accountable for creating a solution that met the high standards of a market leader, prioritizing superior user experiences through vigorous internal testing and faster decision-making.

Academic courses relevant to the project : Principles of Management

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PS-II Station : OfBusiness,Gurugram, Gurgaon

Faculty

Name: Ashish Narang .

Student

Name: TANISHA GUPTA(2022AAPS0194P)

Student Write-up

PS-II Project Title: Customer centric product management

Short Summary of work done during PS-II : Good projects

Tool used (Development tools - H/w, S/w) : figma, ms excel

Objectives of the project : consumer centric improvement in website

Major Learning Outcomes : apm role

Details of Papers/patents : none

Brief Description of working environment, expectations from the company : as a product intern it was important to take ownership of projects you are working on

Academic courses relevant to the project : all courses

PS-II Station : Oracle, Bangalore, Bengaluru

Faculty

Name: Srinath R.Naidu .

Student

Name: AADI SWAPNIL NESARKAR(2021B3A70967G)

Student Write-up

PS-II Project Title: Dashboard for Perimeter Service

Short Summary of work done during PS-II : This project involved building a centralized, web-based dashboard to improve visibility into system events and operational trends. The application provides summarized analytics, trend visualizations, and drill-down capabilities to help users quickly understand system behavior and investigate individual events. The dashboard was developed using Oracle APEX, a low-code web application platform, with REST-based data access, the solution supports rapid development while maintaining a scalable and secure architecture. Key features include filtering and search, identification of frequently occurring events, lifecycle tracking, and views for distinguishing standard and pre-approved events.

Tool used (Development tools - H/w, S/w) : Oracle APEX, Base DB Service, ORDS

Objectives of the project : Deliver a dashboard that visualizes active and historical events, highlights top-emitting sources, exposes whitelisted events, and enables deeper inspection of event details.

Major Learning Outcomes : Oracle APEX and ORDS, underlying working of HTTPS connections, PL/SQL, OCI

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Expectations and work environment are team dependent.

Academic courses relevant to the project : DBMS, DSA, OOP

Name: PRATHIK S SHETTY(2021B3A71317G)

Student Write-up

PS-II Project Title: Fleet Insights and Recommendations

Short Summary of work done during PS-II : My internship focused on the backend development for a new OCI Cloud Service for the Database Organisation. The primary scope involved enhancing customer experience by aggregating and allowing management of all their cloud resources at one place. This involved developing of REST APIs for the new service, building and deploying industry standard code

Tool used (Development tools - H/w, S/w) : Java, Docker, Kubernetes, Dropwizard, OCI Tools

Objectives of the project : Build New OCI Service, Build Backend Infrastructure for the New Service, Implement REST APIs

Major Learning Outcomes : Enterprise Backend Development, Oracle Cloud Architecture, Software Lifecycle Best Practices

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : My internship focused on the backend development for a new OCI Cloud Service for the Database Organisation. The primary scope involved enhancing customer experience by aggregating and allowing management of all their cloud resources at one place. This involved developing of REST APIs for the new service, building and deploying industry standard code.
To support this centralization, I worked on implementing an event-driven architecture that allowed the service to ingest and process lifecycle events from various resources in real-time. This ensured that the customer's fleet view remained accurate and synchronized as resources were created or deleted. I was responsible for the end-to-end delivery of key features, which included defining API specifications, implementing complex business logic for data retrieval.

Academic courses relevant to the project : OOPS, DBMS

Name: ANSHUL GOEL(2021B3A72863G)

Student Write-up

PS-II Project Title: Automated Test Case Generation using AI for DataSafe

Short Summary of work done during PS-II : The project focused on developing an AI-based framework to automate API test case generation for Oracle Data Safe. The initiative addressed challenges such as high manual effort, repetitive test patterns, and missed edge cases in traditional test development. The framework takes API YAML specifications, resource details, test type (sanity or functional), and optional test specifications as input. These are processed using a code generation utility to create structured prompts, which are then passed to Oracle's internal AI system, Testpilot, for intelligent test generation. The output consists of ready-to-use Pytest files with fixtures, assertions, and error handling.

Tool used (Development tools - H/w, S/w) : Python , Streamlit , Oracle Testpilot (internal AI tool) , Git

Objectives of the project : 1.To automate the generation of API test cases using AI to reduce manual effort and time. 2.To improve test coverage by generating sanity, functional, negative, and edge-case scenarios.

Major Learning Outcomes : 1. Understanding AI-assisted software testing workflows 2. Hands-on experience with prompt engineering for structured test generation 3. Designing CLI and UI-based developer tools.

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : The working environment at Oracle was professional, collaborative, and innovation-driven. Regular

interactions with mentors and team members ensured clarity of requirements and alignment with organizational goals. The organization expects interns to be proactive, adaptable, and capable of translating abstract ideas into working software solutions that can scale across teams and products.

Academic courses relevant to the project : Object-Oriented Programming , Artificial Intelligence , Database Management Systems , Operating Systems

PS-II Station :

Name: PRATYAKSH KANSAL(2021B4A72783P)

Student Write-up

PS-II Project Title: Secure Data Access for GenAI Application

Short Summary of work done during PS-II : Helped on an ongoing project - User Private Database

Tool used (Development tools - H/w, S/w) : ADE, Codex, C

Objectives of the project : Making Oracle Database Secure and easy access for Users

Major Learning Outcomes : C
Sqlplus
Oracle Database

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Nice and cool working people and environment is not too stressful

Academic courses relevant to the project : C
Database Management
OS
Oops

Name: AAROSHI R RAO(2021B5A72952G)

Student Write-up

PS-II Project Title: Creating a tool to evaluate the performance of AI agents

Short Summary of work done during PS-II : 1)Developed apps showcasing vector database functionalities.2) Created a tool to help users evaluate the performance of their ai agents

Tool used (Development tools - H/w, S/w) : VS code

Objectives of the project : Creating a tool to evaluate the performance of AI agents

Major Learning Outcomes : Working with codebases, ai agents

Details of Papers/patents : nil

Brief Description of working environment, expectations from the company : Supportive team, supportive manager and mentor. Expected to be present on-site at least 2-3 times a week.

Academic courses relevant to the project : CP

Name: ANGAD BAWA .(2021B5A73171H)

Student Write-up

PS-II Project Title: Agentic AI in ODI

Short Summary of work done during PS-II : Built agentic automations and helpers for various facets of a ETL software.

Tool used (Development tools - H/w, S/w) : Langgraph,Python,Oracle Internal ToolsJava,PL/SQL

Objectives of the project : Build agentic frameworks for ETL platforms

Major Learning Outcomes : Agentic AI design patterns and practices integrating into legacy platform code and databases

Details of Papers/patents : none released

Brief Description of working environment, expectations from the company : Fantastic work environment , great mentors high level of trust and quick moving project

Academic courses relevant to the project : DSA , OOPS, OS, Cloud Computing, ML

PS-II Station : Orange Health Labs, Bengaluru

Faculty

Name: Bharathi R .

Student

Name: YAMANA SAI MAHESH .(2022A4PS1527H)

Student Write-up

PS-II Project Title: OPTIMIZING LOGISTICS & PRODUCT EXPERIENCE AT ORANGE HEALTH

Short Summary of work done during PS-II : Cost Savings: Prevented unnecessary Capex on medical-grade refrigerators by proving operational fixes work. Operational Transparency: Created a transparent incentive model (Km-based) that aligns pay with actual effort/distance. Risk Mitigation: highlighted security and stock vulnerabilities in the NIFLR hub system, prompting immediate review by the Logistics Excellence Team. Strategic Growth: Laid the groundwork for the Blood Donation vertical through legal and market feasibility studies.

Tool used (Development tools - H/w, S/w) : Mixpanel,Microsoft Clarity,Google Analytics,Dbeaver(Postgres SQL)

Objectives of the project : Inventory Optimization: Evaluate the efficacy of the NIFLR (vending machine) system and identify operational bottlenecks. Quality Assurance: Analyze refrigerator temperature performance to ensure sample integrity (2-8°C range) and determine if capital expenditure (Capex) is required for upgrades. Enable predictable execution supporting business growth. Cost Rationalization: Restructure logistics incentives from task-based to kilometer-based models. Product Growth: Analyze Product Detail Page (PDP) conversion rates and research feasibility for a new Blood Donation feature.

Major Learning Outcomes : Data Analytics Tools: Gained proficiency in Mixpanel and Microsoft Clarity for user behavior tracking (heatmaps, conversion funnels).
Root Cause Analysis: Learned to distinguish between equipment failure vs. operational behavior (e.g., Fridge temperature

Details of Papers/patents : nil

Brief Description of working environment, expectations from the company : Working environment was good, everyone was friendly and helpful in every aspect. The main expectation from the company is to complete any given task by deadline and if need of extension of the deadline one has to inform them prior. Basically, they want one to be responsible for the task taken.

Academic courses relevant to the project : Supply Chain Management, POM.

PS-II Station : Perfect Pack, Mumbai

Faculty

Name: Benu Madhab Gedam .

Student

Name: DESAI ISHAAN ANUJ(2021A1PS2095P)

Student Write-up

PS-II Project Title: Custom Design and Inventory Management of Premium Boxes

Short Summary of work done during PS-II : During my Practice School-II internship at Perfect Pack, Mumbai, I designed custom festive themed boxes for Rakshabandhan, Ganpati, Independence Day, Janmashtami, Navratri, Dussehra and Diwali using Figma, and efficiently managed inventory through MS Excel. My work enabled timely production and delivery of over 5000 boxes per client for major sweet shop clients, namely Ramas, Nuts and Spices, MM Mithaiwala, Eastern by Sangeeta, Sweet India, supporting sustained process improvement, enhanced client satisfaction, and smooth operations during seasonal demand.

Tool used (Development tools - H/w, S/w) : Figma, MS Excel

Objectives of the project : Manage start to end journey of product from ideation to production to distribution

Major Learning Outcomes : Learnt to manage high intensity deadlines and learnt supply chain management

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Work was good, highly intense since deadlines were every week. However, highly seasonal as only during festive season

Academic courses relevant to the project : Supply chain management

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PS-II Station : Pfizer Healthcare India Pvt.Ltd, Chennai

Faculty

Name: Vijayalakshmi Anand .

Student

Name: PRIANSHU BANERJEE(2022A3PS0741G)

Student Write-up

PS-II Project Title: Code optimization of indication recommender system

Short Summary of work done during PS-II : My first task was to understand the IRS system, then to remove the hardcoded bits from it into an yaml file, after this add some features to make it better for oncological cases and finally to build an ai agentic system to attach to irs system

Tool used (Development tools - H/w, S/w) : Python libraries, LLM, Lang chain, Yaml

Objectives of the project : Refactor the system, build an ai agentic system and add some extra features in irs system to make it more suitable for oncological cases

Major Learning Outcomes : Understood about how major systems are refactored and learned about LLM and Ai agentic systems

Details of Papers/patents : Being worked on

Brief Description of working environment, expectations from the company : Very friendly and positive environment , all the company members are supportive , expectation are accurate and overall a very good experience

Academic courses relevant to the project : I wanted to Pursue IT, so it was very relevant for me

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Name: AAYUSH VIJ(2022AAPS0566G)

Student Write-up

PS-II Project Title: Leveraging digital hill tech technologies and generative AI in streamlining patient recruitment

Short Summary of work done during PS-II : Did literature review and tested existing models. Also did a side project on using skg to predict drug adverse event links

Tool used (Development tools - H/w, S/w) : Python medhley vs code etc

Objectives of the project : Streamline patient recruitment

Major Learning Outcomes : Literature review

Details of Papers/patents : Potential publications for both projects

Brief Description of working environment, expectations from the company : Nice and helping… relaxed system

Academic courses relevant to the project : Gen ai

PS-II Station : PIEDS - Pilani, Pilani

Faculty

Name: Anjani Srikanth Koka .

Student

Name: OM SONKUSARE .(2022A2PS1703H)

Student Write-up

PS-II Project Title: Mookerji Innovation Fund

Short Summary of work done during PS-II : Sourced and evaluated 50+ Startups, Investment Memo and Diligence and Organised Investment Committee Meetings. Sucessfuly conducted Phase 1 of cohort completion.

Tool used (Development tools - H/w, S/w) : Airtable, MS Excel, G-Suite

Objectives of the project : Startup Investments

Major Learning Outcomes : Deal Sourcing, Evaluation and Business Diligence

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Great

Academic courses relevant to the project : BAV

Name: SHASHWAT PANDEY .(2022A7PS1299H)

Student Write-up

PS-II Project Title: Digital development and management

Short Summary of work done during PS-II : Took ml sessions ,Helped in website development and design ,organising knowledge sessions for startups every week,day to day daily work of making list of startups

Tool used (Development tools - H/w, S/w) : Excel, slides,doc,meet,vs code,python

Objectives of the project : Management

Major Learning Outcomes : Management and communication skills

Details of Papers/patents : Na

Brief Description of working environment, expectations from the company : Calm and smooth working environment

Academic courses relevant to the project : Management courses

Name: RUCHI NEHRA(2022B2PS1538P)

Student Write-up

PS-II Project Title: Digital Outreach & KRITI-C Website Development for Alumni Engagement

Short Summary of work done during PS-II : During PS-II, I worked with the Alumni Relations division to support KRITI-C digital platform development and outreach clarity. The main goal was to make website navigation simple, clean and aligned with a calm viewing experience for students and alumni visitors. Work included developing KRITI-C pages, designing section flow, adding navigation buttons, ensuring mobile compatibility, and maintaining uniform spacing across all screens. The design remained minimal without overwhelming elements, ensuring the innovation platform is easy to understand for newcomers. Weekly discussions helped refine the color selection, page hierarchy, and scrolling comfort. Outreach tasks supported smooth communication, link checks, and clarity of access to information. Overall, this internship strengthened my confidence in web layout decisions, digital communication, and platform readiness for alumni-facing visibility.

Tool used (Development tools - H/w, S/w) : Canva, Google Drive, PowerPoint

Objectives of the project : 1).To develop a clear and minimal KRITI-C website for Alumni engagement visibility. 2). To support smooth digital outreach between Alumni office and students. 3). To ensure simple navigation and clean layout for first-time visitors. 4). To improve accessibility of information related to innovation initiatives.

Major Learning Outcomes : 1.Web layout planning and execution

2.Cross-device responsive viewing
3.Digital outreach clarity
4.Minimal web presentation approach

Details of Papers/patents : No research papers or patents were produced during PS–II. However, the following evaluation components were conducted as part of the academic assessment:
1.Two Quizzes
2.Group Discussion (GD) Evaluation
3.Presentation of Mid-Sem and End-Sem Work

Brief Description of working environment, expectations from the company : The Alumni Relations environment was structured, supportive and informative. Regular design reviews helped maintain clarity and simplicity in KRITI-C website development. Expectations included timely updates, clear communication, minimal visual structure and organised section flow. Autonomy was given in layout planning, while weekly feedback ensured design direction stayed consistent. The setup encouraged clarity in digital communication, calm decision-making and organised documentation. The work culture supported step-wise learning rather than rushed edits, improving overall planning and presentation discipline.

Academic courses relevant to the project : Digital Design Basics
Communication Skills
Web Layout Introduction

Name: RAJKUMAR(2022B4PS1526P)

Student Write-up

PS-II Project Title: Strengthening Scholarship Systems: Data Management, Donor Relations, and Impact Documentation through Testimonial Reporting

Short Summary of work done during PS-II : During my PS-II internship, I worked primarily in the Scholarship and Alumni Relations ecosystem, focusing on database management, donor communication, and testimonial report creation. My first responsibility involved updating, verifying, and organizing scholarship-related data to ensure accuracy and transparency. This included maintaining structured records of students, scholarship types, eligibility criteria, and fund disbursement details. A major part of my work involved preparing impact-driven testimonial reports, where I interacted with students to document their academic journeys, personal stories, and how the scholarship benefitted them. These testimonials were later used for donor engagement, annual reports, and communication material. I also assisted in drafting email communication for donor updates and compiling concise summaries about fund usage and student outcomes. Additionally, I contributed to the internal workflow by supporting the documentation and formatting of scholarship files, coordinating with departments whenever additional information was required, and ensuring all entries were standardized. Through these activities, I gained a practical understanding of communication processes, data structuring, and the administrative functioning of financial aid systems in a university environment.

Tool used (Development tools - H/w, S/w) : Software: Excel, Google Sheets, Canva, MS Word, Notion Hardware: Standard office computer system, printer/scanner for documentation Communication Tools: Email, Google Workspace, BITS Alumni Relations portal Other: Templates and reporting formats used i

Objectives of the project : To organize and maintain a robust database of scholarship beneficiaries and donors for improved transparency, To support donor engagement by preparing communication materials, impact summaries, and testimonial reports, To streamline documentation workflows related to scholarships, fund allocations, and student achievements, To improve the clarity and accessibility of scholarship information for internal and external stakeholders, To understand end-to-end functioning of a scholarship office, including data handling, reporting, and donor communication.

Major Learning Outcomes : Gained hands-on experience in donor engagement, communication writing, and impact documentation.
Learned to manage, clean, and update institutional scholarship databases effectively.
Understood the workflow of scholarship processing, verification, and r

Details of Papers/patents : No papers or patents were generated as part of this internship.

Brief Description of working environment, expectations from the company : The working environment at the Scholarship and Alumni Relations Office was structured, professional, and highly supportive. I worked closely with the team responsible for coordinating scholarships, communicating with donors, and preparing institutional reports. The office encouraged independent work, but guidance was always available whenever required. The environment promoted clarity, accuracy, and accountability, especially while handling sensitive student data and donor-related documents.

I was given the opportunity to interact with different departments, students, and administrative staff, which helped me understand the collaborative nature of university operations. Regular discussions with the team enhanced my understanding of donor expectations, scholarship processes, and the importance of transparent communication.

From the company, I expected to gain exposure to real-time data handling, professional communication, and documentation standards—expectations that were fully met. Additionally, I hoped to learn how large institutions maintain donor relationships and communicate the impact of their scholarship programs. The internship offered insights into all these aspects while also helping me improve my writing, organizational, and interpersonal skills.

Academic courses relevant to the project : Principles of Management, Marketing Research etc.

Name: BHAWANA TANWAR(2022D2PS1545P)

Student Write-up

PS-II Project Title: Strengthening Alumni Engagement and Outreach for PIEDS

Short Summary of work done during PS-II : During my PS-II at PIEDS, BITS Pilani, I worked as an Alumni Relations Intern, focusing on strengthening the institute's alumni network. My role involved managing outreach to alumni across various sectors, creating and updating alumni

databases, and coordinating engagement initiatives to support innovation and entrepreneurship on campus. I participated in planning and executing alumni mentorship sessions, identifying potential mentors and collaborators, and documenting alumni journeys for use in publications and social platforms. Additionally, I supported the team in preparing newsletters, drafting communication for alumni, and contributing to the content used for social media to highlight ongoing achievements. My work helped create meaningful connections and expand the scope of alumni involvement at PIEDS, both as mentors and potential partners for student-led entrepreneurial initiatives.

Tool used (Development tools - H/w, S/w) : Google Workspace (Sheets, Docs, Forms) Airtable / Excel (database management) Canva (content design) LinkedIn (alumni outreach)

Objectives of the project : To enhance alumni network engagement for supporting entrepreneurship and innovation. To streamline outreach efforts and improve database management for active alum participation. To facilitate collaboration between alumni and student teams at PIEDS for mentorship, funding, and networking.

Major Learning Outcomes : Improved professional communication and networking skills.
Hands-on experience in managing alumni relations and outreach strategies.
Better understanding of organizational structure and external stakeholder coordination.
Practical exposure to event pla

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at PIEDS was professional yet collaborative, with a focus on creativity and initiative. As part of the team, I was encouraged to take ownership of my tasks while receiving guidance from mentors and team leads. The environment was startup-oriented, emphasizing the importance of communication, flexibility, and adaptability. Expectations centered around managing tasks responsibly, engaging effectively with alumni, and contributing to the planning and execution of initiatives that align with PIEDS' goals. Regular meetings and discussions helped streamline efforts and report progress.

Academic courses relevant to the project : Principles of Management

Organizational Behavior
Communication Skills
Public Relations
Marketing Management
Business Communication

Name: DEVAASHISH BHOMIA(2022D2PS1556P)

Student Write-up

PS-II Project Title: Experiential Learning in Startup Evaluation and Event Management at PIEDS, BITS Pilani

Short Summary of work done during PS-II : During PS-II at PIEDS, BITS Pilani, the work focused on startup evaluation, event support, and program coordination for entrepreneurship initiatives. In startup evaluation, responsibilities included reviewing pitch decks and business plans, using formal scorecards, and participating in discussions on clarity of business models, differentiation, and team capabilities. Parallelly, continuous support was provided to the MSME Hackathon through meeting scheduling, logistics coordination, preparation of agendas, documenting minutes, and managing communication with students and external stakeholders. A major component of the internship was contributing to the “Cracking the YC Code – Journey to W26 YC Cohort” program. This involved coordinating online speaker sessions with YC founders such as Srinivas Sarkar (Coupl, YC S22) and Aryan Agarwal (Yenmo, YC W24), managing registrations (around 60 participants), preparing promotional posters, running social media and email announcements, and compiling documentation, session summaries, and metrics. Work also included stakeholder management with PIEDS leadership, faculty, and speakers; maintaining participant databases; and archiving resources for future cohorts. Across these activities, the internship blended analytical work, operations, and communication, leading to a stronger understanding of startup ecosystems and event-driven program management.

Tool used (Development tools - H/w, S/w) : Google Workspace (Docs, Sheets, Slides) for report preparation, tracking, and presentations. Email and calendaring tools (e.g., Gmail, Google Calendar/Outlook) for stakeholder communication and scheduling.WhatsApp and social media platforms for reminder

Objectives of the project : To gain experiential exposure to startup incubation and event management at PIEDS

Major Learning Outcomes : Developed the ability to evaluate startup proposals using structured scorecards and discussions on business models, product–market fit, and team quality.
Strengthened event management skills by supporting MSME Hackathon meetings, logistics, communicatio

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at PIEDS was collaborative, open, and mentorship-driven, with faculty, staff, and students working together on incubation, outreach, and events

Academic courses relevant to the project : Entrepreneurship / New Venture Creation (if taken). Business Communication / Professional Communication.

PS-II Station : Piramal Group - BIU, Bengaluru

Faculty

Name: Ankur Pachauri

Student

Name: ANIRUDH(2021B4A82579G)

Student Write-up

PS-II Project Title: LLM Evaluation

Short Summary of work done during PS-II : Project Title: LLM Evaluation Framework and Sales Knowledge Management During my Practice School–II internship at Piramal Finance (BIU), I worked on a project titled “LLM Evaluation Framework and Sales Knowledge Management” , which focused on improving the reliability, accuracy, and usability of an internal AI chatbot used by sales teams. The project addressed two critical organisational needs: ensuring that AI-generated responses are trustworthy in a financial domain, and creating a structured system for managing sales-related knowledge. A major part of my work involved Sales Knowledge Management, where I helped analyse how sales information such as product details, eligibility rules, documentation requirements, and process guidelines were scattered across multiple sources like emails, PDFs, WhatsApp messages, and informal notes. This fragmented structure often caused confusion, delays, and inconsistent information being shared with customers. My contribution involved organising and simplifying this information into structured, easy-to-understand formats, ensuring clarity and consistency. The focus was on making complex product and policy information accessible even to new joiners or non-product background sales staff. The second major component of my project was the evaluation of AI chatbot responses in a production environment. I worked with a structured three-layer evaluation framework comprising Human Hindsighting, LLM-as-a-Judge, and Arize Phoenix (integration in progress). I performed manual review of chatbot conversations to evaluate correctness, completeness, tone, safety, MCP Server routing, correct usecase selection, and NSFW guardrail behavior. These human-reviewed results were treated as ground truth for further automated evaluation. I also contributed to building golden datasets for MCP Server routing accuracy, usecase selection, and NSFW guardrails. These datasets were prepared using logs extracted from Snowflake and PostgreSQL, manually labelled, and structured for future upload into Arize Phoenix. Additionally, I assisted in defining evaluation rubrics and judge prompts for LLM-as-a-Judge to enable scalable automated evaluation. The future prospects of this project are significant. Once fully integrated, Arize Phoenix will enable continuous monitoring, drift detection, clustering of recurring failures, and version-wise performance comparison of the chatbot. The sales knowledge management framework can be further expanded into a real-time decision-support system, reducing dependency on managers

and improving onboarding efficiency. Overall, this project strengthened the organisation's AI reliability while improving sales productivity and customer experience, and gave me strong exposure to real-world AI evaluation and operational workflows in a financial services environment.

Tool used (Development tools - H/w, S/w) : Snowflake, PostGres

Objectives of the project : To know the evaluation of LLM

Major Learning Outcomes : AI & LLM

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The company environment is very good and very suppprting.

Academic courses relevant to the project : LLM Evaluation

Name: YASH KHANNA(2021B4A82948G)

Student Write-up

PS-II Project Title: Digital Acquisition Scorecard Model Development

Short Summary of work done during PS-II : I develop a new credit Risk assesment model for digital loans, whose performance was better than the existing models

Tool used (Development tools - H/w, S/w) : Python, SQL

Objectives of the project : Create a new model to reduce early risk in digital loan products

Major Learning Outcomes : Credit Risk Model development

Details of Papers/patents : Na

Brief Description of working environment, expectations from the company : Comfortable and helpful environment

Academic courses relevant to the project : Applied Statistical Methods
Statistical inference
Machine Learning

Name: SATYAM SHUKLA(2022A3PS1158G)

Student Write-up

PS-II Project Title: Incetntive Summarisation and Planner

Short Summary of work done during PS-II : During my PS-II, I developed an AI-powered Incentive Summarisation and Planner tool aimed at reducing incentive-related queries and improving clarity for employees. The system ingests employee performance data, applies organisation-specific SQL logic, and produces structured, human-readable summaries explaining incentive outcomes.

Tool used (Development tools - H/w, S/w) : Python, LangChain, Pandas, SQL, GitHub, VS Code, Jupyter, Azure/Local compute, JSON/Excel processing, APIs

Objectives of the project : To reduce incentive related queries that come up

Major Learning Outcomes : Understanding of incentive computation logic and business rules. Hands-on experience building agentic AI workflows using LangChain and small language models (SLMs).

Exposure to SQL optimisation, large-scale data handling, and contextual retrieval.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment was collaborative, fast-paced, and highly technical. The organisation encouraged innovation, independent problem-solving, and ownership of complex tasks. I interacted with business teams, data engineers, and analytics teams to understand incentive policies and translate them into scalable AI workflows.

Academic courses relevant to the project : Operating Systems, OOPs, Computer Programming

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Name: VIPIN KUMAR(2022A3PS1208P)

Student Write-up

PS-II Project Title: BIU-Assistant

Short Summary of work done during PS-II : During my PS-II, I worked on a range of technical and analytical tasks that strengthened both my engineering and software development skills. My primary contribution was in designing, developing, and improving full-stack applications using technologies such as React, Node.js/Express, PostgreSQL, Java Spring Boot, and MongoDB. I implemented key features including user authentication, task and data management workflows, file handling, admin-level functionalities, and UI/UX enhancements. I also gained significant hands-on experience working with cloud-based AI systems, including RAG-based assistants, vector databases, and prompt workflows. This involved integrating LLMs into real applications, optimizing query accuracy, and performing troubleshooting on components such as API gateways, vector stores, and Postgres connections. In addition to development work, I collaborated on debugging and optimizing backend services, improving reliability, and resolving issues related to database connectivity, query structure, and system performance. I also worked

extensively with tools such as Git, VS Code, Docker, and Langfuse for monitoring and deployment workflows. The PS-II experience helped me develop strong practical skills in software engineering, problem-solving, and system design. It also improved my ability to work independently, understand real-world requirements, write clean code, and manage end-to-end development tasks. Overall, the internship gave me substantial exposure to industry practices and significantly enhanced my technical confidence and professional readiness.

Tool used (Development tools - H/w, S/w) : VS Code, PGAdmin, Postman, Langfuse, AWS services

Objectives of the project : Provide an AI powered assistant for entire BIU team covering the daily need of different teams regarding data discoverability, data observability, SQL generation etc.

Major Learning Outcomes : learned about RAG pipelines and LLM observability platforms like Langfuse/Arize.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment during PS-II was professional, collaborative, and conducive to learning. The company maintained a well-structured workflow, where teams communicated clearly and supported one another through regular discussions, reviews, and mentorship. I had access to modern development tools, documentation, and resources that enabled smooth progress on assigned tasks. The work culture encouraged initiative, problem-solving, and continuous improvement, allowing interns to explore solutions independently while receiving guidance whenever needed.

The environment also emphasized responsibility and ownership. Interns were expected to meet deadlines, follow coding and documentation standards, and engage proactively with team members. Regular feedback sessions helped clarify expectations and align our work with project goals. The overall atmosphere was balanced—professional yet friendly—creating a space where learning and productivity could co-exist comfortably.

From the company, I expected structured exposure to real-world projects, opportunities to apply classroom concepts, and hands-on experience with industry tools and technologies. I also

anticipated mentorship from experienced engineers, constructive feedback, and a chance to understand how professional teams collaborate to build and maintain systems. These expectations were well met, and the internship provided meaningful insights into technical, organizational, and communication aspects of the workplace.

Academic courses relevant to the project : Courses in Data Science minor catalogue

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Name: SAMAR JALIL SIDDIQUI(2022A7PS1135G)

Student Write-up

PS-II Project Title: Shodh: Decision Tree Framework for Analytics

Short Summary of work done during PS-II : his internship provided the opportunity to work on Shodh, Piramal Finance's decision tree analytics platform, with a focus on making the tool more intuitive, reliable, and accessible for business users. The work spanned multiple dimensions, from redesigning the UI for clearer interpretability to improving backend data quality, automating optimal feature selection, simplifying the user flow, and developing a Generative AI–based summariser to deliver quick, actionable insights. These developments collectively enhance Shodh's effectiveness as a decision-support tool and significantly reduce the cognitive load on Policy and Business teams. On the learning front, the internship exposed me to Piramal Finance's customer lifecycle, business processes, and real-world analytical workflows. I strengthened my technical skills across Python, decision tree modelling, prompt engineering for GenAI systems, and modern UI/UX principles. Equally important were the lessons in stakeholder engagement, iterative design, and cross-functional collaboration, core components of building impactful analytical products in a business environment. Some initial ideas, such as natural-language–based editing of decision trees, remain exploratory but opened new avenues for making analytics even more intuitive. Working with LLMs also highlighted their constraints, including contextual limitations and susceptibility to hallucinations, reinforcing the importance of careful validation and controlled integration. Overall, the internship has been a deeply enriching experience that connected academic learning with practical problem-solving. It strengthened both my technical

foundation and my ability to design user-centric analytical solutions, while contributing meaningful improvements to Shodh's capabilities within Piramal Finance

Tool used (Development tools - H/w, S/w) : VS Code, Python, SQL, Snowflake, PowerBI, JavaScript, Excel, Jira, Confluence, MS Teams, internal company tools.

Objectives of the project : Creating a no-code decision tree analysis tools for business teams to perform DIY risk, collections and growth analysis.

Major Learning Outcomes : Domain knowledge of AI needs and applications at an NBFC
Ideation & Validation of Developments
Understanding of Risk / Growth Analysis
Identifying and solving for pain points in user experience
Defining problem statements
End-to-end development of feature

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment is dynamic, fast-paced, and startup-like, fostering a culture of ownership, agility, and continuous learning. Teams collaborate closely across functions, encouraging open communication and quick decision-making. There is a strong emphasis on problem-solving, experimentation, and delivering impact at scale, while still maintaining structure and discipline. Expectations from the company include gaining hands-on exposure to real business challenges, mentorship from experienced professionals, and the freedom to take initiative. In return, the organization values accountability, adaptability, and a proactive mindset, enabling individuals to grow both technically and professionally.

Academic courses relevant to the project : Data Science courses, Machine Learning, AI, Software Development

Name: VASU ARORA(2022A8PS1112G)

Student Write-up

PS-II Project Title: AALOK-Bank statement parser

Short Summary of work done during PS-II : During my PS-II internship, I worked on building and improving an automated bank statement processing system used in loan decision workflows. The core objective was to extract accurate, structured transaction data from heterogeneous bank statement PDFs at scale. I contributed to the development of a PDF parsing pipeline using Python and PyMuPDF, supporting multiple bank formats and sub-templates. This involved designing rule-based and layout-driven extraction logic, handling noisy OCR outputs, and improving field-level accuracy, particularly for customer details and transaction metadata. I also worked on identifying format variations across large document sets and implemented clustering-based analysis to detect recurring layout patterns. To evaluate system performance, I built mass testing utilities to validate extraction results across thousands of documents and track accuracy metrics. Based on error analysis, I iteratively refined parsing rules to handle population drift and format changes in real-world data, leading to a measurable improvement in overall extraction accuracy.

Tool used (Development tools - H/w, S/w) : Python, SQL, MongoDB, Excel

Objectives of the project : To analyse bank statements from various banks, identification of key details such as name, account number, ifsc code etc and consistency of the statement that reduces manual effort.

Major Learning Outcomes : Got hands on data science and ai live project. Understanding of how to write production ready code and handling of edge cases, debugging and also adding and managing new features as well. Got better with analysis.

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment is very calm but on the other hand it is demanding as well, the projects are great and genuinely adds value for anyone looking for learning with some unique and actually real life

challenging problems. The company is not restricted to a single team alloted and new ideas and cross functionality is appreciated, the company culture is good with a very supportive team.

Academic courses relevant to the project : OOP, DSA, ML, AI, GenAI, OS

PS-II Station : Piramal Pharma Limited, Mumbai

Faculty

Name: Ankur Pachauri

Student

Name: SATYA SHREYAS KUSUMANCHI .(2021B3A70723H)

Student Write-up

PS-II Project Title: Business Analytics

Short Summary of work done during PS-II : Automated various key processes

Tool used (Development tools - H/w, S/w) : Python, Excel

Objectives of the project : Various automations and processes

Major Learning Outcomes : Data Analytics

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Good work environment, supportive team and mentor and manager.
Work is a bit dull and repetitive

Academic courses relevant to the project : Foundations of Data Science

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Name: HARSH SINGH(2022A8PS1263P)

Student Write-up

PS-II Project Title: AI AUTOMATION

Short Summary of work done during PS-II : IT WAS GOOD

Tool used (Development tools - H/w, S/w) : PYTHON,LORA,OLLAMA API

Objectives of the project : LEARN BUSSINES ANALYTICS

Major Learning Outcomes : LEARN LOCAL LLM , HOW TO TRAIN LLM

Details of Papers/patents : NONE

Brief Description of working environment, expectations from the company : IT WAS GOOD

Academic courses relevant to the project : NONE

Name: KUNAL JOHRI(2022AAPS0243P)

Student Write-up

PS-II Project Title: Chatbot and QMS digitization

Short Summary of work done during PS-II : I contributed to the digitization of Quality management by designing systems for recording audit observations, tracking corrective and preventive actions (CAPA), managing deadlines, and generating automated reports. Through this work, I gained deep exposure to business stakeholder management, including requirement prioritization, feasibility assessment, security and compliance considerations, scalability planning, cost evaluation, and vendor/tool comparison. I learned how enterprise decisions are made by balancing technology, compliance, cost, and long-term maintainability. Additionally, I independently built a smart document and audio chatbot, capable of working across multiple document formats and audio inputs. This involved designing a complete RAG pipeline using OCR, layout-aware chunking, embeddings, scoring systems, and multiple LLMs. The project required extensive experimentation with different models, embeddings, retrieval strategies, and fallback mechanisms, giving me hands-on experience in applied AI R&D and production-grade system design.

Tool used (Development tools - H/w, S/w) : Software / Frameworks: Python, FastAPI, Streamlit OCR & AI: DocTR, Tesseract, EasyOCR, Whisper Automation & Workflow: UiPath, Power Automate Databases / Storage: SharePoint, SQL Server Analytics & Dashboards: Qlik, Vizlib ML / NLP: FAISS, BM25, Jina

Objectives of the project : 1.To find a holistic QMS digitization solution 2. To make a chatbot which can retrieve answers from documents and audiofile and genenrate custom summaries

Major Learning Outcomes : Got to know the business side of the thing sespecially the one related to quality management and learnt how to build scalable projects which can be deployed for large number of users

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The working environment is really great and the company does expect you to know some things before hand but they will help you throughout your internship happily.

Academic courses relevant to the project : Database Systems
Machine Learning
Artificial Intelligence
IT

PS-II Station : Pocket FM Private Limited - Content Performance, Bengaluru

Faculty

Name: Jyotsana Grover

Student

Name: ADITYA AGRAWAL .(2022A4PS0716H)

Student Write-up

PS-II Project Title: Product Analyst

Short Summary of work done during PS-II : Analyzed data, tables and backend , collaborated with ads team and experiments team .

Tool used (Development tools - H/w, S/w) : Databricks , Quicksight , Argus

Objectives of the project : Analysis of data

Major Learning Outcomes : Proficiency in SQL and management

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Good working environment, helpful mentors

Academic courses relevant to the project : Product and Brand Management , DBMS

Name: PRAKHAR MITTAL(2022A4PS0965G)

Student Write-up

PS-II Project Title: Content Performance

Short Summary of work done during PS-II : During my Practice School II at PocketFM, I worked as a Business Analytics Intern in the Content Analytics Team, focusing on leveraging data to drive strategic product decisions and optimize user engagement. My primary responsibility involved utilizing SQL and Databricks to mine and analyze large-scale datasets, extracting actionable insights regarding user behavior, content consumption, and platform monetization. I designed and maintained interactive dashboards using Amazon QuickSight, providing stakeholders with real-time visibility into key performance indicators (KPIs) such as Daily Active Users (DAU), retention rates, and average listen time. I regularly developed and optimized complex queries to dissect trends across various audio series, helping to identify high-performing content and potential churn risks. Furthermore, I collaborated with cross-functional teams to support feature rollouts by quantifying their impact on user metrics. This experience significantly enhanced my technical proficiency in big data processing and visualization while refining my ability to translate raw data into narrative-driven business solutions.

Tool used (Development tools - H/w, S/w) : SQL, Python, Google Sheets, Slack

Objectives of the project : To fetch and analyse data like Retention, ARPL etc of the content and give valuable insights, action points and suggestions

Major Learning Outcomes : SQL, Dashboarding, Excel, Analytics, Analysis, Quicksight, Databricks

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment was great and healthy with a great office, coffee machines on every floor and with healthy people to work around, although the expectations felt too much from the company that even after working a lot and completing the required tasks they had unrealistic benchmarks of work.

Academic courses relevant to the project : None

PS-II Station : Pocket FM Private Limited - Market Expansion, Bengaluru

Faculty

Name: Reddy Rani Vangimalla .

Student

Name: SAMEER KUMAR(2022A1PS1482G)

Student Write-up

PS-II Project Title: Growth DE UK product analyst

Short Summary of work done during PS-II : It was good

Tool used (Development tools - H/w, S/w) : SQL Python

Objectives of the project : To analyse the top and bottom funnel metrics

Major Learning Outcomes : SQL Python Sheets Excel

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : Friendly

Academic courses relevant to the project : Nil

Name: KARAN VIR SINGH RANA(2022A1PS1512G)

Student Write-up

PS-II Project Title: Retention

Short Summary of work done during PS-II : good

Tool used (Development tools - H/w, S/w) : sql, quicksight

Objectives of the project : sql, increase retention and revenue

Major Learning Outcomes : sql, databricks, quicksight

Details of Papers/patents : none

Brief Description of working environment, expectations from the company : good

Academic courses relevant to the project : none

PS-II Station : Pocket FM Private Limited - Monetization Strategies, Bengaluru

Faculty

Name: Reddy Rani Vangimalla .

Student

Name: ANIRUDH SINGH RATHOR(2022A1PS1099P)

Student Write-up

PS-II Project Title: Product Analytics

Short Summary of work done during PS-II : learnt basics of analytics, how to do sanity of experiments rolled out, how to make meaningfull data stories and make useful dashboards from raw data

Tool used (Development tools - H/w, S/w) : SQL; Quicksight; Eppo; Databricks

Objectives of the project : Understanding the product analytics and workflow along with managing and testing of company's data

Major Learning Outcomes : product and business analytics real life experience

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Good work culture; Expected ppo but the company didn't offer to any student

Academic courses relevant to the project : Not mine(I am from chemical) but DBMS can be helpful.

Name: KRISHNA GARG(2022A1PS1729P)

Student Write-up

PS-II Project Title: Monetisation strategies and Experimentation

Short Summary of work done during PS-II : During my internship, I worked on solving real business problems using data-driven approaches. My responsibilities included understanding problem statements from stakeholders, extracting and analyzing data, and identifying key metrics to evaluate performance. I worked with large and imperfect datasets, which helped me develop a practical understanding of data quality, edge cases, and real-world constraints. I collaborated closely with cross-functional teams to align analytical work with business objectives and presented insights in a clear, structured manner to support decision-making. Through this experience, I gained exposure to end-to-end project ownership—from requirement gathering and analysis to final delivery and impact assessment. Overall, the internship strengthened my analytical thinking, problem-solving, and communication skills, while also helping me understand how data, technology, and business decisions come together in a fast-paced, production environment.

Tool used (Development tools - H/w, S/w) : Data Bricks , Quicksight , SQL

Objectives of the project : To increase the revenue and retention of users on our platform

Major Learning Outcomes : Learned how to translate ambiguous business problems into well-defined, data-driven objectives

Gained hands-on experience working with real, large-scale datasets and handling data inconsistencies
Developed a structured approach to analysis.

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The work environment during my internship was extremely supportive and welcoming. The culture was relaxed yet focused, which made it easy to ask questions, share ideas, and learn without hesitation. Everyone in the team was approachable and always willing to help, whether it was clarifying concepts, reviewing work, or providing guidance. This collaborative atmosphere encouraged open communication and made the learning process both smooth and enjoyable.

Academic courses relevant to the project : -

PS-II Station : Pocket FM Private Limited - Retention Analysis, Bengaluru

Faculty

Name: Jyotsana Grover

Student

Name: ARYAN SRIVASTAVA(2022A1PS1279G)

Student Write-up

PS-II Project Title: Product Analyst

Short Summary of work done during PS-II : As a Product Analyst Intern on the US Growth Team, I focused on optimizing performance for a market responsible for 80% of total revenue. I spearheaded the implementation of Custom Product Pages (CPP) in campaigns, which successfully reduced iOS data leakage from 70% to 30%. Additionally, I conducted Root Cause Analysis on critical metrics like activation, payback, and retention using SQL (Databricks) and Amazon QuickSight, while leveraging Python to automate monitoring alerts and manage data workflows.

Tool used (Development tools - H/w, S/w) : SQL, Amazon Quicksight, Python

Objectives of the project : To write complex SQL queries to fetch data and analyse it, then visualise it using Amazon Quicksight.

Major Learning Outcomes : Root Cause Analysis, Media Industry's KPI, SQL

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Good and supportive team members, although most of us stayed late working sometimes.

Academic courses relevant to the project : None

Name: PRATIK GHOSH(2022A4PS0148G)

Student Write-up

PS-II Project Title: Retention

Short Summary of work done during PS-II : I got to learm SQL and user behaviour of behaviour.

Tool used (Development tools - H/w, S/w) : SQL

Objectives of the project : To increase user retention

Major Learning Outcomes : Sql, Quicksight

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : It was friendly with good learning

Academic courses relevant to the project : Na

Name: ADITYA AGARWAL(2022A4PS1207G)

Student Write-up

PS-II Project Title: Retention Analysis

Short Summary of work done during PS-II : During my PS-II, I worked as part of the analytics and growth team, contributing to end-to-end data analysis and dashboard development to support remarketing and subscription growth initiatives. My primary responsibility was to build and refine SQL pipelines on Databricks, create Delta tables, and ensure seamless data flow for daily reporting. I worked extensively on generating performance dashboards that tracked user cohorts, audience volumes, revenue, DAU, installs, and incremental impact across multiple marketing campaigns. As part of the project, I integrated various data sources, performed complex joins, implemented rolling-window calculations, and optimized queries for improved efficiency. I also contributed to redesigning the SW+ and remarketing dashboards by adding new metrics such as installs, subscription payers, and D30 rolling revenue, ensuring accurate and real-time visibility for business stakeholders. Additionally, I analyzed user inactivity behavior, churn segments, and the performance of A/B test groups (test vs. control), enabling the team to measure the incremental impact of campaigns. This project strengthened my understanding of user lifecycle

analytics, marketing attribution, cohort behavior, and data-driven decision-making. It also helped me develop strong technical proficiency in SQL, Databricks, and data visualization tools, while learning to troubleshoot large-scale datasets and collaborate effectively in a product-driven environment.

Tool used (Development tools - H/w, S/w) : Databricks SQL (Spark SQL) AWS S3 Delta Lake Quicksight (Dashboarding) Python (basic data checks) Git / Version Control Excel / Google Sheets Internal Analytics Platforms (PocketFM dashboards)

Objectives of the project : The objective of this internship project was to gain hands-on exposure to real-world business problem-solving while supporting key analytical tasks within the team. The project aimed to enhance my technical and data-analysis skills by working directly with live datasets, tools, and business processes. Additionally, it focused on enabling me to contribute meaningful insights, streamline workflows, and assist in informed decision-making through structured analysis and reporting.

Major Learning Outcomes : During this internship, I developed strong analytical and technical capabilities by working extensively with real-world datasets and business problems. I gained hands-on experience in SQL, Databricks, Delta tables, and dashboarding, which enhanced my abil

Details of Papers/patents : -NA

Brief Description of working environment, expectations from the company : The working environment during my PS-II was highly collaborative, structured, and conducive to learning. I was integrated into the analytics and growth team, where data-driven decision-making formed the core of daily operations. The environment balanced independence with guidance—while I was trusted to handle key analytical tasks, senior team members were always available for support and clarification. Regular stand-ups, review discussions, and feedback sessions helped me align my work with the team’s goals. The culture encouraged open communication, problem-solving, and a strong focus on accuracy, given the critical role of data in remarketing and performance reporting.

I actively worked with large-scale datasets on cloud platforms such as Databricks and S3, which exposed me to an industry-standard engineering setup. The fast-paced nature of campaign

tracking and dashboard refresh cycles taught me to work efficiently and adapt quickly. I also appreciated the emphasis on documentation, query optimization, and stakeholder-oriented reporting, which improved the quality and clarity of my output.
In terms of expectations, I did not have any specific expectations from the company prior to joining. My goal was primarily to learn, gain hands-on experience, and contribute meaningfully to ongoing analytical projects. The internship provided a great opportunity to explore real-world applications of data engineering and analytics while working in an environment that values ownership, discipline, and continuous improvement.

Academic courses relevant to the project : -NA

PS-II Station : Porter - Business - Growth (Retention & GTM Strategy), Bengaluru

Faculty

Name: Monali Tushar Mavani .

Student

Name: ONKAR M DESHMUKH(2022A4PS1563P)

Student Write-up

PS-II Project Title: Business Growth Intern

Short Summary of work done during PS-II : I worked on several projects working with different teams as and when required. The majority of My work revolved around understanding and building the user cohorts based on surveys, behavioral patterns, etc and performing RCAs.

Tool used (Development tools - H/w, S/w) : Moengage, Mixpanel, Excel, Snowflake, Streamlit

Objectives of the project : Growth for specific Product Categories

Major Learning Outcomes : Understanding of different verticals of a Business, Business Sense, Product Metrics, GTMs, RCA, etc

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The working environment is truly collaborative. As an intern I received positive support from everyone that I worked with. The initial wok for user persona was quite exhausting because it involved numerous user callings. It seemed repetitive after a while so I asked for different which involved more of number crunching, opportunity sizing, RCAs, etc. This part heavily relied on problem solving skills. Depending on what work is assigned company expects the related skills that aint mentioned in the JD. If the work is based on user understanding - the work is basically calling the customers (30 -50) for one project which demands probing skills and the ability to get the survey information without getting hung up on.
If the work is GTM related, excel related skills are more important as it will involve deep understanding of numbers paired with metrics and tracking results.

Academic courses relevant to the project : none

PS-II Station : Porter - Business Operations, Bengaluru

Faculty

Name: Monali Tushar Mavani .

Student

Name: RISHI RAJ SHEKHAWAT(2020A5PS2042P)

Student Write-up

PS-II Project Title: “Optimization of Intra-City Delivery Operations at Porter”

Short Summary of work done during PS-II : During my Practice School-II internship at Porter, Bengaluru, I worked as a Business Operations Intern within the Porter Packers and Movers (PNM) vertical. The primary focus of my role was to understand core business operations, analyse performance metrics, and assist in process improvement initiatives aimed at reducing operational inefficiencies and improving customer experience. My responsibilities included supporting warehouse operations, coordinating vendor interactions, and ensuring adherence to dispatch protocols. I worked closely with the operations team to manage service workflows and monitor key efficiency indicators such as cancellation rates, SLA compliance, and vehicle utilization. A major part of the internship involved conducting a structured analysis of customer order cancellations. This included contacting customers to collect data on cancellation reasons, comparing pricing and service providers, and identifying patterns across multiple cities including Bengaluru, Jaipur, and Indore. The insights gathered were used to recommend pricing adjustments and operational improvements. I also contributed to the creation of internal documentation, training material for supervisors, and dashboards for performance visibility. Additionally, I assisted in compiling and standardizing regional pricing structures across routes and service types. Through this internship, I gained practical exposure to the logistics technology sector, developed strong analytical and communication skills, and deepened my understanding of real-world business problem-solving. Overall, the experience strengthened my operational awareness and contributed meaningfully to Porter’s ongoing process optimization efforts.

Tool used (Development tools - H/w, S/w) : Spreadsheet , canvas , google forms .

Objectives of the project : ● Warehouse Operations: Oversee intercity house-shifting operations at the Local Warehouse hub. Oversee loading/unloading, inventory, and dispatch process adherence. ● Vendor Management: Visit warehouses, meet and onboard intercity vendors, and build a strong vendor network. ● Process Improvement: Identify gaps in operational flows and create scalable and efficient solutions ● Reporting: Track key metrics and prepare regular reports

on operational performance and vendor efficiency. ● Work with Operations and City Heads to build visibility and drive SLA Metrics

Major Learning Outcomes : Adaptibility , Communication , Problem solving , Data analytics

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment at Porter, Bengaluru, was dynamic, fast-paced, and highly collaborative, reflecting the nature of the logistics and on-demand operations industry. The workplace culture encouraged hands-on involvement, proactive ownership, and problem-solving through real-time decision-making. As an intern, I worked closely with the operations, product, and vendor management teams, which allowed me to observe how cross-functional coordination drives efficiency in a large-scale logistics ecosystem.

The environment offered a balance of structured processes and flexibility, where learning and adaptability were essential. Regular interactions with warehouse teams, supervisors, and driver-partners provided practical exposure to ground-level challenges, while discussions with senior managers offered strategic insights into operational planning and optimization.

In terms of expectations, the company emphasized accountability, data-driven thinking, and attention to detail. Interns were expected to contribute meaningfully to ongoing projects rather than perform only observational tasks. Timeliness, clear communication, and willingness to independently research or resolve issues were important professional qualities.

Continuous improvement was a recurring theme, with expectations to identify operational inefficiencies, analyze metrics such as SLA adherence and cancellation trends, and suggest actionable recommendations. The company encouraged curiosity, initiative, and openness to feedback, which supported both personal development and project outcomes.

Overall, Porter provided a supportive learning environment with high professional standards, enabling meaningful exposure to real business challenges while fostering learning and practical skill development.

Academic courses relevant to the project : Elective courses .

PS-II Station : Porter - SDE (Backend), Bengaluru

Faculty

Name: Monali Tushar Mavani .

Student

Name: GYANESH ROY BHOWMIK(2022A7PS0035P)

Student Write-up

PS-II Project Title: NI - Utilities Scrapper; FFRD configurability

Short Summary of work done during PS-II : Mostly I have worked on backend technologies, and was also fortunate to get some DevOps exposure.

Tool used (Development tools - H/w, S/w) : Kubernetes, Docker, ArgoCD, Terraform, GCP, Appsmith

Objectives of the project : To fetch data from the data warehouse and process it to return valuable insights through API hit. The next project aimed at providing APIs to create and update driver allocation rules in the DB.

Major Learning Outcomes : Kotlin, CI/CD, Terraform, ArgoCD, Kubernetes, GCP, Docker, REST API, Snowflake, AppSmith, Domain Driven Design

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The work environment is good, and provides a sense of work life balance. I was given ample time to get used to the work environment and learn the required skills. My manager was good and understood

the fact that freshers need some time to learn the required skills and did not have unrealistic expectations. He would give me the deadline for a work and would not bother me until then. I was allowed to explore different technologies and approaches to solve a problem and learn at my pace; my manager and mentor were supportive enough to guide me through the problems without imposing their ideas on me. All in all, its a good place to begin one's corporate journey, as it provides a good mix of learning different technologies and gives exposure to different processes without the work being too heavy and stressful for a freshie.

Academic courses relevant to the project : DSA, OOP, DBMS, OS

PS-II Station : Porter Marketing Operations, Bengaluru

Faculty

Name: Monali Tushar Mavani .

Student

Name: PRANAY VAJRAPU .(2022A4PS1000H)

Student Write-up

PS-II Project Title: Data-Driven Go-To-Market Strategy and Performance Analytics for On-Demand Logistics

Short Summary of work done during PS-II : During my PS-II at Porter, I worked on analytics-driven initiatives supporting growth and go-to-market execution for an on-demand logistics platform. My work involved analyzing user behavior across acquisition, conversion, and retention funnels to assess the effectiveness of campaigns and discount strategies across multiple cities. In addition to internal performance analysis, I conducted competitor benchmarking to compare

Porter's pricing, service positioning, and promotional strategies with key market players. This analysis helped identify relative strengths, gaps, and potential levers for differentiation across regions and user segments. I performed user persona analysis and geo-wise segmentation to improve targeting and reactivation strategies. Insights from both internal data and competitor analysis were translated into actionable recommendations for optimizing communication channels, promotional intensity, and cost efficiency. The project strengthened my ability to combine data analysis with market context to support real-world business decisions in a fast-paced logistics environment.

Tool used (Development tools - H/w, S/w) : Software: Excel, SQL, MoEngage, Kaleyra, Gupshup Hardware: Standard workstation/laptop/Monitor

Objectives of the project : To analyze user demand, conversion, and engagement patterns across multiple markets To design and evaluate go-to-market (GTM) and discount strategies for growth To benchmark Porter's offerings and performance against key competitors to identify strategic gaps and opportunities To enable data-backed decision-making for acquisition, retention, and revenue optimization

Major Learning Outcomes : Translating business and competitive problems into measurable analytical frameworks
Conducting structured competitor analysis to inform GTM and pricing decisions
Designing and evaluating growth and discount experiments
Understanding marketplace and log

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Porter provided a fast-paced, execution-focused startup environment with a strong emphasis on ownership and data-backed decision-making. Interns were expected to independently analyze problems, structure insights, and supplement internal data with external market and competitor context.
The culture encouraged rapid iteration, proactive communication, and collaboration with cross-functional teams

Academic courses relevant to the project : Essentials of Strategic Management, Marketing Research

PS-II Station : Porter Non Tech - ROI - Jaipur, Jaipur

Faculty

Name: Monali Tushar Mavani .

Student

Name: GURSIMAR SINGH KALRA(2022A2PS1714P)

Student Write-up

PS-II Project Title: Act as E Loader category Manager

Short Summary of work done during PS-II : The internship began with a two-month induction period, which involved extensive fieldwork alongside field officers. This phase included on-ground operations, partner interactions, and routine tasks, which were physically tiring and repetitive but helped build a strong understanding of ground realities. Post induction, I worked closely with the city operations team as part of category management for the E-Loader segment, focusing on improving fulfilment, partner availability, and operational performance during peak demand periods.

Tool used (Development tools - H/w, S/w) : Excel/Google Sheet, SQL, Metabase, CRM

Objectives of the project : Improve the fulfillment of the assigned category.

Major Learning Outcomes : * Developed strong understanding of logistics operations and category management
* Learned to analyze operational data and identify root causes of performance issues
* Gained experience in demand–supply planning and partner activation strategies
* Improve

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment was fast-paced, data-driven, and ownership-oriented. I expected the company to provide real responsibilities, exposure to decision-making, and learning through execution, all of which were met during the internship.

Academic courses relevant to the project : Any management and Data related course.

PS-II Station : Porter Non Tech - ROI - Surat, Surat

Faculty

Name: Monali Tushar Mavani .

Student

Name: RISHIT SAKILAM(2022A4PS1118G)

Student Write-up

PS-II Project Title: Strategic Operations: Partner Lifecycle Management and Market Expansion at Porter

Short Summary of work done during PS-II : During the initial phase (Jul-Sept), my focus was on high-velocity execution and supply activation. I led the "Porter Sales Star" acquisition program, converting 94 leads into active partners through direct mentorship. I also conducted a "Wallet Reactivation" A/B test on 2,000 suspended partners, achieving a 66% uplift in reactivation by optimizing call-and-incentive strategies. Additionally, I performed pricing research for the Compact 3W launch and optimized the Scooter category by reducing the Maximum Dry Run (MDR) radius in high-rejection zones. Transitioning to strategic operations (Sept-Dec), I investigated operational friction through "Voice of Partner" audits, identifying critical issues regarding parking fees in textile markets. I spearheaded a "Garage Lead Generation" drive, securing 250+ high-quality leads and establishing sustainable 3PL franchise partnerships. My role culminated in drafting the Annual Operating Plan (AOP) for 2026 using cohort analysis to forecast supply needs , and conducting a "2W Churn Analysis" to categorize partners into actionable personas.

Tool used (Development tools - H/w, S/w) : Google sheets, Google Forms, Canva, Web Scraping Tools, Snowflake, Metabase, Streamlit, CRM, Moengage, Internal Porter Dashboards.

Objectives of the project : To optimize on-ground operations, To expand supply acquisition channels, To analyze and mitigate partner churn, To formulate the Annual Operating Plan (Forecasting), Category management,

Major Learning Outcomes : 1. Acquired skills in diagnosing and resolving on-ground operational friction.
2.Developed the ability to conduct mixed-method research (Qualitative Interviews & Quantitative Surveys) to identify root causes of churn.
3.Gained hands-on experience in formu

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The work environment at Porter, Surat, is fast-paced and very supportive. My mentors, Mr. Shreyas Birajdar and Mr. Neeraj Punia, guided me through a "bottom-up" learning process. The work was a mix of office analytics and on-ground field visits, such as market audits.

In the beginning, the company expected me to master the basics. I was responsible for execution tasks like making calls and managing partner activation to understand how the business works. Once I proved my skills, the expectations shifted to high-level strategy. I was trusted with major responsibilities like drafting the Annual Operating Plan (AOP) and analyzing partner churn. Overall, Porter expects interns to be proactive, use data to solve problems, and deliver practical solutions rather than just theoretical idea.

Academic courses relevant to the project : Principles of Management, Supply Chain Management

PS-II Station : Praj Industries Ltd - CoE Execution, Pune

Faculty

Name: Sudeep Kumar Pradhan .

Student

Name: ASHISH KUMAR JHA(2022A4PS1232G)

Student Write-up

PS-II Project Title: Analysis of Non-Moving Inventory and Generation of SOPs to prevent its generation in Future.

Short Summary of work done during PS-II : I worked on a comprehensive project to analyse and improve the management of Non-Moving Inventory (NMI). The objective was to understand why NMI accumulates, evaluate the effectiveness of current processes, and propose actionable solutions.

Tool used (Development tools - H/w, S/w) : Microsoft Excel, SAP S/4Hana, Power BI, Microsoft Office Suite

Objectives of the project : Design Processes to prevent the generation of Non Moving Inventory

Major Learning Outcomes : Understanding end-to-end EPC material flow,Root-cause–driven analytical thinking
Importance of data quality and structured reason capture.
Exposure to industry practices & digital interventions.
Improved communication & stakeholder alignment.

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment was calm, steady, and structured, though not particularly fast-paced or exciting in terms of learning opportunities or growth. Work cycles were often slow, with limited activity at times, but the teams were supportive and approachable whenever needed. The company expected me to analyse NMI data, participate in review meetings, and contribute wherever possible by being reliable and proactive. Overall, it was a stable environment, though not very dynamic from a growth perspective.

Academic courses relevant to the project : Manufacturing Management (ME F316), Supply Chain Analytics (BITS F455)

PS-II Station : Praj Industries Ltd - CoE Innovation / R&D, Pune

Faculty

Name: Sudeep Kumar Pradhan .

Student

Name: ANSHUL DAS .(2022A1PS1683H)

Student Write-up

PS-II Project Title: Advanced Bio-refinery models using AI

Short Summary of work done during PS-II : The PS-II project focused on developing advanced AI/ML models for optimizing biorefinery operations at Praj Industries. Initially, core biorefinery processes such as sugar-to-ethanol and sugar-to-PHB production were deconstructed to understand key unit operations and process variables. A low-code platform (Rubiscape) was evaluated for predictive modeling of bioethanol concentration; however, architectural and activation-function constraints limited ANN performance. To overcome these limitations, the workflow transitioned to a Python-based development environment. A deep Artificial Neural Network with an 8-10-1 architecture was implemented using TensorFlow/Keras to predict and optimize bioethanol concentration. The model achieved a validation R^2 greater than 0.90 and identified operating conditions capable of improving ethanol concentration by approximately +1.0 °GL. In parallel, a second study benchmarked multiple ML algorithms for lactic acid recovery using industrial demo plant data. Due to data sparsity, Repeated K-Fold Cross-Validation was employed, and Histogram-Based Gradient Boosting was identified as the most suitable model. The project concluded with strategic recommendations for deploying these models as digital twins for real-time process monitoring and optimization.

Tool used (Development tools - H/w, S/w) : Software: Python, TensorFlow, Keras, Scikit-Learn, Pandas, NumPy, Matplotlib, VS Code, Rubiscape Hardware: Industrial workstation / standard computing systems

Objectives of the project : Develop AI/ML-based predictive models for biorefinery processes Optimize bioethanol concentration using ANN-based digital twins Benchmark machine learning models for lactic acid recovery Evaluate limitations of low-code AI platforms and transition to code-first modeling

Major Learning Outcomes : Application of AI/ML techniques to real industrial bioprocess data

Development and validation of ANN models for non-linear fermentation systems
Critical evaluation of low-code vs code-first AI platforms
Understanding of biorefinery unit operations and

Details of Papers/patents : No patents were filed as part of this project

Brief Description of working environment, expectations from the company : The working environment at Praj Industries was professional, research-oriented, and collaborative, providing strong exposure to industrial biorefinery technologies and applied data science. The organization emphasized problem-solving grounded in real plant data and encouraged independent analysis supported by domain knowledge. Regular technical discussions with mentors facilitated clarity in objectives and alignment with industrial relevance.

Academic courses relevant to the project : None

Name: NAYONIKA SREE VIDHYA SEELAMSETTY(2022A1PS1693H)

Student Write-up

PS-II Project Title: Solar-PTC Driven Direct Steam Generation for ZLD Effluent Drying: A Techno-Economic Assessment

Short Summary of work done during PS-II : The Goal To stop burning fossil fuels for industrial waste drying by using the sun’s heat instead. The Solution I designed a system using 133 curved solar mirrors (Parabolic Troughs) for a factory in India. These mirrors focus sunlight to boil water into steam, which is then used to dry out liquid waste. Key Features Smart Backup: To save money, I didn't use expensive batteries. Instead, the system "tags-in" the factory's existing boiler on cloudy days. The Results: The system produces energy at just ₹3.50 per unit and pays for itself in about 7 years. The Impact: it cuts 716 tons of CO2 every year—the same as taking 150 cars off the road. Bottom Line The project proves that solar heat is a cheap, reliable, and "green" way for factories to run their waste treatment plants.

Tool used (Development tools - H/w, S/w) : MS office, Google Scholar, Scopus, Google, Gen AI

Objectives of the project : Technical Feasibility & Reliability: Design a CSP-PTC system to deliver 30 tonnes/day of saturated steam at 165°C, proving parallel hybridization can meet the thermal load for ZLD operations. Environmental Impact & ESG: Quantify CO_2 emission reductions to demonstrate contribution to corporate ESG targets. Financial Viability: Establish the economic case via Levelized Cost of Heat (LCOH) analysis and calculate payback periods. Addressing Solar Limitations: Propose engineering solutions for solar intermittency to ensure system robustness.

Major Learning Outcomes : Engineering Strategy & Modelling: Technical design of collector fields and performance simulation.
Economics & Finance: Analyzing CAPEX, OPEX, LCOH, and financial viability metrics.
Project Management: Understanding procurement, vendor selection, and impl

Details of Papers/patents : Way too many

Brief Description of working environment, expectations from the company : The internship was conducted at Praj Industries Limited (Praj CIAT) in Pune, an established EPC (Engineering, Procurement, and Construction) firm. The working environment is professional and steady-paced, mirroring a structured corporate or semi-government atmosphere rather than a high-pressure startup. There is a emphasis on professional discipline, standard work conduct, and organizational hierarchy.
The nature of the work is highly dependent on the specific department and project assignment. While some roles involve travel to various Praj facilities for site inspections or field data, my role was primarily a desk-based research and design job.I was not given access to sensitive internal documents, which required me to rely on external simulations, literature, and guided data for my techno-economic assessment.
The staff and mentors are approachable and willing to share their expertise, providing a supportive learning environment for answering technical queries. The company expectations were clearly defined: interns are expected to demonstrate consistent progress and professional reliability. My mentors expressed satisfaction with the final output of the Solar-PTC feasibility

study, which successfully aligned with the company's focus on sustainable industrial solutions and decarbonization.

Academic courses relevant to the project : Heat Transfer, SP 1, SP 2, Essentials of Financial Management

PS-II Station : Prashanu Hospital - Data Analysis, Palghar

Faculty

Name: Sandeep Kayastha .

Student

Name: NANAVATY AKASH ANISH(2021B4A72322P)

Student Write-up

PS-II Project Title: Market Structure and Medical Database Development

Short Summary of work done during PS-II : The project focuses on analysing, documenting, and optimising operational workflows at Prashanu Hospital, with a particular emphasis on patient flow (OPD and IPD) and medical inventory management. The work involved an in-depth systems study of how information is generated, transmitted, and stored across various administrative and clinical units. This included mapping patient journeys, identifying bottlenecks, and understanding how manual, paper-based processes impact efficiency and data accuracy. A major component of the project was the design and implementation of a structured, normalised SQL database for medicine and inventory management. This database includes modules for medicines, suppliers, prescriptions, billing, and stock logs—addressing issues such as expiry tracking, stock-outs, fragmented records, and duplicate entries. Entity–Relationship models, data flow diagrams, and

workflow charts were developed to support system clarity and future scalability. The outcomes of the project provide Prashanu Hospital with a digital-ready framework that can serve as the foundation for a complete Hospital Information System (HIS). For the student, the project offered substantial exposure to healthcare operations, database engineering, process optimisation, and real-world system analysis in a resource-constrained environment.

Tool used (Development tools - H/w, S/w) : SQL, python

Objectives of the project : Understand healthcare operations, optimise tech

Major Learning Outcomes : Understood operations in a small scale hospital, tech implementation

Details of Papers/patents : none

Brief Description of working environment, expectations from the company : The working environment during the Practice School internship was structured, supportive, and representative of a typical small- to mid-scale organizational setting. The atmosphere balanced routine operational tasks with opportunities for independent learning. Day-to-day work involved interacting with staff across departments, observing internal processes, and contributing to ongoing tasks with guidance from supervisors. The environment encouraged a combination of discipline, adaptability, and self-initiative, allowing interns to gradually understand the workflows and responsibilities associated with the role. Expectations from the company were reasonable and aligned with the goals of experiential learning. Interns were expected to be punctual, attentive, and proactive in understanding the systems and procedures already in place. The organization provided access to relevant information, personnel, and resources needed to carry out assigned work, but also expected students to take ownership of their learning. This included documenting observations, asking clarifying questions, and contributing meaningfully to tasks wherever possible. Professional behaviour, confidentiality, and respect for organizational protocols were emphasized throughout the internship. Overall, the working environment fostered learning through observation, participation, and reflection. The expectations were clear, manageable, and designed to help interns gain practical insight while gradually integrating into the workplace setting.

Academic courses relevant to the project : Database management, Operations research

Name: SUBIT SHEKHAR PANDA(2021B4A72325P)

Student Write-up

PS-II Project Title: Hospital Market Structure and Medicines Database Architecture

Short Summary of work done during PS-II : Mapped OPD/IPD flows and quantified a shift from an earlier 50:50 mix to roughly 70:30 favoring OPD, driven by antenatal consults and follow-ups. Benchmarked against nearby government hospitals to understand price sensitivity and infrastructure gaps (blood bank, 24×7 emergency). Identified operational levers: slotting and triage coordination to smooth morning OPD peaks; short-stay IPD planning with clearer referral thresholds; transparent procedure bundles. Concurrently scoped an internal medicines database to replace a third-party tool, proposing a SQL backend with a relational model for items, stock-on-hand, batch/expiry, and transactions. The system aims to improve reliability, fast search/filtering, expiry alerts, and autonomy. Outputs include a market/operations overview, KPI set (OPD→IPD conversion, occupancy, ALOS, theatre utilization), and a database blueprint to streamline pharmacy operations and support data-guided decisions.

Tool used (Development tools - H/w, S/w) : SQL (relational modeling); structured data collection (forms/spreadsheets); dashboarding for basic trends; prototype design of inventory database

Objectives of the project : Diagnose OPD–IPD demand patterns and operational constraints; design an in-house medicines database to replace third-party dependence; improve reliability, stock/expiry tracking, search, and replenishment; enable data-driven staffing and capacity planning

Major Learning Outcomes : Grounded understanding of semi-urban hospital workflows; ability to map OPD/IPD journeys and identify bottlenecks; skills in collecting/structuring operational data; prototype design for a reliable medicines database;

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : A 15-bed, semi-urban private hospital with supportive clinical, nursing, and administrative staff enabling on-floor immersion across registration, OPD assistance, wards, and pharmacy. Expectations centered on dependable, low-friction care, courteous interactions, transparent billing, and predictable service levels. The internship emphasized observing real patient journeys, capturing operational data reliably, and proposing practical, low-cost improvements (slotting, recall loops, short-stay IPD planning). The hospital values incremental enhancements that strengthen reliability and patient experience over sweeping tech overhauls.

Academic courses relevant to the project : Database Management Systems; Machine Learning; Probability & Statistics; Operations Research; Fuzzy Sets

PS-II Station : Prashanu Hospital - Management, Palghar

Faculty

Name: Sandeep Kayastha .

Student

Name: PRANAV PRASHANT KOTI(2021B1AB1289P)

Student Write-up

PS-II Project Title: Management trainee

Short Summary of work done during PS-II : Mapped patient flow

Tool used (Development tools - H/w, S/w) : excel, powerpoint

Objectives of the project : Understanding and mapping function of IPD OPD

Major Learning Outcomes : Strucutring problems

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Supportive and high ownership

Academic courses relevant to the project : Manufacturing courses were relevant

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PS-II Station : Prashanu Hospital - Supply Chain, Palghar

Faculty

Name: Sandeep Kayastha .

Student

Name: BANSAL HARSHVARDHAN RAJENDRA KUMAR(2021B5A30896P)

Student Write-up

PS-II Project Title: Market Analysis & Strategic Insights for a Regional Multi-Specialty Hospital

Short Summary of work done during PS-II : During my six-month PS-II at Prashanu Hospital, I worked across four areas: market analysis, operations, patient experience, and HR. First, I mapped the hospital's catchment, patient segments, and competitors to clarify its role in the regional healthcare ecosystem. Building on this, I analyzed OPD–IPD dynamics and capacity utilization, studying the shift from a 50:50 to 70:30 mix and highlighting underuse of private rooms and implications for staffing and bed planning. I then conducted a patient journey and experience study, identifying bottlenecks in communication, waiting times, and navigation, and designed a QR-based feedback system. Finally, I proposed a staff financial wellness initiative, including a SIP-based savings program tailored to nursing and support staff socio-economic realities.

Tool used (Development tools - H/w, S/w) : Google sheets, Notion, Google Docs

Objectives of the project : To understand Prashanu Hospital's catchment, patient mix, and position in the regional healthcare ecosystem. Analyze OPD–IPD patterns and patient flows for better capacity and resource planning. Identify gaps in patient experience and operational workflows and propose practical improvements. Design a simple staff financial wellness initiative aligned with nursing and support staff needs.

Major Learning Outcomes : I gained a deep understanding of how Tier-3 hospitals operate, make decisions, and manage constraints through real patient interactions, staff interviews, and on-ground process mapping. This project strengthened my ability to translate unstructured operat

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Prashanu Hospital provided a close-knit, high-intensity working environment typical of a Tier-3 healthcare setup. With lean staffing and steady patient inflow, doctors, nurses, and administrative staff worked collaboratively across roles, which gave me direct exposure to real operational constraints, quick decision-making, and strong doctor–patient relationships. I was encouraged to spend time in OPD, IPD, and administrative areas, interact with staff and patients, and observe processes end-to-end.

From the hospital's side, expectations were clear: understand how the system currently works, analyze OPD–IPD patterns, identify gaps in workflows and patient experience, and propose low-

cost, practical improvements. I was expected to be proactive, respectful with patients and staff, and to translate observations into structured, actionable insights.

Academic courses relevant to the project : Principles of Economics

PS-II Station : ProteanTecs - Infrastructure Automation, Bengaluru

Faculty

Name: Swapna S Kulkarni

Student

Name: AMANAGANTI ROHAN REDDY(2021B4A32377H)

Student Write-up

PS-II Project Title: Physical Design RTL2GDSII

Short Summary of work done during PS-II : Utilized in-house flow to perform complete RTL2GDSII runs on a range of process nodes, tools, and designs to validate new customer features, product validation, and flow enhancement.

Tool used (Development tools - H/w, S/w) : Synopsys and Cadence RTL2GDS toolset (FC, DC, Genus, Innovus, PrimeTime, etc.), Tcl scripting

Objectives of the project : Physical Design

Major Learning Outcomes : Gain exposure on physical design aspect of chip designing (RTL2GDS), flow methodology, challenges associated with advanced nodes and Industry approach of solving issues.

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The team is very tightly knit, where everyone is easy to approach. One is expected to utilize their time and the available resources well during their time there. No one restricts you from using the available resources for personal learning, and all mentors and seniors are ready to help with any issues you could be facing at any time.

Academic courses relevant to the project : ADVD

PS-II Station : ProteanTecs - Physical Design RTL2GDSII, Bengaluru

Faculty

Name: Swapna S Kulkarni

Student

Name: ADVAIT SHUKLA(2022A8PS0586P)

Student Write-up

PS-II Project Title: Hardening of standalone profiling blocks

Short Summary of work done during PS-II : I was given udemy courses on STA and in house resources on the rtl2gdsii flow.

Tool used (Development tools - H/w, S/w) : Cadence Genus CUI, Innovus CUI, Fusion Compiler, PrimeTime, StarRC, REDHAWK

Objectives of the project : RTL to GDSII flow on a test chip for delivery to AMD

Major Learning Outcomes : I learnt static timing analysis in detail and also the entire rtl to gds flow as well as the use of physical cells and all cells available in tsmc and samsung tech stack

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Amazing working environment with extremely friendly and kind people who are willing to teach whatever you are willing to learn. If you are giving all work on time there is no issue. Work is also interesting and easy to grasp.

Academic courses relevant to the project : Digital Design, Analog and Digital VLSI Design

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PS-II Station : PwC India, PAN India

Faculty

Name: Parag Rastogi

Student

Name: SHREYASI BHARATIYA(2021B1A40793P)

Student Write-up

PS-II Project Title: SAP One Consulting Advisory Intelligent Digital Enterprise Apps

Short Summary of work done during PS-II : Core Challenge: Process Automation for manufacturing systems Technical Scope: * SCADA system integration with S4 HANA ERP * Real-time data monitoring capabilities on SCADA dashboard * Enhanced privacy and security protocols * Hierarchical design architecture to integrate SCADA with third-party systems * Data retrieval and management from AWS Storage infrastructure * Programmed scripts to store data on SAP ERP. My roles and responsibilities: Conduct process diagnostics & workflow mapping. Support research and analysis. Prepare the client deliverables: dashboards, reports, presentations, executive storyboards. Collaborate with cross-functional teams: engineers + consultants.

Tool used (Development tools - H/w, S/w) : PwC Proprietary Assets, MS Teams, Microsoft Office (Word, Excel, Power Point), Zoom, Cisco Webex

Objectives of the project : The primary objective of the project was to provide a project plan and process design for the Integration of SCADA (Supervisory Control and Data Acquisition) systems in robotic arms within manufacturing environments with SAP S4 HANA ERP.

Major Learning Outcomes : Process Automation for Forging Industry, SAP, SCADA, Consulting Skills, Advisory Consulting Mindset, Presentation Skills, Soft Skills, Networking

Details of Papers/patents : Final Project Presentation submitted to team at PwC India

Brief Description of working environment, expectations from the company : The working environment was competitive and friendly with a highly collaborative and focused team. The tasks given by mentors were meaningful and involved lots of exposure and learning. The mentors provided valuable lessons, guidance, constant support as required and motivated to grow as a professional and organised multiple bonding sessions at team dinner parties. The working hours were minimum 8 hours five days a week.

Academic courses relevant to the project : Management Minor, Finance Minor, Manufacturing Management, Robotics, Engineering Optimisation, Supply Chain Management, Artificial intelligence, Machine Learning

Additional Online Certification Courses:

1. Udemy Hands on SAP Build Code, Joule AI, Low Code

Name: AVIRAL AMAR(2022A4PS0748P)

Student Write-up

PS-II Project Title: SAP Signavio Process Intelligence

Short Summary of work done during PS-II : Worked on SAP Signavio Process Intelligence (cant share details due to confidentiality clause)

Tool used (Development tools - H/w, S/w) : SAP Signavio

Objectives of the project : Make custom value accelerators for PwC

Major Learning Outcomes : Technical and function insights of O2C and P2P processes

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Great environment, however limited mentorship time due to tight schedule

Academic courses relevant to the project : SQL basics and Industrial process knowledge

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PS-II Station : Qbeats, Hyderabad

Faculty

Name: Kranthi Kumar Palavalasa

Student

Name: MARRI THANVITA REDDY .(2021B2A43134H)

Student Write-up

PS-II Project Title: Design & Systems Analysis – Multiphysics Simulation

Short Summary of work done during PS-II : During my PS-II at QuBeats, I worked on the design, fabrication, and characterization of a Helmholtz coil–based experimental setup integrated with a mechanically stable PCB enclosure and a low-noise boom for hosting PNI magnetic sensors. The objective was to achieve a highly uniform magnetic field while minimizing mechanical vibrations, magnetic interference, and electrical noise that affect precision magnetic measurements. The mechanical components, including the Helmholtz coil formers, PCB enclosure, and sensor boom, were designed and modeled using Fusion 360, enabling precise control over geometry, material selection, and assembly constraints. COMSOL Multiphysics was used to perform electromagnetic simulations and analyze magnetic field distribution, helping optimize coil radius, spacing, and uniformity within the target test region. Structural and vibration-related aspects of the boom were evaluated using ANSYS to ensure adequate stiffness, minimal deflection, and stable sensor alignment under operational conditions. Experimental calculations related to magnetic field strength, ampere-turn requirements, and sensor response were supported using MATLAB for numerical analysis and validation. The Helmholtz coils were fabricated using non-magnetic materials and experimentally characterized to verify field uniformity and linearity. Mechanical and electrical testing was conducted to assess vibration behavior, signal integrity, noise performance, and long-term stability of the integrated system. Overall, the project provided comprehensive exposure to multiphysics simulation, mechanical design, experimental validation, and system integration for precision instrumentation applications.

Tool used (Development tools - H/w, S/w) : The project involved the use of both hardware and software development tools for design, simulation, and experimental validation. Mechanical components such as the Helmholtz coil formers, PCB enclosure, and sensor boom were designed using Fusion 360. COMS

Objectives of the project : The objective of this project was to design, fabricate, and experimentally characterize a Helmholtz coil–based setup capable of generating a highly uniform magnetic field for precision magnetic measurements. The project aimed to minimize the effects of mechanical vibrations, magnetic contamination, and electrical noise through careful analytical design, material selection, and system integration. In addition, a mechanically stable, non-magnetic boom and PCB enclosure were developed to support and integrate PNI magnetic sensors, ensuring reliable performance, signal integrity, and suitability for sensor calibration and controlled low-field experimental applications.

Major Learning Outcomes : Through this project, I gained hands-on experience in the analytical design, fabrication, and experimental characterization of precision engineering systems. I developed a strong understanding of Helmholtz coil design for achieving magnetic field uniformi

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : QuBeats offered a collaborative and research-driven working environment that emphasized hands-on experimentation and analytical problem-solving. I worked closely with the technical team while being expected to take ownership of tasks, follow engineering rigor, use simulation and design tools effectively, and maintain proper documentation. The experience helped bridge academic concepts with real-world engineering practices and improved my ability to work in a multidisciplinary, industry-oriented setting.

Academic courses relevant to the project : Advanced Manufacturing Processes, Machinces and Mechanisms.

PS-II Station : Quadeye, Gurgaon

Faculty

Name: Nishit Narang .

Student

Name: ABHAY GUPTA .(2021B3A70971H)

Student Write-up

PS-II Project Title: Software Development for automating processes

Short Summary of work done during PS-II : Non compete and IP scope is very broad at Quadeye and our contract and company policy strictly prohibits disclosure relating to projects done during internship. That being said our role was chiefly to bring about automated solutions to improve day to day working of various teams including Quant and infra teams. This included process for smooth running of high frequency strategies.

Tool used (Development tools - H/w, S/w) : Python Django, React and various databases and tools relating to software development

Objectives of the project : To optimise systems and infra for smooth execution of strategies

Major Learning Outcomes : Software development with specialization in HFT based development

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment and timings are quite long and hectic. Work and ownership of the projects is taken

seriously and encouraged. Learning opportunity is huge especially for someone looking for career in software development. Mentors are always ready to help and questions and suggestions are encouraged .

Academic courses relevant to the project : Operating System, DSA, OOP, Computer Architecture

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Name: KARTIK CHAUHAN(2022A7PS1255G)

Student Write-up

PS-II Project Title: Software Development

Short Summary of work done during PS-II : Wrote frontend as well as backend for Quadeye console and optimized few django queries to load page faster

Tool used (Development tools - H/w, S/w) : Django, sql, react

Objectives of the project : Optimize data fetching queries

Major Learning Outcomes : Django and python

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Very hectic work culture. We used to work from 9 to 8 (11 hours a day)

Academic courses relevant to the project : Database management, Computer Networks

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PS-II Station : Questt .ai, Bengaluru

Faculty

Name: A Michael Alphonse

Student

Name: SHASHWAT AGRAWAL(2021B1A30811P)

Student Write-up

PS-II Project Title: Engineering Enterprise AI Workflows: From RAG-Driven Reasoning to Agentic BI Pipelines and Knowledge Graph Automation

Short Summary of work done during PS-II : Worked on multiple enterprise AI projects. Designed agentic AI pipelines to automate daily business intelligence reports for a retail client, covering various metrics and KPIs using SQL-LLM workflows. Built and refined prompts to reduce hallucinations, enforce structure, and stabilize outputs for dashboard deployment. Conducted SAP-HANA GST data validation by writing and testing SQL queries across multiple datasets. Additionally contributed to a Retrieval-Augmented Generation (RAG) pipeline for large-scale email classification by designing and refining scenario and email summarization prompts.

Tool used (Development tools - H/w, S/w) : Python, SQL, SAP-HANA, OpenAI APIs, LangChain/LangSmith, Vector DB (Qdrant)

Objectives of the project : The objective of the project was to design and deploy enterprise-grade AI workflows for automating business intelligence, data validation, and analytical reasoning. The work focused on building agentic and RAG-based pipelines that improved accuracy, scalability, and hallucination control in real-world deployments. Additionally, the project aimed to validate SAP-HANA data and develop reusable business ontology frameworks for enterprise AI systems.

Major Learning Outcomes : - Practical experience building agentic AI and RAG pipelines in production settings
- Deep understanding of prompt engineering trade-offs, hallucination control, and guardrails
- Hands-on SQL development and SAP-HANA data validation for enterprise use cas

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The environment is mostly laid-back, but does grow intense for a few days if you're assigned to a project that's nearing a deadline. They don't expect you to know a lot as an intern, and will assign personal projects solely to help you learn. As a whole, the team is quite supportive and can be easily approached.

Academic courses relevant to the project : NA

PS-II Station : Rail-IT, USA, Minneapolis

Faculty

Name: Gopalakrishnan Venkiteswaran .

Student

Name: JEREMY KARRA .(2022A7PS2008H)

Student Write-up

PS-II Project Title: Identifying Faults in Train Networks

Short Summary of work done during PS-II : In order to identify faults in train networks, we had to create an algorithm to help identify and relevant API endpoints to help process the algorithm given a set of data in near real-time. Given this, we can deduce the cause of the fault, something not possible prior to this solution.

Tool used (Development tools - H/w, S/w) : Python, FastAPI, Matplotlib, Shell scripting

Objectives of the project : To create a solution to help identify faults in train networks.

Major Learning Outcomes : Learned system design and enterprise level coding practices. Strengthened problem solving skills

Details of Papers/patents : No papers or patents relevant for this specific project.

Brief Description of working environment, expectations from the company : The working environment was flexible and accommodating. As a small startup, it was easy to be on the same page as the rest of the team. They were strict about code reviews and system design quality. The company also expected diligence and integrity in the work done.

Academic courses relevant to the project : DSA, OOPS, DBMS, OS

PS-II Station : Ratham - Tech, Hyderabad

Faculty

Name: Lucy J. Gudino

Student

Name: SHUBAN KAMATH(2022AAPS0339P)

Student Write-up

PS-II Project Title: Advanced Fleet Routing and Test Case Automation

Short Summary of work done during PS-II : Worked on three areas: (1) constraint-based fleet routing to generate efficient assignments under time/capacity/availability constraints, (2) GPS data processing to reduce noise and reconstruct clean polylines for reliable visualization and audits, and (3) end-to-end UI automation using Playwright + TypeScript with a Page Object Model for maintainability and cross-browser coverage. All work was implemented and validated in a controlled development environment without exposing confidential operational data.

Tool used (Development tools - H/w, S/w) : Python, Playwright, TypeScript/Node.js, Page Object Model, Git/GitHub, CI pipeline tools, BrowserStack (cross-browser).

Objectives of the project : Improve route planning using constraint-based optimization. Clean and reconstruct GPS trajectories for accurate route visualization/audit. Build scalable end-to-end UI automation to improve regression reliability.

Major Learning Outcomes : Applied routing optimization under real-world constraints.
Built GPS cleaning + reconstruction pipeline (outliers, smoothing, interpolation).
Designed maintainable Playwright automation using POM and reusable utilities.
Practiced structured testing, debug

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The work environment was based in a small office setup in Madhapur, HITEC City, with defined timings and a structured day to day routine. The workload could vary depending on project priorities. However, it remained largely steady during the last few months. Since it is a startup environment, the pace is generally high and deliverables are expectation driven, requiring consistent ownership and timely execution. One work from home day per week was permitted, and overall the workplace culture was supportive.

Academic courses relevant to the project : DSA, Algorithms, Optimization/OR basics, Software Engineering, Software Testing, DBMS, Probability & Statistics

PS-II Station : Recur Club, Gurgaon

Faculty

Name: Neha Vinayak .

Student

Name: YASH SHARMA(2022A7PS0155P)

Student Write-up

PS-II Project Title: Applied Learnings in DevOps, Cloud, Scripting and Agentic AI Workflows

Short Summary of work done during PS-II : I worked extensively on DevOps, cloud infrastructure, and backend automation systems, gaining hands-on experience with production-grade workflows. My responsibilities included designing and enhancing CI/CD pipelines using Jenkins and GitHub Actions to automate build, testing, and deployment processes. I implemented automation scripts in Python to extract and process large-scale data from APIs and web sources, including GST-related data from ClearTax, and stored structured results in MySQL databases. I developed web crawlers to scan websites, detect broken links, and generate detailed reports, which were integrated into Jenkins pipelines and shared via Slack. To reduce dependency on live APIs, I created mock services for LLM agents using WireMock and Docker, significantly improving development efficiency and cost optimization. I also contributed to improving system observability by implementing request-scoped logging using ContextVars in FastAPI-based backend services. Additionally, I worked with n8n to automate workflows and prototype secure migration of

workflows between production and non-production environments. I integrated SonarQube analysis to automatically extract code quality issues and hotspots for continuous monitoring. I also implemented Playwright and MCP-based automated test cases to validate website functionality as part of CI pipelines. Overall, this internship provided strong practical exposure to DevOps automation, cloud-based systems, backend scripting, testing frameworks, and real-world software engineering practices in a production environment.

Tool used (Development tools - H/w, S/w) : Python, TypeScript, SQL, Jenkins, GitHub Actions, Docker, AWS (EC2, VPC), n8n, Playwright, SonarQube, Postman, WireMock

Objectives of the project : Multiple projects were assigned to me in short intervals of time, which were mostly feature implementation, data analysis or automation tasks using scripts

Major Learning Outcomes : Gained hands-on experience with DevOps and CI/CD pipelines, including building, modifying, and monitoring Jenkins pipelines in production environments.
Developed strong skills in automation scripting using Python for API integration, data extraction.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The overall working environment at the organization was acceptable, though there were instances where mentorship support was limited during task execution. While some mentors were strict and their evaluation approach felt harsh at times, this also highlighted the importance of meeting professional standards and deadlines.
On a positive note, collaboration with co-interns was productive, and several employees were approachable and supportive, contributing significantly to task completion and knowledge sharing. Team interaction with fellow interns and employees was generally healthy and cooperative, which helped maintain workflow continuity.
The experience also provided valuable exposure to real-world corporate dynamics, including handling expectations, feedback, and workplace pressure. While initial expectations from the station were high, the experience helped build a realistic understanding of industry environments and professional adaptability.

Overall, despite certain challenges, the internship contributed to skill development, workplace awareness, and an understanding of organizational culture, all of which are important aspects of professional growth.

Academic courses relevant to the project : AI, ML, DBMS, Computer Networks. Although I would recommend learning System Design basics which would help in the organisation.

Name: AYUSHMAN KUMAR(2022A7PS0600G)

Student Write-up

PS-II Project Title: Tech Support Agent in n8n

Short Summary of work done during PS-II : I worked on designing and implementing an AI-powered IT Helpdesk Assistant integrated with Slack to automate internal technical support workflows. The system was designed to handle employee queries related to account access, application issues, and product information across multiple internal platforms. My primary responsibility involved building an intelligent agent that understands user intent, routes queries through multiple Retrieval-Augmented Generation (RAG) pipelines, and triggers appropriate automated actions via backend APIs. The bot was capable of resolving issues such as account unlocks and access requests autonomously. In cases where automation was not possible, it created structured JIRA tickets and notified the technical team as a fallback mechanism. Over the course of the internship, the system evolved from a basic prototype into a production-ready solution with multiple RAG pipelines (Knowledge Queries, Product Requests, and Release Notes), real API integrations replacing mock services, and automated feedback workflows for resolution validation. The project significantly reduced manual intervention, improved response time, and demonstrated how AI agents can be practically deployed in enterprise environments to streamline IT operations.

Tool used (Development tools - H/w, S/w) : Software / Development Tools Programming Language: Python Backend Framework: Flask (REST API development) Workflow Automation

Platform: n8n AI / LLM Integration: Large Language Models with Retrieval-Augmented Generation (RAG) Messaging Platform Integ

Objectives of the project : To automate the repeatative tech support queries and further creation of jira ticket if not solved by the bot

Major Learning Outcomes : Gained hands-on experience in building end-to-end AI agents for real-world enterprise use cases
Learned to design intent classification and multi-pipeline RAG architectures
Integrated AI workflows with external systems such as Slack, JIRA, and internal

Details of Papers/patents : No

Brief Description of working environment, expectations from the company : The working environment was highly collaborative, fast-paced, and engineering-driven, with a strong focus on building scalable and reliable internal tools. The company emphasized ownership, encouraging interns to take responsibility for designing and implementing production-grade features rather than limiting them to isolated tasks.
Expectations included writing clean, maintainable code, understanding business requirements, and ensuring that solutions were robust enough for real internal usage. Regular code reviews, feedback sessions, and iterative improvements were part of the development process. The team valued problem-solving ability, clarity in communication, and the willingness to learn and adapt quickly.

Academic courses relevant to the project : DBMS,CN,OS,AI,ML,NLP

Name: MEHAK GARG(2022A7PS0803G)

Student Write-up

PS-II Project Title: Data Science Intern

Short Summary of work done during PS-II : During my PS-II at Recur Club, I worked across multiple high-impact data engineering and financial analytics projects. I executed complete Early Warning System (EWS) cycles for Aug–Sept 2025, combining repayment, compliance, employee, bureau, and runway data to generate explainable, actionable risk insights. I developed a Box Identification Framework for detecting structured tables in messy Excel sheets using column properties and date-stream validation. I built multiple Metabase dashboards to track document-tagging accuracy, query-level insights, and operational KPIs. I designed a Bank Statement Analytics pipeline to review daily uploads, consolidate retry statuses, classify failures, and provide actionable reporting for ingestion improvements. As part of intelligence initiatives, I implemented lender standardization using fuzzy legal matching, automated GST–Bank reconciliation, and portfolio/waitlisted lost opportunity detection using bureau and MCA signals. My largest contribution was enhancing the Debt Schedule Ingestion Pipeline—automating header detection, value extraction, date/amount normalization, unit identification, validation, aggregate row removal, and lender name cleanup—producing production-ready standardized loan datasets. Overall, the internship significantly strengthened automation, data quality, and intelligence layers across Recur Club's financial ecosystem.

Tool used (Development tools - H/w, S/w) : Python, Pandas, NumPy, Regex, JSON, OpenPyXL, Metabase (SQL + dashboards), Excel, OpenAI APIs, Internal Recur Club data pipelines, JIRA, Git, MacOS/Linux environment.

Objectives of the project : The primary objectives were to design and improve automated data ingestion pipelines, enhance financial document processing, build explainable risk analytics (EWS), create dashboards for operational visibility, and convert semi-structured financial inputs into standardized, validated datasets. Additional goals included developing POCs for fuzzy reconciliation, lender standardization, and building intelligence signals from bureau and MCA data.

Major Learning Outcomes : Deep understanding of real-world financial ingest pipelines and risk analytics systems

Hands-on experience in automating messy Excel/financial data into structured outputs

Expertise in Python, Pandas, regex, JSON handling, and ETL design

Practical exposure.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Recur Club provided a fast-paced, data-driven fintech environment where ownership and problem-solving were strongly encouraged. The team operated with high autonomy, and interns were treated as full contributors responsible for delivering production-grade solutions. Daily collaboration with product, engineering, and risk teams ensured continuous learning and business-context understanding.

Expectations included quick understanding of domain concepts, producing clean and maintainable code, maintaining high data accuracy, and delivering automated systems that reduced operational dependencies. The culture emphasized transparency, documentation, regular feedback, and iterative improvement, with high standards for quality, reliability, and explainability of outputs.

Academic courses relevant to the project : Data Structures & Algorithms, Database Systems, Operating Systems, Compiler Construction, Design & Analysis of Algorithms, Financial Risk Management, Derivatives & Risk Management, Business Analysis & Valuation, Finance & Accounting, OOP, Computer Network

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PS-II Station : Resollect - Backend Developer, Bengaluru

Faculty

Name: Pradheep Kumar K .

Student

Name: ABHINAV MISHRA(2021A8PS0833G)

Student Write-up

PS-II Project Title: Web Development

Short Summary of work done during PS-II : automated workflows for loan recovery

Tool used (Development tools - H/w, S/w) : Git, cursor, docker, postman

Objectives of the project : Build scalable backend systems for the loan recovery system following business logic needs of the client

Major Learning Outcomes : Learnt how to build scalable full stack websites and the logic behind them

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : fast paced and high ownership

Academic courses relevant to the project : OOPS, FoDSA

PS-II Station : RISA Labs, Inc - Healthcare -Product, Bengaluru

Faculty

Name: Ramesh Venkatraman .

Student

Name: PARV ABHIJEET SINGHANIA(2021B1A43004G)

Student Write-up

PS-II Project Title: Associate Product Manager

Short Summary of work done during PS-II : As an APM intern at RISA Labs, an AI-driven healthcare startup, I work closely with US-based healthcare clients, addressing queries, gathering feedback, and translating their needs into PRDs and actionable specifications for our tech team. This has strengthened my analytical problem-solving as well as my ability to communicate complex requirements with clarity. I own some of the key features built on our dashboard including our USP of guidelines centric workflows automating 30% of the orders we process. I supervise and mentor a 7-member fulfilment team, ensuring accuracy, minimizing errors, and maintaining high-quality deliverables. I have also developed SOPs and PRDs to streamline workflows, reduce operational friction, and support investor-facing documentation for VC pitches. These responsibilities have enhanced my program management skills and cross-functional coordination. My role also involves conducting workflow analysis and organizing healthcare data to identify inefficiencies and propose improvements thus building strong competencies in data handling, process optimization, and structured thinking.

Tool used (Development tools - H/w, S/w) : Claude, Cursor, Notion, Excel, Github

Objectives of the project : Build a dashboard to automate Prior Authorizations workflow in the US Healthcare

Major Learning Outcomes : AI, Client Interactions, Healthcare, Automation, RPAs, Documentation

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Fast-paced environment with very good potential for learning and upskilling. Intensive working hours but the colleagues are very talented.

Academic courses relevant to the project : NA

Name: ANISH PAWAR(2022A4PS0307G)

Student Write-up

PS-II Project Title: Automating Backend Workflows

Short Summary of work done during PS-II : I contributed to the evolution of the platform's "digital workforce" by designing Agentic AI workflows utilizing the ReAct pattern. These autonomous agents were architected to handle complex oncology specificities, including J-Code authorizations and Intelligent Document Processing (IDP) for unstructured faxes, directly supporting the company's mission to minimize administrative delays in cancer treatment.

Tool used (Development tools - H/w, S/w) : Postman API, Power BI, Google Firestore, Datadog, Google Sheets

Objectives of the project : Next-Generation Revenue Cycle Management: Automating Oncology Operations through Agentic AI, API-First Clearinghouses, and Real-Time Observability

Major Learning Outcomes : Key Competency Development
Technical Proficiency:
Mastered X12 EDI Standards (270/271, 276/277, 837).
Gained hands-on experience with JSON API integration and Datadog query syntax.
Product Management:
Authored comprehensive PRDs for complex technical

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Our work environment is fast-paced, dynamic, and fuelled by innovation. Here we embrace agility and

encourage creative problem-solving, meaning no two days are alike. High performance, accountability, and a 'can-do' attitude are essential.

Academic courses relevant to the project : NA

PS-II Station : RiseUpp.com (Educorn Learning Pvt. Ltd.), Bengaluru

Faculty

Name: Perumal Jayakumar

Student

Name: JISHNU BALAJI(2021A4PS2500G)

Student Write-up

PS-II Project Title: Founder's office: To optimize operations and effectiveness of the organization

Short Summary of work done during PS-II : Managed MIS sheet, fundraising through angel investors, analysing data of courses and providing the most suitable course a candidate needs to do. Finance tracking and project management.

Tool used (Development tools - H/w, S/w) : Gemini, Google Sheets, Google Docs, Google Analytics

Objectives of the project : Improve effectiveness and getting in touch with prospective VCs and angel investors, data analytics for traffic optimization

Major Learning Outcomes : Learnings about Edtech industry and how to get a massive audience open towards online education

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Work related to management of other staff members, meeting monthly quotas and ensuring data accuracy.

Academic courses relevant to the project : Effective Public Speaking, Quality Control Assurance and Reliability

PS-II Station : Rusk Media Pvt. Ltd - Business Analyst, , Mumbai

Faculty

Name: Pravin Yashwant Pawar .

Student

Name: HASAN ZAREB(2021B3A80951P)

Student Write-up

PS-II Project Title: Project Associate Intern

Short Summary of work done during PS-II : During my Practice School-II at Rusk Media, Mumbai, I worked across the AI Automation and Data Analytics verticals, contributing to both internal operations and content strategy. In the AI Automation vertical, I enhanced and developed internal tools to streamline company workflows. I upgraded the Vendor Management App by implementing a multi-level approval system, improving the React-based interface for better

usability, and optimizing backend performance to reduce loading time. I also built core modules of the OKR App, enabling employees to set objectives, track progress, and receive structured performance evaluations. My most extensive project was the Sales Intelligence Tool, where I created a database of over 1500 brands, designed a scoring model to rank sponsorship-fit, and developed a Selenium-based Python scraper that collected Google News articles to detect brand "trigger events," helping the sales team prioritize high-value leads. In the Data Analytics vertical, I conducted detailed market and competitor research to identify trends, benchmark performance, and support the creative teams. I designed and analyzed an audience feedback survey for a flagship show, providing insights that influenced planning for its next season. I also assisted in estimating content demand using engagement and viewership patterns. Overall, the internship strengthened my skills in automation, research, and cross-functional collaboration while giving me hands-on experience with real industry challenges.

Tool used (Development tools - H/w, S/w) : Python, Selenium, Google Trends, Cursor, Gemini, Excel

Objectives of the project : To streamline all repetitive internal functions of the company via AI tools

Major Learning Outcomes : Understood how to streamline work streams in an organization and improve efficiency. How to work with data in the Media Industry and how to give data backed decisions.

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment at Rusk Media is friendly, energetic, and very supportive. The company follows a fast but organized way of working, where teams communicate openly and help each other whenever needed. Everyone—from managers to team members—is approachable, which makes it easy to ask questions, share ideas, and learn new things.

One of the best parts about working at Rusk is the strong sense of ownership. Interns are given real responsibilities and trusted with important tasks. This helps build confidence and makes the work feel meaningful. At the same time, guidance is always available, and team members are happy to review work, give feedback, and explain things clearly.

The company also encourages collaboration across departments. Whether I worked with the tech, operations, or creative teams, the discussions were always respectful and solution-focused. Overall, Rusk Media offers a positive, motivating, and growth-friendly environment that supports both learning and independence.

Academic courses relevant to the project : DBMS, OOP (for the Web dev part)

PS-II Station : Sairajsri Business Solutions Private Limited - Data Science, Hyderabad

Faculty

Name: Vineet Kumar Garg .

Student

Name: ANKIT SINGH .(2022A4PS1433H)

Student Write-up

PS-II Project Title: Travel planner agent

Short Summary of work done during PS-II : During the internship, I designed and developed a Travel Planner Agent as a multi-agent, tool-augmented AI system capable of converting natural-language travel requests into structured, end-to-end travel plans. The system extracts key user inputs such as destination, travel dates, budget, and preferences, and resolves ambiguous information through multi-turn interactions. It integrates backend microservices to retrieve real-time flight and hotel data from external APIs, validates pricing and date constraints, and maintains conversational memory across user sessions. A dedicated itinerary-generation agent synthesizes this information into personalized, day-wise travel plans aligned with user constraints. The architecture is modular and stateful, implemented using LangGraph for workflow orchestration

and FastAPI for backend services. Emphasis was placed on reliability through schema validation, fallback mechanisms, and error handling. The Travel Planner Agent serves as a reusable framework for building consumer-facing AI assistants that combine LLM reasoning with real-time data and deterministic execution.

Tool used (Development tools - H/w, S/w) : Large Language Models (LLMs), LangGraph, Python, FastAPI, Uvicorn, Pydantic, external travel APIs (flights and hotels), SQLite, Postman, and Visual Studio Code.

Objectives of the project : To automate travel planning using AI

Major Learning Outcomes : Learnt a lot about agentic AI, integration of LLM's and using fastaspi endpoints for backend development.
Professionally learnt how corporate environment is and what are the expectations from the company which is supposed to be met

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at SB Solutions was professional, collaborative, and strongly oriented toward real-world problem solving. Interns were treated as active contributors rather than observers, with responsibilities similar to full-time team members. The organization encouraged independent thinking while also promoting regular discussions and reviews to ensure alignment with project goals. Clear communication, structured workflows, and timely feedback helped maintain efficiency and quality throughout the development process.
The company expected a strong sense of ownership, accountability, and willingness to learn. Emphasis was placed on writing clean, production-ready code, maintaining proper documentation, and adhering to industry best practices. Interns were also expected to understand the business context behind technical decisions and meet project deadlines effectively. Overall, the environment fostered both technical growth and professional discipline, preparing interns for real corporate and startup work cultures.

Academic courses relevant to the project : AI and FDSA were the courses relevant to the project as these were the only courses I did in tech

PS-II Station : Sairajsri Business Solutions Private Limited - IT, Hyderabad

Faculty

Name: Venkateswara Rao Thunuguntla .

Student

Name: GANNAVARAPU VENKATA AVINASH(2022A3PS1095G)

Student Write-up

PS-II Project Title: Agentic portfolio system

Short Summary of work done during PS-II : During PS-II, I worked on building two major AI-driven systems: an Agentic Portfolio System and a Universal Invoice/Document Parsing Agent. The agentic portfolio system focuses on intelligent analysis and reasoning over financial and document-based inputs, enabling automated insights and structured outputs. The document parser was designed to handle unstructured invoices and documents by combining OCR (PaddleOCR), layout-aware models (LayoutLMv3), and large language models (Gemini). The system supports both default entity extraction (such as invoice number, date, vendor, amount, etc.) and custom user queries, allowing users to ask natural language questions about uploaded documents. A modular architecture was implemented using FastAPI for backend services and Streamlit for UI interaction. Emphasis was placed on scalability, extensibility to other document types (medical reports, financial reports), and clean code organization. The project provided hands-on exposure to real-world AI pipelines, agentic reasoning, and deployment-oriented development.

Tool used (Development tools - H/w, S/w) : Hardware Laptop / Workstation Software & Frameworks Python FastAPI Streamlit PaddleOCR LayoutLMv3 Google Gemini LLM Hugging Face Transformers PyTorch Vector Databases (for embeddings) Git / GitHub VS Code Linux / Windows

Objectives of the project : To design and develop agentic AI systems that can autonomously understand, reason over, and act upon complex documents and financial data. The project aims to build scalable AI agents capable of document understanding, intelligent information extraction, portfolio insights, and user-driven querying with minimal human intervention.

Major Learning Outcomes : Understanding and implementation of agent-based AI architectures
Practical exposure to OCR + NLP + LLM pipelines
Designing scalable backend systems using FastAPI
Handling unstructured documents (PDFs/images) efficiently
Integrating LLMs for reasoning

Details of Papers/patents : No papers or patents published during the PS-II tenure.
(Internal research and implementation-focused work)

Brief Description of working environment, expectations from the company : The working environment was highly collaborative and research-oriented, encouraging innovation and independent problem-solving. The company provided exposure to real-world AI challenges, particularly in document intelligence and agent-based systems. Regular discussions with mentors helped in refining system architecture and understanding best industry practices.
The expectations from the company included ownership of tasks, proactive learning, and the ability to design end-to-end solutions. Emphasis was placed on clean code, scalability, documentation, and effective communication of ideas. The environment supported experimentation with modern AI tools and frameworks, enabling practical learning beyond theoretical concepts.

Academic courses relevant to the project : Artificial Intelligence
Machine Learning
Natural Language Processing
Deep Learning

Data Structures & Algorithms
Database Systems
Software Engineering

PS-II Station : SAMEER, Mumbai

Faculty

Name: Kranthi Kumar Palavalasa

Student

Name: SIDDHARTH GANESH .(2022A3PS1316H)

Student Write-up

PS-II Project Title: Creating a Shunt Impedance Calculator

Short Summary of work done during PS-II : Built a GUI tool to basically help input Shunt Impedance data obtained from testing on Linear Accelerators. This data includes a graph with multiple figures touching the x-axis, the areas of which needed to be computed via code. This was done using libraries like polars and matplotlib. The GUI was made using tkinter.

Tool used (Development tools - H/w, S/w) : Pycharm, google collab, IDLE, Excel

Objectives of the project : Create a GUI that allows the user to input excel files and calculate Shunt Impedance data from the excel files.

Major Learning Outcomes : Learnt about various coding libraries and how to utilise them

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : It was a very relaxed and friendly environment, everyone was extremely helpful and supportive

Academic courses relevant to the project : FDSA, AI

Name: RUSHIL V BANGERA(2022A8PS1183G)

Student Write-up

PS-II Project Title: Calculation of backscattering coefficient of LIDAR returns using real time data

Short Summary of work done during PS-II : During the early part of my internship, I began by learning the essential Python skills required for LiDAR data analysis. I spent time understanding fundamental programming concepts such as loops, functions, arrays, and basic plotting. This foundation helped me gain confidence in handling scientific computations. As I progressed, I moved on to exploring important Python libraries like NumPy and Matplotlib, which are widely used for numerical modeling and data visualization. Although I initially struggled with array manipulation and plot formatting, consistent practice and referring to official documentation helped me overcome these challenges. After gaining familiarity with the tools, I focused on understanding the theoretical background of LiDAR systems, including key parameters such as wavelength, pulse width, telescope diameter, and atmospheric scattering behavior. This theoretical understanding allowed me to start writing small simulation scripts, beginning with constructing a fine-resolution range vector and generating synthetic atmospheric backscatter profiles for different conditions like clean air, polluted environments, and cloud layers. With this groundwork, I developed a full LiDAR simulation code that models the return power signal under multiple atmospheric scenarios. I implemented the lidar equation by computing optical depth, atmospheric transmission, and backscatter contributions. The code also incorporated a noise model to simulate realistic measurement conditions, and I carried out pulse energy sweeps to analyze how the received power varies with changing system parameters. Visualizing all

scenarios together gave me insights into how LiDAR performance shifts under clean, hazy, and cloudy atmospheres. This phase of the internship helped me transition from basic Python programming to applying scientific computing techniques for real-world remote sensing problems. It strengthened my understanding of how theoretical models translate into computational simulations and prepared me for the later stage of the project, where I worked with real-time data to compute molecular backscatter coefficients.

Tool used (Development tools - H/w, S/w) : Vs Code, pandas, numpy, python

Objectives of the project : To observe and understand LIDAR backscattering behavior with altitude

Major Learning Outcomes : The major learning outcomes of this internship include understanding LiDAR system behavior, atmospheric backscattering, and developing strong skills in scientific computing using Python for real-world data analysis. I also gained experience in handling la

Details of Papers/patents : No formal papers or patents were generated but helped to further it.

Brief Description of working environment, expectations from the company : The working environment at SAMEER was professional, structured, and conducive to learning. I was placed in a research-oriented team where the focus was on atmospheric remote sensing and LiDAR system analysis. The workspace encouraged independent thinking while also providing timely guidance whenever I needed clarification. My mentors maintained a balance between giving me the freedom to explore solutions on my own and offering support during technically challenging stages of the project. The environment promoted discipline, regular progress tracking, and clear communication. These expectations were met, as I was able to work with real atmospheric data, understand industry-level coding practices, and learn how research problems are approached in an applied electronics setting. Overall, the environment was highly supportive and learning-focused.

Academic courses relevant to the project : Signals and Systems and Digital Signal Processing, Optics, Python programming and Data Analysis

Name: ANGAD SINGH GULATI(2022AAPS0252P)

Student Write-up

PS-II Project Title: Development of ULF RF Electronics

Short Summary of work done during PS-II : I designed and simulated a solenoid coil for ULF MRI on CST Simula software.

Tool used (Development tools - H/w, S/w) : S/w: CST Simula

Objectives of the project : To design a solenoidal coil for ULF MRI

Major Learning Outcomes : CST Software, Electromagnetic simulation, RF Electronics

Details of Papers/patents : Wiley's Intro to MRI Textbook

Brief Description of working environment, expectations from the company : It was a government laboratory.

Academic courses relevant to the project : Electromagnetic Theory, Antenna Theory and Design

PS-II Station : Sanas.AI - Machine Learning, Bengaluru

Faculty

Name: Sugata Ghosal .

Student

Name: SAKSHAM GARG(2021A7PS2083G)

Student Write-up

PS-II Project Title: Scalable Audio Processing Data Pipeline Development and Optimization

Short Summary of work done during PS-II : The project involved building an end-to-end, event-driven ingestion system that processes audio files uploaded to S3 using SQS-triggered workflows. A multi-stage audio processing pipeline was implemented, incorporating validation, PII redaction, slicing, utterance extraction, and advanced feature computation. These features include statistical audio metrics, signal processing outputs, and machine-learning-driven quality assessments such as SQUIM, PESQ, and STOI.

Tool used (Development tools - H/w, S/w) : AWS (S3, SQS, RDS), Kubernetes, Ray, Dagster, Apache Iceberg, Python (librosa, PyTorch, torchaudio, Polars), VS Code, Git/GitHub, Linux, Docker, Slack Monitoring Tools.

Objectives of the project : The primary objective is to create a robust, maintainable, and scalable data pipeline that can handle audio feature extraction, quality assessment, and data delivery for machine learning models.

Major Learning Outcomes : Developed strong proficiency in modern data pipeline technologies, including Dagster, Ray, and Apache Iceberg, along with advanced audio signal processing techniques.
Gained hands-on experience in building scalable, production-grade distributed systems.

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment at SANAS AI is structured, collaborative, and strongly oriented towards engineering excellence. The company promotes a culture where learning, experimentation, and ownership are encouraged, enabling interns to work on real, production-grade systems.

Academic courses relevant to the project : Data Structures and Algorithms, DBMS, Natural Language Processing

PS-II Station : Sarda Metals & Alloys Ltd, Vizianagaram

Faculty

Name: Panchagnula Jayaprakash Sharma .

Student

Name: ARPIT KAPOOR .(2022A4PS1526H)

Student Write-up

PS-II Project Title: MAINTENANCE PHILOSOPHY AND METHODOLOGY IN CONTEXT OF GAS CLEANING PLANT IN FERRO ALLOY INDUSTRY

Short Summary of work done during PS-II : Detailed understanding of the working of the GCP(gas cleaning plant) and pollution control technologies in general. Associated theory behind it. Maintenance philosophy behind procedures followed in the concerned industry and application of strategies like- equipment and function centric followed by methods for establishing them. Tools used for process optimization and fault detection in the industry were also understood.

Tool used (Development tools - H/w, S/w) : Basic introduction to software used for monitoring of process parameters and database system for streamlining and planning of maintenance works.

Objectives of the project : To gain an understanding of the ferro alloy industry and the associated processes. Understanding the maintenance work carried out and the underlying philosophy behind it.

Major Learning Outcomes : Detailed understanding of the working of the GCP(gas cleaning plant) and pollution control technologies in general. Working and classification of the filtration methods utilized in the industry and the associated theory behind it.

Details of Papers/patents : Final report generated submitted to the company and same copy to be submitted to the faculty.

Brief Description of working environment, expectations from the company : Highly supportive team and division. Guidance given by the employees and operators in general was extremely helpful.

Academic courses relevant to the project : Mechanical CDC were somewhat useful in understanding the working procedure.

PS-II Station : Securonix - Developer, Bengaluru

Faculty

Name: Sai Kishor Jangiti .

Student

Name: ADITYA SHRIVASTAVA(2022A8PS1732P)

Student Write-up

PS-II Project Title: Modernizing Securonix Microservices: Security Hardening, API Enhancements, and Infrastructure Improvements.

Short Summary of work done during PS-II : During my PS-II internship at Securonix, I worked on modernizing and securing key microservices within the organization's Shared-MS ecosystem. The pre-midsem phase focused on foundational security and quality improvements, including upgrading vulnerable third-party libraries, hardening Dockerfiles by enforcing non-root execution, and raising the unit test coverage of the auth-proxy service to above 90% using JaCoCo, JUnit, and Mockito. These changes ensured a secure and stable baseline for further enhancements. The post-midsem phase involved more extensive architectural and feature-level contributions. I migrated routing from Spring Cloud Gateway and Eureka to Kubernetes Gateway and Service DNS, reducing latency and aligning services with Kubernetes-native networking. I enhanced the tenant-metrics GraphQL API by adding licensedEntity and usedEntity fields and implementing resolver logic to fetch accurate usage data from the database. A critical SSRF vulnerability was mitigated by introducing a strict regex-based allow-list for validating outbound callback URLs. I developed encryption and decryption utilities for sensitive configuration keys to ensure secure storage and transmission. Additionally, I refactored multiple CE microservices to send credentials via request bodies instead of insecure HTTP headers. Finally, I redesigned the DAG scheduling mechanism using a round-robin approach so that all jobs execute within a deterministic two-hour window, improving system load distribution. Collectively, these enhancements strengthened microservice security, improved reliability, and aligned services with modern engineering standards while providing significant hands-on experience with production-grade systems.

Tool used (Development tools - H/w, S/w) : DockerHub, Lens, DBeaver, IntelliJ, AWS Management Console, Postman

Objectives of the project : Security hardening, API enhancement, infrastructure modernization, and quality assurance.

Major Learning Outcomes : I learned how to secure and modernize microservices through real-world practices like vulnerability remediation, Kubernetes-based routing, and API enhancement. I also gained hands-on experience with automated testing, CI/CD pipelines, and debugging produc

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Work environment is very good with friendly/helpful people, interns need to come all 5 days but full-time employees can take 2 days WFH in a week. Inter-Team and Intra-Team communication and synergy is also high. Exposure to a big tech stack can be expected, but as the company is currently on journey to modernize it's architecture so most of the tech stack you will learn is for modern services.

Academic courses relevant to the project : OOP, OS

Name: RAJAT JAIN .(2022AAPS0266H)

Student Write-up

PS-II Project Title: Policy Generation UI for Automated YAML Policy Creation

Short Summary of work done during PS-II : During my PS-2, I worked on two major areas: the Policy Agent feature and the company's Shift-Left security initiative. For the Policy Agent, I built the frontend interface that takes a blog URL and generates a corresponding YAML policy using backend AI services. My work involved designing the UI, handling API calls, managing state, and presenting the generated policy in a clean, editable format. This helped me gain hands-on experience in production-level frontend development and integrating AI-driven outputs into a user workflow. I also contributed to the Shift-Left strategy, which focuses on introducing security earlier in the software development lifecycle. I assisted in analysing existing processes, understanding secure coding practices, and supporting improvements to internal tools that help detect issues

earlier in development. Overall, this PS-2 experience strengthened my skills in frontend engineering, API integration, and secure development practices.

Tool used (Development tools - H/w, S/w) : React.js, Next.js, JavaScript, HTML/CSS, REST APIs, JSON, Jira / Confluence , Postman (for API testing), Browser DevTools

Objectives of the project : To create the frontend for the policy agent feature including API integration

Major Learning Outcomes : 1) Built a scalable frontend for AI-driven policy generation.
2) Learned API integration, state management, and dynamic UI design.
3) Gained exposure to YAML workflows and policy configuration UX.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment was supportive, collaborative, and balanced. The company encouraged open communication, flexible work habits, and a healthy work–life balance. Team members were approachable, and guidance was always available whenever needed. Expectations were clear yet realistic, focusing on learning, contribution, and steady progress rather than pressure. The culture promoted independence, experimentation, and personal growth, making it easy to stay motivated and productive. Overall, it provided a comfortable and positive space to work, learn, and develop professionally.

Academic courses relevant to the project : Object oriented programming , data structures and algorithms

PS-II Station : SeedlingLabs private Limited, Bengaluru

Faculty

Name: Lucy J. Gudino

Student

Name: RISHABH JANGID .(2022A3PS0485H)

Student Write-up

PS-II Project Title: Testing Platform

Short Summary of work done during PS-II : During my Practice School-II at Product Orchard, I worked on the Testing Platform, a system designed to execute automated tests efficiently across multiple environments and configurations. My role primarily involved contributing to the testing platform's functionality, stability, and usability. I worked on enhancing automated test execution flows, improving test reliability, and resolving issues related to cross-browser and environment compatibility. I was involved in analyzing failures, optimizing test runs, and improving reporting mechanisms to provide clearer insights into test results. The work also included collaborating with engineers to understand system architecture and ensure seamless integration with CI/CD pipelines. Throughout the internship, I followed industry-standard development practices such as version control, code reviews, and agile workflows. This experience strengthened my understanding of scalable test systems and exposed me to real-world software quality challenges. Overall, PS-II helped bridge the gap between academic learning and professional software engineering practices.

Tool used (Development tools - H/w, S/w) : Automated Testing Frameworks CI/CD tools (Jenkins / GitHub Actions – as applicable) Git & GitHub Web Technologies (HTML, CSS, JavaScript) Backend services & APIs , AWS

Objectives of the project : To design and enhance a scalable Device-Independent & Distributed (DID) Testing Platform

Major Learning Outcomes : Gained hands-on experience in building and enhancing large-scale testing platforms

Learned real-world test automation strategies used in production systems
Understood CI/CD integration and test orchestration at enterprise scale

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Product Orchard provided a highly collaborative and professional working environment focused on building robust, production-grade software solutions. The engineering team encouraged learning, ownership, and active participation in discussions related to system design and problem-solving. Agile development practices were followed, with regular stand-ups, sprint planning, and reviews.

Academic courses relevant to the project : Software Engineering
Object-Oriented Programming
Web Technologies
Database Systems
Operating Systems

PS-II Station : SG Analytics, , Bengaluru

Faculty

Name: Arindam Roy .

Student

Name: SHLOK DHARESHWAR(2022A3PS0540G)

Student Write-up

PS-II Project Title: Automation of Ticket Categorization and Processing

Short Summary of work done during PS-II : The tickets reached by the employees within the company where initially categorised into their different categories of category and group manually we developed model to automate the centre process

Tool used (Development tools - H/w, S/w) : Python, Tensorflow

Objectives of the project : To automate the process of categorising and routing tickets in raised in the IT Dept

Major Learning Outcomes : Data science

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Not much interaction with other employees, mainly due to language barrier. Not much interaction with mentor either since he used to sit in Pondy office

Academic courses relevant to the project : CS

PS-II Station : Shell India Markets Pvt. Ltd.,, Bengaluru

Faculty

Name: Santosh Sopanrao Khandgave

Student

Name: MAJJI SAI SNIGDHA .(2022A2PS1427H)

Student Write-up

PS-II Project Title: Data-Driven Procurement Intelligence and Cost Modeling for Oil and Gas Supply Chains

Short Summary of work done during PS-II : The work focused on delivering data-driven procurement intelligence and cost modeling solutions to support strategic decision-making within the Contracting and Procurement function. The projects were carried out under the Market Intelligence and Category Analysis (MICA) team. The internship involved developing analytical deliverables across multiple upstream oil and gas procurement categories, including OCTG, wells, rotating equipment, road logistics, and professional services. The primary responsibility was to consolidate procurement, cost, and market datasets into structured analytical outputs that could be used by category managers and procurement stakeholders. Key deliverables included procurement benchmarking tools, cost models, price index trackers, and market intelligence dashboards. These outputs enabled improved cost transparency, clearer understanding of supplier and market trends, and stronger commercial evaluation across categories. Overall, the contributions helped strengthen Shell's procurement analytics capabilities by providing standardized, scalable, and insight-driven tools. The work played an important role in supporting sourcing strategy, negotiation planning, budgeting, and long-term category management.

Tool used (Development tools - H/w, S/w) : MS Excel, Power BI

Objectives of the project : To develop data-driven procurement intelligence and cost models supporting strategic sourcing and supply chain decision-making

Major Learning Outcomes : Gained hands-on experience in procurement analytics, cost modelling, Power BI dashboards, and data-driven strategic decision support

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment was professional and supportive, with a good balance between guidance and independence. Tasks were clearly defined, and there was flexibility in how the work was carried out, provided quality and timelines were met. Team members were approachable and open to

discussions, and feedback was given when needed to improve outputs. The work pace was steady, allowing time to understand the problem context and deliver accurate results. The company expected interns to be responsible, detail-oriented, and willing to learn. Clear communication, ownership of tasks, and timely delivery were important. Overall, the environment enabled meaningful learning and contribution without unnecessary pressure.

Academic courses relevant to the project : NA

Name: VAGISHA CHAUDHARY(2022A2PS1670P)

Student Write-up

PS-II Project Title: Integrated Cost Modelling And Market Intelligence Dashboards For Energy And EPC Analytics

Short Summary of work done during PS-II : The aim was to automate, atleast partially, several existing insight dashboards, and create a few new ones. Major work included creation of cost models, for equipment and services, etc. Apart from cost modelling, projects involed indices creation, data restructuring or cleaning, and backend updation. A major project included profiling of suppliers. In all, the work majorly involved data, its cleaning and restructuring, and its transformation into interactive dashboards.

Tool used (Development tools - H/w, S/w) : PowerBI, Visual Studio Code, MS Excel

Objectives of the project : Cost modelling and market analysis, automation of existing processes, conversion of Excel dashboards to Power BI, benchmarking of indices against standards.

Major Learning Outcomes : Major learning outcomes included cost analysis and cost modelling, supplier profiling, data restructuring, Power BI, VS Code, data analysis and visualization, and dashboard creation.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment is welcoming and flexible with a moderate workload. The mentors are helpful and approachable. Expectations from the interns is mainly an appetite to learn and grow. Basic MS Excel knowledge is expected and appreciated, and the mentors guide on how to learn and use the remaining softwares and processes. Knowing basic Power BI could be a bonus.

Academic courses relevant to the project : NA, Finance knowledge may be helpful for some projects

PS-II Station : Shipon Group - Non Tech, Bengaluru

Faculty

Name: Arindam Roy .

Student

Name: SHAKYADEEP MUKHERJEE(2022A4PS0970G)

Student Write-up

PS-II Project Title: GTM Analyst

Short Summary of work done during PS-II : During my internship, I focused on turning manual sales tasks into an automated, data-backed growth engine. My goal was to help the brand expand globally while making our internal processes much faster and more intelligent. I started by connecting Apollo.io with n8n to automate our outbound outreach. This didn't just save hours of

manual searching; it created a steady flow of qualified leads that helped us build an international sales pipeline of over INR 2 Lakh. To ensure we weren't just chasing volume, I used SQL to run cohort analyses and segment our database. This allowed us to pinpoint the top 15% of high-value accounts, ensuring our marketing efforts were focused where they mattered most. Finally, I worked on the website and meta ads itself to make sure those leads actually converted. By applying UI/UX principles and running A/B tests, I optimized the user journey to align with our overall growth strategy. Essentially, I bridged the gap between technical automation and creative design to drive measurable business results.

Tool used (Development tools - H/w, S/w) : SQL ,n8n, apollo, Canva, Figma, Cohort booklets, TeleCRM

Objectives of the project : To bridge the gap between technical automation and sales strategy by streamlining lead to prospect workflows and executing targeted international outbound campaigns to build a high value sales pipeline.

Major Learning Outcomes : Strategic Sales Automation
Learned to design and deploy end-to-end automated workflows (n8n + Apollo) that eliminate grunt work, allowing a focus on high-value closing activities.
Mastered the art of dynamic lead enrichment, ensuring sales outreach is ba

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Shipon Group is made of two verticals, Campus Express and Search your merch. I was part of Campus Express Team which was a logistics company. The working environment was friendly and I got to learn about new things there which i can apply in my real and professional life.

Academic courses relevant to the project : NA

Name: HARITHA AKELLA .(2022A5PS1270H)

Student Write-up

PS-II Project Title: Founder's Office

Short Summary of work done during PS-II : ◦ In charge of outreach, pitching, marketing, designing, while ensuring timely production and delivery of products to customers ◦ Explored whitespace and pitched to over 30 colleges, corporations, and sponsors for new business ◦ Worked with founders to improve inventory efficiency by applying analytical insights and supply chain knowledge ◦ Designed and executed sales strategies that boosted market reach and increased merchandise sales by 40% within six months ◦ Managed vendor relationships to achieve 90% on time-delivery rate and ensure high customer satisfaction

Tool used (Development tools - H/w, S/w) : Canva, Excel, Tableau, Figma

Objectives of the project : Expand the company

Major Learning Outcomes : Understood how to satisfy customer needs while the company was profiting

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Not satisfied.

Academic courses relevant to the project : Management course

PS-II Station : Siemens Energy, Bengaluru

Faculty

Name: Shashank Mohan Tiwari .

Student

Name: SUMIT KUMAR JHA(2022A4PS0795P)

Student Write-up

PS-II Project Title: New Expanding Materials Capabilities

Short Summary of work done during PS-II : Analyzed the Working Limit Loads of Different Matrial Grades and created a template ot ease out the Work of R&D Department along with Credibility

Tool used (Development tools - H/w, S/w) : AnSys R2022, SpaceClaim, AutoCAD, Nautos

Objectives of the project : For Bottom Half Tower lifting PIN, identify the working load at which Specific Materials reaches its practical performance limit

Major Learning Outcomes : Learnings are way to many! From Substance to Abstract, I got to experience a Lots of things
1. Got to learn advanced mechanical Concepts LIKE FEA & CAD & in a Number of Modules in AnSys R2022 from Industry experts with Practical Applications.
2. Structur

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Environment is flexible! The team was very Cohesive. As I was the Only intern, they Cared for me even after 5 pm! They included me to all the Staff trips etc

Academic courses relevant to the project : DFMEA, Mechanics of Solids, CAD

PS-II Station : Siemens PLM, , Pune

Faculty

Name: Pawan Sharma .

Student

Name: VATSAL GOYAL .(2021B1A32325H)

Student Write-up

PS-II Project Title: Development of Data Catalog Service

Short Summary of work done during PS-II : Developed API's and their business logic integrating AWS services for a microservice from scratch using Java spring boot MVC framework..

Tool used (Development tools - H/w, S/w) : S/w- AWS and Java

Objectives of the project : To develop API's and their business logic for a microservice from scratch using Java spring boot MVC controller.

Major Learning Outcomes : Java spring boot

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Very good, friendly environment with lot of learning opportunities. Great work life balance.

Academic courses relevant to the project : Oops, fdsa, OS, CP

Name: KEVIN GEORGE MATHEW .(2022A7PS0238H)

Student Write-up

PS-II Project Title: Audit Logging with Structured Data Ingestion and Querying

Short Summary of work done during PS-II : During my internship at Siemens Digital Industries Software, I designed and implemented a scalable, end-to-end audit logging system using AWS serverless architecture. My primary objective was to ingest, store, and query high-volume log data efficiently without impacting application performance. I built an asynchronous ingestion pipeline using Amazon Kinesis and Firehose to buffer and store logs in a centralized S3 Data Lake. To validate the system's scalability, I developed a serverless workflow using AWS Step Functions that generated over 5 million realistic test records. For data processing, I implemented an asynchronous querying service using AWS Glue and PySpark. A significant achievement in my project was optimizing the report retrieval service. I successfully migrated the system from a polling-based model to an event-driven architecture using Amazon SQS, which ensured immediate report availability and optimized costs. I managed the entire infrastructure using Terraform (IaC) and ensured reliability through automated CI/CD pipelines and end-to-end testing with Postman.

Tool used (Development tools - H/w, S/w) : AWS, Terraform, Python, PySpark, MongoDB, AWS Lamda, AWS Glue, Amazon S3, Amazon Kinesis, Amazon SQS, Amazon Event Bridge, AWS IAM, Postman

Objectives of the project : Asynchronous Ingestion, Test Data Generation, Asynchronous Querying, Secure Retrieval, Deployment & QA

Major Learning Outcomes : Event-Driven & Serverless Architecture, Big Data Engineering, Infrastructure as Code (IaC), DevOps, Cloud Security Best Practices

Details of Papers/patents : Na

Brief Description of working environment, expectations from the company : My experience at Siemens Digital Industries Software was defined by a highly supportive and technically rich environment. I am deeply grateful for the constant encouragement and insightful feedback I received from my mentors and colleagues, whose deep expertise was invaluable to my learning. The culture fostered professional growth, allowing me to work on a challenging and meaningful project that bridged the gap between academic theory and industry practice.

The expectations were high; I was tasked with building critical cloud-native infrastructure rather than simple prototypes. This meant that beyond writing code, I was expected to deliver production-ready solutions complete with robust CI/CD practices and automated testing strategies. I was responsible for designing systems that were scalable, cost-efficient, and secure, ensuring that my work met rigorous industry standards for reliability and performance.

Academic courses relevant to the project : DBMS, Computer Networks, Operating Systems, Data Mining, DSA

PS-II Station : SiFive India Pvt Ltd, Bengaluru

Faculty

Name: A Rekha .

Student

Name: C VARUN .(2021B3AA3031H)

Student Write-up

PS-II Project Title: Automated Floorplanner of SRAM Macros for RISC V cores

Short Summary of work done during PS-II : The objective of the project was to create a script to place sram macros of RISC V cores automatically to get an initial estimate of the PPA. This involved coming up with and implementing an algorithm for placing these macros to reduce wirelength and congestion. I also had to learn to use FusionCompiler to it.

Tool used (Development tools - H/w, S/w) : Synopsys FusionCompiler

Objectives of the project : To automate the floorplanning step of the Physcial Design process.

Major Learning Outcomes : Basics of the Physical Design flow, Learnt of the ways to improve the PPA of a design. How to use FusionCompiler.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment is pretty relaxed.

Academic courses relevant to the project : ADVD, Computer Architecture

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Name: GANDHALE PARTH SOPAN .(2021B4A32365H)

Student Write-up

PS-II Project Title: Physical Design Flow and Execution

Short Summary of work done during PS-II : The internship offered a comprehensive and immersive introduction to the physical design flow, allowing me to experience first hand how complex digital systems progress from RTL descriptions to physically realizable layouts. Through floorplan experimentation, timing and congestion analysis, tool-driven optimization, and the development of automation scripts, I gained a practical understanding of the iterative nature of PD and the many tradeoffs that guide decision-making. The work strengthened my technical

foundation in using industrial EDA tools such as Synopsys Fusion Compiler, PrimeTime, and Verdi, while also introducing me to the dynamic, feedback-driven workflow that characterizes real-world implementation. Just as importantly, it helped me develop a more intuitive sense of how logical structure, physical layout, and tool behavior intertwine in determining final PPA outcomes. The experience demonstrated that successful physical design requires not only technical knowledge of tools and scripts but also the ability to reason about design hierarchy, timing dependencies, and physical constraints at a system level.

Tool used (Development tools - H/w, S/w) : Fusion Compiler, PrimeTime, Verdi, Git, Github

Objectives of the project : Focusing on the RTL-to-GDSII flow with an emphasis on physical design.

Major Learning Outcomes : The learnings of the internship reflect a combination of technical contributions to ongoing
physical design work and substantial growth in understanding the RTL-to-GDSII implementation process.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : It's a helpful learning environment and there's an emphasis on ramping up quickly (as aided by the company) and to start contributing meaningfully. My mentor was a very helpful guy, as well as my manager, and I learned a lot from them.

Academic courses relevant to the project : Computer Architecure, Digita Design, Analog and Digital VLSI Design, FPGA Lab

PS-II Station : Simply Vyapar Apps Pvt. Ltd - Marketing, Bengaluru

Faculty

Name: Vineet Kumar Garg .

Student

Name: PRATYAKSH PRADEEV(2021B1A42808G)

Student Write-up

PS-II Project Title: Management & Optimisation of Performance Marketing channels.

Short Summary of work done during PS-II : Launched 6+ New Campings, Optimised 15+ Existing campaigns, 200+ Adsets & 1000+ creatives month on month, Deployed two Landing Pages, Used AI to create creative variants which surpassed the original creative which it was created from in terms of revenue.

Tool used (Development tools - H/w, S/w) : Meta Ads, Google Ads, Redash, SQL , Prompt engineering,Lovable and other no code tools.

Objectives of the project : Managing Meta , Google & Other Ad platform experiments like Quora , Cross functional activities with Data , Growth & Sales teams to align objectives. Analyse & optimise campaign on campaign, Ad set level & Ad level , micro observe data, advanced analysis of it using Excel, SQL ,etc.& take descisons accordingly. Optimise Funnel building landing pages , Audience pushes and Update Audience based on conversion data of every month.

Major Learning Outcomes : Learnt from basics to advanced of performance marketing fundamentals and also about Meta's algorithm. Learnt how to optimise and take important funnel or campaign decisions based on data.

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Very good Work environment - Supportive & Collaborative, Despite being a startup and some days being high pressure, overall work culture is very healthy.

Academic courses relevant to the project : Business Communication

PS-II Station : Singlestore India Pvt Ltd, Hyderabad

Faculty

Name: Sai Kishor Jangiti .

Student

Name: UNMESH SANDIPANI BHOLE(2021B1A71949G)

Student Write-up

PS-II Project Title: Software Development on Psyduck (Internal HPC testing platform) for SingleStore DB

Short Summary of work done during PS-II : Enhancements to Psyduck Testing Infrastructure with Migrations of modules from Py2 to Py3, Tests/Run notifications on Slack and Email, Phabricator comments, Jira Matching feature, Run-Multiple times Feature, Bisection of failed commits from UI, Indexing of core dumps, UI/UX of test-run metadata

Tool used (Development tools - H/w, S/w) : VScode, MS Copilot, AWS, Python, Javascript, Typescript, Node, Git, Docker, Kubernetes, Grafana dashboards, Prometheus, MySQL

Objectives of the project : Contribute to adding features and also fix bugs for the Psyduck HPC testing platform for SingleStore DB

Major Learning Outcomes : Python, Javascript, Typescript, Node, Git, Docker, Kubernetes, Grafana dashboards, Prometheus, MySQL

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Fast Paced Learning Environment, expected to know technologies beforehand, no learning period, biweekly sprint planning, Remote working all the time.

Academic courses relevant to the project : Data Structures and Algorithms, Database Systems, Operating Systems.

Name: OMKAR SHASHANK SATHE(2021B1A72280G)

Student Write-up

PS-II Project Title: Enhancing SingleStore Database Engine through Fault-Tolerant Querying, Distributed Execution, Parallelized Metadata Retrieval, and Prometheus Observability

Short Summary of work done during PS-II : Enabled returning partial results for queries that would fail if a node in the distributed database cluster was under heavy compute load. Improved performance of information schema queries by paralleizing metadata retrival using remote procedural calls. Extend database engine to expose metrics to Prometheus for b monitoring and observability

Tool used (Development tools - H/w, S/w) : C++, SQL

Objectives of the project : Enhance SingleStore Database Engine through Fault-Tolerant Querying, Distributed Execution, Parallelized Metadata Retrieval, and Prometheus Observability

Major Learning Outcomes : Learnt how distributed databases work on the cloud

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : Environment is conducive for growth and learning
Provide hands on training on projects to help interns get up to speed

Academic courses relevant to the project : Database systems, operating systems, data structures and algorithms

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Name: OM JIGNESH JOSHI(2021B3A70958G)

Student Write-up

PS-II Project Title: Software Engineer Intern

Short Summary of work done during PS-II : The internship at SingleStore gave me great exposure to real-world software engineering, especially in databases and AI-powered services. It started with an onboarding phase, which helped me get familiar with the company's tools, workflows, and overall technical environment. As the internship went on, I moved from learning-focused tasks to working on projects that had a real impact in production. A big part of my internship involved researching AI features in modern database systems, like generating interactive visualizations using Large Language Models and studying how other companies approach similar services. I also got hands-on experience with data analytics tools like Mixpanel, which showed me how user data and observability can guide product decisions. One of the most important parts of my internship was working on an end-to-end internal feature, covering backend development, frontend implementation, testing, and deployment. This helped me improve my

skills in GoLang, TypeScript, and Python, and gave me a better understanding of distributed systems, databases, and deployment using Kubernetes. I also learned how to securely integrate LLM services into backend systems and turn Figma designs into working frontend features. Overall, the internship was a very enriching experience. It gave me a good mix of research, coding, and deployment experience, strengthened my technical and professional skills.

Tool used (Development tools - H/w, S/w) : Tools used during the internship included a personal workstation running Ubuntu, with software such as GoLang, TypeScript, Python, SingleStore, VSCode, Git, Kubernetes, Figma, and Mixpanel.

Objectives of the project : The internship aimed to develop practical expertise in databases, AI service integration, and full-stack feature development within large-scale distributed systems.

Major Learning Outcomes : The internship resulted in strong proficiency in backend, frontend, and database systems, along with practical exposure to AI integration, deployment workflows, and production-grade software development.

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment at SingleStore was very supportive and encouraging for learning. The team was approachable, and everyone was willing to help and share knowledge. Regular discussions, mentoring sessions, and clear documentation made it easy to understand workflows and get up to speed with the codebase. It was a good balance of guidance and independence, allowing me to explore ideas while also receiving feedback to improve my work.

From interns, the company expects a willingness to learn, take responsibility for tasks, and contribute meaningfully to projects. Clear communication, teamwork, and the ability to follow best engineering practices are important. There is also an emphasis on writing clean and reliable code and understanding how features are designed and implemented.

Interns are encouraged to work on tasks that have real impact, from backend development and database design to AI integration and frontend implementation. Attention to detail, problem-solving, and learning from feedback are valued, especially when working with distributed systems, cloud infrastructure, and AI-driven services.

Overall, the internship environment helped me grow technically and professionally. It provided opportunities to work on meaningful projects, learn from experienced mentors, and gain hands-on experience in real-world software development while feeling supported throughout the process.

Academic courses relevant to the project : Computer networks, database management systems, OS, DSA

Name: MEHUL KOCHAR .(2021B3A73032H)

Student Write-up

PS-II Project Title: Regional S4 buckets

Short Summary of work done during PS-II : • Contributing to the multi-region S4 project, designing region-aware data storage and compute for Nova apps to improve latency, compliance (GDPR/HIPAA), and scalability across 18+ regions. • Exploring and prototyping dynamic pool sizing algorithms to auto-scale Nova containers based on interactive load and scheduled jobs, aiming to reduce wait times and optimize infrastructure costs. • Implementing backend mutations and resolvers in GoLang with GraphQL APIs to support seamless synchronization between backend services and frontend applications.

Tool used (Development tools - H/w, S/w) : AWS, GoLang, Kubernetes, Docker, Typescript, React, Nix, Dataloaden, Postgres, S2DB

Objectives of the project : The project revolved around solving latency and compliance issues of storing every data and notebook spin off in 1 bucket to multiple regional buckets, changing the internal infrastructure of the system.

Major Learning Outcomes : Learned a lot of stuff. How to dive deep, importance of soft skills, how to be the real engineer to reverse engineer everything amd unblock yourself.

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The work environment is pretty good. Everyone is supportive and friendly. Just ask any person around and they will be more than ready to help.

Academic courses relevant to the project : DBMS, OOPS, DSA, Information Retrieval,

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Name: SNEHAL YUTIKA .(2021B4A72322H)

Student Write-up

PS-II Project Title: Machine Learning Feature for SingleStore

Short Summary of work done during PS-II : During PS-II, I worked on developing a production-ready backend system that automated machine learning workflows for anomaly detection and classification. The core contribution was the design of dataset-independent training pipelines, which allowed models to be trained, tested, and deployed with minimal user intervention. This abstraction enabled the same system to operate across diverse datasets without custom tuning, significantly improving usability and scalability. I implemented the backend primarily in Golang, focusing on performance, concurrency, and maintainability. GraphQL queries and mutations were used to manage API communication, allowing flexible interaction between clients and the ML backend. The system supported one-click execution of the ML pipeline, covering data ingestion, training, evaluation, and deployment. Through this project, I gained strong exposure to backend system design, API development, and the integration of machine learning workflows into real-world software products. I also developed a deeper understanding of how ML models are operationalized in production environments, balancing algorithmic accuracy with system efficiency and extensibility. Additionally, collaborating with cross-functional teams helped me understand product expectations, scalability concerns, and real customer use cases.

Tool used (Development tools - H/w, S/w) : Programming Language: Golang, API Framework: GraphQL, Machine Learning Libraries (for model integration), Version Control: Git

Objectives of the project : To design and develop a scalable backend system that automates end-to-end machine learning workflows.To enable seamless anomaly detection and classification across multiple datasets without manual reconfiguration.To build dataset-independent training pipelines that support one-click model training, evaluation, and deployment.To expose machine learning functionalities through efficient and flexible APIs for easy integration with other services.

Major Learning Outcomes : Machine Learning, Backend Engineering, Dataset-Independent Pipelines, Model Deployment, Scalable Systems.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment was highly collaborative and product-driven, emphasizing clean design, scalability, and reliability. I worked closely with backend engineers, AI engineers, and product stakeholders to align the system design with real customer requirements. Regular code reviews, design discussions, and sprint planning sessions ensured high code quality and continuous learning.
The company encouraged ownership and independent problem-solving, while also providing mentorship when tackling complex system-level challenges. Expectations included writing production-ready code, adhering to best practices, and designing systems that could scale with increasing data and usage demands. Emphasis was placed on building extensible solutions rather than quick prototypes.

Academic courses relevant to the project : Machine Learning, Foundations of Data Science, Algorithms and Data Structures, Database Systems, Operating Systems

Name: AIMAN .(2021B5A73177H)

Student Write-up

PS-II Project Title: Development and Integration of AI-Driven Incident Automation and Core Monitoring Enhancements at SingleStore

Short Summary of work done during PS-II : During my PS-II internship at SingleStore, I worked on both AI-driven incident automation and core platform engineering projects. In the first phase, I contributed to the development of OpsBot, a conversational incident assistant designed to help on-call engineers query system internals using natural language. My work involved backend and frontend development, integrating OpsAPI tools, implementing cluster-scoped context handling, building a persistent ContextStore, and debugging Just-In-Time approval workflows. OpsBot was successfully deployed to production and demonstrated to senior leadership, following which it was adopted into LiveSite debugging workflows, marking a significant organizational impact. In the second phase, I transitioned to core engineering work within the Helios and Helios Monitoring teams. I contributed to onboarding enhancements, backend migrations, and frontend changes. I worked extensively with Prometheus and Grafana to build ServiceMonitors, PodMonitors, and customer-facing dashboards for SingleStore Flow. I also implemented customer-requested improvements to alerting email templates across both control plane and data plane. Additionally, I enabled monitoring support for new Engine Z-pages and began working on the Pusher component responsible for metrics ingestion into the monitoring database. These contributions strengthened SingleStore's production monitoring and observability infrastructure.

Tool used (Development tools - H/w, S/w) : Go, Python, React ,SingleStore (MemSQL) ,Monitoring & Observability: Prometheus, Grafana APIs: GraphQL, REST

Objectives of the project : The primary objective of the project was to design, build, and deploy an intelligent operational assistant (OpsBot) to simplify incident debugging and system diagnostics at SingleStore. The project aimed to enable engineers to interact with complex system internals such as database schemas, monitoring metrics, and Kubernetes infrastructure using natural language, while ensuring safety through human-in-the-loop approval mechanisms. A secondary objective was to contribute to core cloud platform and monitoring systems within Helios by enhancing onboarding workflows, observability, alerting, and metrics ingestion pipelines. Overall, the project sought to improve reliability, reduce incident resolution time, and strengthen production monitoring capabilities.

Major Learning Outcomes : This internship helped me gain hands-on experience with production backend systems in Go, apply conversational AI to operational workflows, and understand cloud-native monitoring using Kubernetes, Prometheus, and Grafana. I also improved my ability to deb

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment at SingleStore is genuinely great. Everyone is friendly, approachable, and always ready to help, which made it easy to learn and adapt. There is a strong culture of collaboration, and I always felt comfortable asking questions or discussing ideas.

Academic courses relevant to the project : DBMS, OS, AI, Computer Networks

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PS-II Station : SmalBlu - Product, Ahmedabad

Faculty

Name: Pawan Sharma .

Student

Name: ANURAG THAKAN(2022A4PS0955P)

Student Write-up

PS-II Project Title: Enhancing user onboarding experience

Short Summary of work done during PS-II : It was thing for my career growth and it was great improvement for my skills especially soft skills

Tool used (Development tools - H/w, S/w) : canva

Objectives of the project : the objective of our project was to make a more user friendly onboarding experience

Major Learning Outcomes : I learned how to design a new product development

Details of Papers/patents : we used mainly our company website and its backend.

Brief Description of working environment, expectations from the company : working environment was great and every body was supportive

Academic courses relevant to the project : SCM

Name: S PARIMESH(2022A4PS0962P)

Student Write-up

PS-II Project Title: Enhancing the Onboarding experience for Clients

Short Summary of work done during PS-II : During the Practice School–II internship at SmalBlu, our work mainly focused on improving the onboarding experience for new users. In the first phase, we spent time understanding the product, its users, and how the platform fits into the market. Through product walkthroughs, discussions with team members, and basic usability analysis, we identified onboarding as a key area where users were facing confusion and drop-offs. Based on these observations, we worked on simplifying the onboarding flow to make it clearer and easier for first-time users. We created initial sketches and wireframes and tested early ideas through basic usability checks. As the internship progressed, our work became more execution focused. We collaborated closely with the design, engineering, data, and customer success teams to understand technical constraints and practical implementation challenges. We

also gained exposure to backend systems and API flows to ensure that our design suggestions were realistic. Another important part of the project involved studying how AI-generated insights were presented to users and suggesting improvements to improve clarity and trust. We participated in a small cross-functional feature simulation, prepared a structured feature launch plan, and observed real customer feedback through customer success interactions. Towards the end, we identified key onboarding metrics such as completion rate and to measure success. The project concluded with proper documentation and handover, giving us a complete view of how product ideas move from understanding the problem to execution and iteration.

Tool used (Development tools - H/w, S/w) : S/w - Figma, Whimsical, n8n

Objectives of the project : To create a dashboard and ease the onboarding process and experience for clients.

Major Learning Outcomes : Learned Figma, whimsical, Loveable.ai etc tools for wireframing and mapping product outcomes to business outcomes.

Details of Papers/patents : nil

Brief Description of working environment, expectations from the company : Good working environment , supportive and flexible.

Academic courses relevant to the project : nil

PS-II Station : Snitch Apparels Private Limited - Growth Analyst, Bengaluru

Faculty

Name: Perumal Jayakumar

Student

Name: PAARTH CHANDNA(2021B1A22731P)

Student Write-up

PS-II Project Title: Data-Driven Process Automation and Product Lifecycle Optimization at Snitch

Short Summary of work done during PS-II : The internship at Snitch Apparels concentrated on boosting operational effectiveness and agility in the fast-fashion environment. The core focus was on replacing manual processes with structured, data-driven systems. Key projects included: Data Reporting and Inventory Planning: Established a central analytical tool for the Production and Planning teams. This tool tracked and reconciled monthly demand projections against supply plans and actual warehouse stock arrivals, ensuring accurate order quantities. I also developed a recurring data routine to identify and quickly sell off low-stock, slow-moving items at reduced prices, which enhanced cash flow. Workflow Digitization: Crucial internal application that manages the end-to-end process from design concept to final production. I prioritized and managed the integration of features like detailed cost tracking, maintaining a history of product samples, and setting up automated alerts via the company's communication platform to flag delays and ensure accountability across teams. Logistics Efficiency: Created a logic system to optimize where new inventory is stored across the company's two main fulfillment centers. This system used past sales data to intelligently split stock, positioning products closer to predicted customer demand. Performance Strategy: Conducted detailed performance reviews for all major apparel lines (e.g., Trousers, Shirts). This analysis guided merchandising and design decisions by recommending specific product mixes, optimizing inventory levels for best-selling items, and setting competitive price points based on conversion rates. The overall effort established a unified data source and successfully reduced delays in the product launch cycle.

Tool used (Development tools - H/w, S/w) : SQL, Maplemonk, Metabase, Bubble.io

Objectives of the project : Establish and maintain a centralized Business Intelligence infrastructure to serve as the single source of truth for key metrics, including demand forecasting, supply tracking, and inventory liquidation, enabling data-driven decision-making. Product Manage and drive adoption of a bespoke internal Design-to-Production (D2P) workflow tool using

the RICE framework, focusing on reducing lead times, improving process transparency, and integrating automated communication alerts (SLAs). Generate actionable strategic insights through deep-dive category performance analysis (Volume, Efficiency, Financial metrics) to optimize inventory depth, pricing strategies, product assortment mix, and improve overall gross margins.

Major Learning Outcomes : SQL, Business Understanding , Product Management

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Fast Paced working environment, with strict deadlines for tasks, supportive co-workers

Academic courses relevant to the project : NA

PS-II Station : Snitch Apparels Private Limited - Special Projects_Supply Chain Ops, Bengaluru

Faculty

Name: Perumal Jayakumar

Student

Name: ANCHIT MAHESHWARI(2021B5A42452G)

Student Write-up

PS-II Project Title: Special Projects - Supply chain operations

Short Summary of work done during PS-II : • Launched the Shoes category Go-To-Market strategy, scaling to 8 million in monthly sales in stores. • Directed cross-functional project execution for long-tail categories, aligning design, sourcing, marketing, and logistics teams to ensure a seamless flow from prototyping and procurement to warehouse inwards and channel distribution. • Drove supply side strategy as long tail category lead, optimizing inventory with MapleMonk dashboards. • Designed the perfume incentive model, driving a 35% increase in revenue from the offline channel. • Designed and deployed an automated process improvement system using N8N and SQL queries on Snowflake to detect inventory and sales anomalies, reducing issue response time.

Tool used (Development tools - H/w, S/w) : Snowflake, Metabase, N8N, SQL, Python , Maplemonk.

Objectives of the project : Pick up Long Tail categories (NON APPRELLS) at Snitch, streamlining the pipeline from design to channel distribution.

Major Learning Outcomes : - Working in different teams, working as project lead, leading the zero to one operations in a fast paced startup.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : It is a faced paced start up, one should be ready to do all the grunt work if needed, one has to deal with various departments to get things done. The best part is you get to work directly with founding members in some sense, so get to learn how they take decisions at a higher level.

Academic courses relevant to the project : Principle of Economics, Engineering Optimisation

Name: DHRUV PATIL(2022A1PS0960G)

Student Write-up

PS-II Project Title: Setup of Control Tower for Logistics and Automation and Tracking of the success of SnitchX Program

Short Summary of work done during PS-II : Enabled proactive real-time monitoring of logistics operations, allowing early detection of issues and faster corrective action. Gained meaningful insights into customer behaviour and online enrolment patterns, helping inform future engagement strategies despite discontinuing the calling program. Improved offline enrolment consistency by delivering simplified, timely, and direct reports to store-level teams through automated communication. Ensured relevant and stock-aware freebie distribution through data-driven curation and realtime inventory tracking, reducing manual decisionmaking effort. Streamlined customer support tracking with a unified dashboard and automated hourly reports, resulting in faster resolutions and clearer operational visibility

Tool used (Development tools - H/w, S/w) : Snowflake Metabase Maple Monk n8n Amazon d3

Objectives of the project : To implement a control tower which monitors the real time data

Major Learning Outcomes : Overall, this experience strengthened my technical abilities in Snowflake, n8n, Metabase, SQL, and dashboard design, while also improving my understanding of supply chain metrics, customer loyalty operations, and business performance measurement.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working enviroment was great, the office was very flexible and it was fun to be there

Academic courses relevant to the project : None

PS-II Station : Spanda.AI, , Hyderabad

Faculty

Name: Y V K Ravi Kumar .

Student

Name: ARYAN POLA .(2022A4PS1099H)

Student Write-up

PS-II Project Title: AI empowered chatbots

Short Summary of work done during PS-II : Worked on DevOPs to have infrastructure as code for automated deployment using helm and terraform, backend using fast api, asyncio, batching, llm inference, model distillation, frontend using html, react, css

Tool used (Development tools - H/w, S/w) : Kubernetes, Docker, python, javascript

Objectives of the project : Chatbots and applications using AI

Major Learning Outcomes : Backend, DevOPs, frontend

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : Fast paced company but you would get a lot to learn in the PS timeline. You would get exposure to all fields in the market.

Academic courses relevant to the project : OS, DBMS

Name: SAKSHAM GUPTA .(2022A4PS1195H)

Student Write-up

PS-II Project Title: AI empowered chatbots

Short Summary of work done during PS-II : Team worked on building application in edtech domain. Worked full stack on frontend, backed and database parts of application

Tool used (Development tools - H/w, S/w) : Docker, python, LLM's

Objectives of the project : Application Building

Major Learning Outcomes : AI/ Ml, LLM inferencing

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Good, fast paced.

Academic courses relevant to the project : AI, Ml

PS-II Station : Spinny's, Gurgaon

Faculty

Name: Gaurav Nagpal .

Student

Name: ARNAVA RANE(2022A1PS0865G)

Student Write-up

PS-II Project Title: Cx support

Short Summary of work done during PS-II : Assisted the general manager in whatever capacity we could aiding the the customer experience team and implementing high level management objectives

Tool used (Development tools - H/w, S/w) : Sheets

Objectives of the project : Ai implementation

Major Learning Outcomes : Corporate exposure

Details of Papers/patents : N/a

Brief Description of working environment, expectations from the company : Working hours were very long and bad 10-7 monday to saturday, most of the days little to no work was given to the interns and we had to ask for the work

Academic courses relevant to the project : Finance Minor

PS-II Station : SRTD ISRO - Ahmedabad, Ahmedabad

Faculty

Name: Vijayalakshmi Anand .

Student

Name: DEVANGI CHAUDHARY(2021B2A82309P)

Student Write-up

PS-II Project Title: Algorithmic Analysis and Inversion of Martian Radar Sounding Data from MARSIS and SHARAD

Short Summary of work done during PS-II : During my internship at ISRO's Space Applications Centre, I developed and implemented an inversion framework to estimate subsurface electromagnetic properties of Mars using orbital radar sounder data. The project involved analyzing data from two instruments: MARSIS (Mars Express) and SHARAD (Mars Reconnaissance Orbiter). I created a physics-based forward model that simulates radar wave propagation through a two-layer Martian subsurface, relating echo intensity ratios to time delays and dielectric properties. To address the ill-posed inversion problem, I implemented a hybrid Bayesian-Genetic Algorithm approach that incorporates prior geophysical constraints. The methodology included automated peak-picking algorithms, statistical conditioning using empirical cumulative distribution functions, and uncertainty quantification. I applied this framework to two key regions: the South Polar Layered Deposits (SPLD) and equatorial areas. For SPLD, results confirmed an ice-rich layer ($\varepsilon \approx 2.75$-4.0) over basaltic substrate ($\varepsilon \approx 7.3$-8.1). For equatorial regions, I detected evidence of buried ice ($\varepsilon \approx 2.6$) beneath dry regolith, validating recent discoveries. Using higher-resolution SHARAD data, I calibrated the forward model's bandwidth correction factor ($C=0.51$), demonstrating cross-instrument consistency. The work contributes to understanding Martian subsurface volatile distribution and provides a robust methodology applicable to future planetary radar missions.

Tool used (Development tools - H/w, S/w) : MATLAB

Objectives of the project : This project focuses on physics-based forward modeling and inversion of Martian radar sounding data from MARSIS and SHARAD. Robust algorithms

incorporating Bayesian inference, Markov Chain Monte Carlo, and Genetic optimization were developed to infer subsurface properties, enabling improved interpretation of Martian radar reflections and subsurface characterization.

Major Learning Outcomes : Planetary Radar Data Processing: Gained hands-on experience processing MARSIS and SHARAD radar datasets, including frame extraction, peak identification, and statistical conditioning of radar echoes.
Forward Modeling & Inversion: Developed and implemente

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Working Environment: Conducted research within the Atmospheric and Trans-ionospheric Wave Propagation Group (ATVG) at EPSA Division, SAC-ISRO. The environment was highly collaborative with regular mentorship from scientists, access to specialized computational resources, and opportunities to participate in technical discussions. The culture emphasized scientific rigor, innovation, and practical application of theoretical concepts.
Expectations from the Organization: I expected to contribute meaningfully to ongoing planetary science research while developing professional research skills. The organization provided excellent mentorship, access to real planetary datasets, and exposure to cutting-edge radar sounding methodologies. I anticipated gaining experience in the complete research lifecycle—from problem formulation to documentation—within a premier space research institution, which was fully realized through guided independence and constructive feedback.

Academic courses relevant to the project : NA

PS-II Station : ST Microelectronics, Noida

Faculty

Name: Pawan Sharma .

Student

Name: ROHAN ARORA(2021B1A31693P)

Student Write-up

PS-II Project Title: Performing Synthesis and PnR using Synopsys Design Compiler and Synopsys Fusion Compiler

Short Summary of work done during PS-II : Performing Synthesis and PnR using Synopsys Design Compiler and Synopsys Fusion Compiler. Got to work on AIMC (Analog in Memory Computing) Tile and DIMC (Digital in Memory Computing) Tile Tape out.

Tool used (Development tools - H/w, S/w) : Synopsys Design Compiler and Synopsys Fusion Compiler.

Objectives of the project : Performing Synthesis and PnR using Synopsys Design Compiler and Synopsys Fusion Compiler

Major Learning Outcomes : Got to understand the complete RTL to GDS flow. Learned to run steps in the flow specifically the synthesis and PnR part of the flow. Got understanding of Digital In-memory Computing Tile.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Working environment is good. Office is quite spacious. Large number of teams in the company, so learning and work done widely varies from team to team.

Academic courses relevant to the project : Digital Design, Semiconductor Fab Tech, Analog and Digital VLSI

PS-II Station : Standard Chartered - Data Engineer, Bengaluru

Faculty

Name: Gaurav Nagpal .

Student

Name: SASWAT SUMAN DWIBEDI(2021B1A42293P)

Student Write-up

PS-II Project Title: Data Analyst - Global Internal Audit Analytics

Short Summary of work done during PS-II : As a Data Analyst intern in the Global Internal Audit Analytics team, I developed automated control checks using SQL and Excel to validate financial and regulatory metrics, reducing manual validation time by approximately 40%. I created monitoring systems to track financial exposures and flag limit breaches in real-time, enabling proactive risk management. I conducted thorough investigations into data discrepancies, performing root cause analysis to uphold data integrity and address operational risks. Additionally, I enhanced the team's data infrastructure by maintaining a comprehensive data dictionary and establishing relationships between data entities, which improved the reliability and performance of Power BI dashboards used by audit teams. My work directly contributed to strengthening the control environment and provided actionable insights for the reporting team.

Tool used (Development tools - H/w, S/w) : Excel, Power BI, SQL, Python

Objectives of the project : Develop automated control checks for financial metrics Monitor financial exposures and limit breaches Enhance data integrity and quality assurance Improve data infrastructure for audit dashboards Reduce operational risk through data analytics

Major Learning Outcomes : Gained proficiency in SQL for data extraction and automation
Developed advanced Excel skills for financial analysis
Understood banking regulations and risk management frameworks
Learned to translate business requirements into technical solutions

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment at Standard Chartered was highly professional and collaborative, with a strong emphasis on data-driven decision making. The Global Internal Audit function operated with strict adherence to compliance and regulatory standards. Expectations included delivering high-quality analytical solutions under tight deadlines, maintaining absolute data accuracy, and effectively communicating technical findings to non-technical stakeholders. The company expected interns to take ownership of projects, demonstrate proactive problem-solving, and contribute meaningfully to the team's objectives. There was a strong focus on continuous learning and understanding the banking domain, particularly risk management and control frameworks. The environment encouraged innovation in automation while ensuring all solutions met the bank's rigorous security and compliance standards.

Academic courses relevant to the project : Database Management Systems
Financial Accounting
Business Analytics
Risk Management
Software Engineering
Statistics
Operations Research

Name: SATYAM KUMAR(2021B1A42813G)

Student Write-up

PS-II Project Title: Audit Analytics website development, High Value payments Automation

Short Summary of work done during PS-II : During my Practice School–II at Standard Chartered Bank, GBS Bangalore, I worked with the Data Science and Analytics team on audit analytics and automation initiatives. My work primarily focused on building scalable data solutions and improving accessibility of audit-related information across the organization. A key contribution was the development of an Audit Analytics Website, designed using HTML, CSS, and JavaScript and integrated into the bank's SharePoint environment. The platform served as a centralized repository for audit analytics tools, documentation, and internal links, significantly reducing manual effort and improving ease of access. The website was showcased during Audit Analytics Month and received appreciation from senior management for its usability and impact. In parallel, I worked on automation and ETL pipelines using Dataiku, Python, PySpark, and SQL. I contributed to automating high-value payment monitoring by identifying transactions that failed mandatory callback and signature verification checks, thereby strengthening fraud risk management and regulatory compliance. Additionally, I supported database updation for legacy automation use cases—specifically Insurance Monitoring and Valuation Monitoring—by modifying and re-running Dataiku DA scenarios across 10+ countries and multiple month-end reporting periods. This ensured auditors had access to up-to-date, consistent datasets without manual intervention. Overall, the internship strengthened my skills in analytics, automation, web development, and enterprise data workflows while providing hands-on experience in delivering production-level solutions in a regulated banking environment.

Tool used (Development tools - H/w, S/w) : Dataiku, HTML/CSS/JS , SQL, PySpark,Python

Objectives of the project : 1. To create a website for Audit Analytics team in order to showcase tools made by the Analytics and Data Science team. 2. Create an end to end ETL pipleline in order to automate the signature verification and callback process

Major Learning Outcomes : Learnt how to make end to end automation in Dataiku. Also learnt how to do UI/UX design for Analytics website

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at Standard Chartered Bank was highly professional, structured, and driven by strong ethical and compliance standards. I worked within the Data Science and Analytics team, where collaboration, accountability, and attention to detail were integral to daily operations. The team followed well-defined processes, documentation practices, and review mechanisms, reflecting the rigor required in a global banking environment. Regular interactions with managers and peers encouraged open communication, constructive feedback, and continuous learning.
The organization emphasized a strong culture of integrity, data security, and responsible use of technology. Mandatory trainings on ethics, data protection, workplace conduct, and responsible AI usage ensured that all employees, including interns, were aligned with regulatory and organizational expectations. The work culture promoted discipline, ownership of tasks, and adherence to deadlines, while also providing a supportive environment for learning and skill development.

Academic courses relevant to the project : CP

PS-II Station : Standard Chartered - Data Engineer, Bengaluru

Faculty

Name: Gaurav Nagpal .

Student

Name: YATHARTH AGARWAL(2021B1A82299P)

Student Write-up

PS-II Project Title: GIA Data Engineer - Intern

Short Summary of work done during PS-II : My experience during PS-II was characterized by a very slow-paced start and a relatively light workload. Projects were assigned quite late in the internship, which meant a significant portion of the term was spent waiting for direction rather than engaging in hands-on tasks. Even once the initial onboarding was complete, there was very little work given to interns overall. The assignments tended to be limited in scope, and it often felt as though there was a lack of trust in allowing interns to handle more substantive or sensitive responsibilities. While the team was approachable, the hesitation to delegate meaningful projects made it difficult to fully integrate into the core functions of the department. Ultimately, while the atmosphere was stress-free, it was not the most ideal environment for rapid career growth. The lack of high-impact deliverables and the delayed start resulted in an experience that was more about passive observation than active professional development. For those seeking a rigorous, fast-paced internship with heavy responsibility, this environment might feel a bit too restrictive.

Tool used (Development tools - H/w, S/w) : Python (all popular data libraries such as Pandas), SQL, Dash, Tableau, SharePoint, Dataiku, Databricks

Objectives of the project : Creation and maintenance of internal tools and automation especially in the audit department

Major Learning Outcomes : Learned to collaborate in a real life high speed working environment, learnt to use version control in a professional manner, learnt about the business of the bank in high detail, learned to gain expertise in platforms like Dataiku

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : During my internship, I found the working environment to be exceptionally relaxed and positive, striking a great balance between professional rigor and personal well-being. We followed a five-day work

week with a flexible hybrid model, requiring a maximum of two days of offline work. This allowed for meaningful in-person collaboration without the burnout of a daily commute.

One of the standout features was the two-month training period, which is much more comprehensive than a typical internship induction. Rather than being thrown into the deep end, I spent the first eight weeks in a structured learning environment—attending technical workshops, shadowed by mentors, and gaining a deep understanding of the bank's systems and global operations. This long ramp-up period ensured I felt fully confident and equipped before taking on high-impact responsibilities. The company expects you to be a proactive learner and a collaborative team player, but in return, they provide an incredibly supportive space where you are treated as a valued professional from day one.

Academic courses relevant to the project : Computer Programming, DBMS, OS

PS-II Station : Standard Chartered - Data Science, Bengaluru

Faculty

Name: Gaurav Nagpal .

Student

Name: NETI SRUTI DARSHINI(2021B1A33212H)

Student Write-up

PS-II Project Title: Document translator

Short Summary of work done during PS-II : I worked on translation tool.

Tool used (Development tools - H/w, S/w) : Python

Objectives of the project : Translation

Major Learning Outcomes : Hands on experience in machine learning

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Good work culture

Academic courses relevant to the project : ML

Name: SHAANTANU JAIN .(2021B5A82926H)

Student Write-up

PS-II Project Title: Data Science Intern

Short Summary of work done during PS-II : I primarily skilled up in with my industry courses and did one project. My project implements an end-to-end NLP-driven risk classification engine, rebuilt from a Streamlit prototype into a production-ready Flask application embedded in a Dataiku webapp. It processes large volumes of conversational free-text from investigation reports, audit findings, and compliance documents, and classifies them into risk categories such as Fraud, AML, and Operational Risk using a hybrid of statistical and rule-based methods. At its core, the backend integrates a custom TextRank implementation for category-specific keyword extraction from historical labeled corpora, combined with a TF-IDF vectorization and cosine similarity pipeline for matching new documents against learned keyword sets. The preprocessing layer performs text cleaning, lemmatization, negation and confirmation detection, and conflict resolution to adjust similarity scores contextually, reducing false positives in cases like “no evidence of fraud” while boosting clear affirmative signals. The frontend is a six-panel, SPA-style interface with Standard Chartered branding, supporting keyboard and button-based navigation, file uploads,

parameter selection, and interactive result views. Panels cover the full workflow: data ingestion, keyword generation, keyword upload, matching configuration, and results exploration with confidence scores and multi-category detection. The system exports audit-ready Excel outputs with keyword highlighting and structured CSVs for downstream integration. Across the stack, the design addresses Dataiku environment constraints, session and state management between panels, performance on large Excel datasets, and robust error handling with clear status messaging, making it suitable for enterprise compliance and investigation workflows.

Tool used (Development tools - H/w, S/w) : Dataiku DSS

Objectives of the project : Application of Data Science concepts and creation of Webapps based on the project requirements.

Major Learning Outcomes : Dataiku DSS, Flask, NLP Transformers

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The work environment was good and the team was very friendly and frank. The mentor helped me out a lot and gave me time to address my doubts and issues faced.

Academic courses relevant to the project : Machine Learning

Name: HARSHAL BHAMBHANI .(2022A3PS1809H)

Student Write-up

PS-II Project Title: LMA Clause Identification Tool

Short Summary of work done during PS-II : Technical Implementation The solution utilizes a dual-model NLP architecture designed for high precision in legal domains: Classification: A fine-

tuned DistilBERT model classifies text chunks into specific clause types (e.g., Governing Law, Sanctions). To solve extreme class imbalance—where irrelevant data comprises over 90% of documents—Harshal implemented a 20x manual class weight boost to the loss function, forcing the model to prioritize rare relevant clauses. Contextual Matching: A specialist SentenceTransformer (fine-tuned with contrastive learning) performs semantic search to match extracted clauses to ideal standard "Sample Language". Data-Driven Precision: The inference pipeline uses clause-specific confidence thresholds derived via a "Minimum Correct Confidence" method on validation data to reject low-certainty predictions. Workflow & Deployment The end-to-end pipeline features robust PDF parsing and overlap chunking to preserve legal context. Prototyped in Streamlit and deployed as an enterprise web application on Dataiku, the tool provides auditors with high-confidence clause detection and contextual mapping for standardized compliance verification.

Tool used (Development tools - H/w, S/w) : Core Machine Learning & NLP Hugging Face Transformers: Facilitates the loading and fine-tuning of the DistilBERT classification model. Sentence-Transformers: Provides the framework for loading and fine-tuning high-precision SBERT embeddings.

Objectives of the project : Develop a Data Analytics Tool in Dataiku to automate the identification and classification of standard LMA clauses in financial documentation.

Major Learning Outcomes : Major learning outcomes from your LMA Clause Identification project include:

* Model Fine-Tuning: Expertly adapted BERT and SentenceTransformer models for high-accuracy legal clause classification and semantic matching.
* Imbalance Handling:

Details of Papers/patents : Some research papers were used as reference

Brief Description of working environment, expectations from the company : Company is still not telling who all are getting the ppo

Academic courses relevant to the project : ML

PS-II Station : Steer Advisors, Mumbai

Faculty

Name: Uma Nagarajan .

Student

Name: VEDANT VIVEK SHENDE(2021B3A72136G)

Student Write-up

PS-II Project Title: Investment banking intern

Short Summary of work done during PS-II : Deal sourcing to preparing collaterals to supporting investor conversations. Front end exposure to investment banking

Tool used (Development tools - H/w, S/w) : Software - excel , PPT, Bloomberg

Objectives of the project : Prepare deal collaterals and support in deal running process

Major Learning Outcomes : Learned about end to end deal flow in investment banking

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Small, lean team , direct work under seniors

Academic courses relevant to the project : BAAV, FuFa

PS-II Station : STMicroelectronics - Analog / Mixed Signal, Noida

Faculty

Name: Pawan Sharma .

Student

Name: VAIBHAV VIVEK(2021B2A82747P)

Student Write-up

PS-II Project Title: Understanding the design of bulding blocks for Discrete Time Delta Sigma Modulators

Short Summary of work done during PS-II : As an Analog/Mixed-Signal Design Intern, I was immersing myself in cutting-edge precision data converter development. My primary focus was on sigma-delta modulator design and related analog IP blocks, where I leveraged oversampling and noise-shaping techniques to achieve high resolution and dynamic range in mixed-signal systems. I also contributed to AI-accelerated optimization workflows, automating design-space exploration to fine-tune specifications and boost signal-to-noise ratio (SNR) more efficiently than traditional methods—streamlining what would otherwise be exhaustive manual iterations.

Tool used (Development tools - H/w, S/w) : Cadence Virtuoso, Spectre, Eldo, Shell Scripting, python

Objectives of the project : AI-acceleration of design workflows

Major Learning Outcomes : Mastered Cadence Virtuoso workflows for schematic design, Spectre simulation.

Applied AI-accelerated optimization to analog circuits, automating parameter sweeps to improve design efficiency.
Gained first-principles insight into analog circuits.

Details of Papers/patents : NIL

Brief Description of working environment, expectations from the company : During my internship at ST, the working environment stood out for its collaborative and technically rich atmosphere, with supportive teams and modern infrastructure. Interns received equal treatment to full-time staff in project involvement, fostering hands-on learning in a friendly, low-pressure setting praised across reviews.

Academic courses relevant to the project : Microelectronic Circuits, Analog and Digital VLSI Design, Analog Electronics

PS-II Station : STMicroelectronics - Digital Design & Verification, Noida

Faculty

Name: Pawan Sharma .

Student

Name: KARTHIKEYA KUCHIBHATLA .(2021B3A31024H)

Student Write-up

PS-II Project Title: DFT insertion on P18 DIMC TILE

Short Summary of work done during PS-II : Insert scan chains in DIMC tile and run ATPG and simulate the patterns

Tool used (Development tools - H/w, S/w) : tetramax, fusion compiler, design compiler

Objectives of the project : Insert scan chains in DIMC tile and run ATPG and simulate the patterns

Major Learning Outcomes : DFT, Scan insertion , ATPG

Details of Papers/patents : none

Brief Description of working environment, expectations from the company :

Academic courses relevant to the project : ADVD, DD , MEC,

Name: VASHISHTH PATEL(2021B4A82781G)

Student Write-up

PS-II Project Title: DFT flow on stellar processors

Short Summary of work done during PS-II : • Implemented primary and secondary snapshot methodologies on the G5 processor using Synopsys TetraMAX, executed regression with 25K+ ATPG patterns in Cadence vManager, and performed detailed flop-level failure debug. • Evaluated alternative fault models on the P7 processor within TetraMAX, assessing fault coverage and impact on test effectiveness. • Developed an automation script in Shell to correlate failing patterns with failing flops, streamlining failure triage and accelerating debug cycles.

Tool used (Development tools - H/w, S/w) : Synopsys Tetramax, xcelium and xceliumagile, cadence simvision

Objectives of the project : Tapeout of processlr in stellar G series

Major Learning Outcomes : Learnt about SoC cycle, how does different domain collaborate to produce a chip, leant about Design for testability

Details of Papers/patents : Na

Brief Description of working environment, expectations from the company : Very friendly. All the staff including are approachable. Always ready to help you whenever you are stuck or have some doubt

Academic courses relevant to the project : Digital design

PS-II Station : STN 10xscale Technology Private Limited - AI Tools, Hyderabad

Faculty

Name: Mrityunjay Kumar

Student

Name: DINESH KUMAR(2022B4PS1516P)

Student Write-up

PS-II Project Title: AI-Driven Recruitment and Job Application Automation

Short Summary of work done during PS-II : My project, The Auto Job Application Agent extended learnings into real-world automation by integrating LangChain, LangGraph, and MCP

Playwright tools to build an end-to-end system capable of parsing forms, minimizing token usage, and applying for jobs autonomously. This project underscored the challenges of efficiency, stability, and scalability when deploying LLM-based agents in production-like environments. In some other projects, I contributed to enhancing resume generation workflows by refining prompt engineering, improving formatting, and optimizing content relevance. I worked on resume-job description matching, skills extraction, and scoring systems majorly query optimzation part. And lastly i worked on building a RAG pipeline to get content(books content to feed LLM to answer properly) using MCP tools and then creating embedding of the content and on querying something it used to return top 5 chunks based on the cosine similarity.

Tool used (Development tools - H/w, S/w) : VSCode, Langchain, Langgraph, MCP playwright tools, Git, RAG, Python,

Objectives of the project : Majorly, to build an application that can apply jobs automatically, without human intervention(as much as possible).

Major Learning Outcomes : Together, these projects have strengthened my technical skills in LLM orchestration, workflow automation, embeddings, and tool integration, while also sharpening my problem solving abilities in handling efficiency bottlenecks and user experience challenge

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Working environment was good and friendly.

Academic courses relevant to the project : NA

PS-II Station : STN 10xscale Technology Private Limited - Healthcare, Hyderabad

Faculty

Name: Mrityunjay Kumar

Student

Name: ARUN KARTHIK B.T .(2022A3PS0635H)

Student Write-up

PS-II Project Title: Healthcare

Short Summary of work done during PS-II : During my PS-II, I developed an AI-driven Raspberry Pi robot capable of autonomous navigation based on sound source localization. The system uses four omnidirectional microphones configured as a single four-channel audio device through an ALSA asoundrc setup. By applying cross-correlation–based Time Difference of Arrival (TDoA) estimation, the robot determines the direction of incoming sound and navigates accordingly. This involved real-time audio signal processing, multi-channel synchronization, and precise direction estimation under hardware constraints. In parallel, I designed and implemented a medical AI agent powered by AgentFlow, our 10xScale AI framework. This agent serves as the cognitive layer of the robot and is capable of understanding natural human speech. The system is built with two operational modes—Patient Mode and Doctor Mode—allowing context-adaptive responses based on the user category. In Patient Mode, the AI provides simplified explanations and general guidance, whereas in Doctor Mode, it offers more technical insights suited for clinical use. Additionally, the agent supports document, medical report, and prescription analysis, enabling automated extraction of relevant information and providing meaningful summaries or interpretations. Overall, the project integrates embedded hardware, real-time audio processing, robotics, and multi-modal AI to create a unified system capable of intelligent navigation and medical assistance.

Tool used (Development tools - H/w, S/w) : Hardware Tools : Raspberry Pi (Model 5),4 Omnidirectional Microphones Custom 4-Channel Microphone Array (via .asoundrc configuration) , Motor Driver Module , Robot Chassis & Motors ,Power Supply / Battery Pack. Software: Python,Numpy,AgentFlowPyAudio, Cr

Objectives of the project : Hardware: Build an AI-powered Raspberry Pi robot capable of navigating by detecting and localizing the direction of a sound source. Software: Develop a medical AI agent that can assist both doctors and patients, serving as the bot's core intelligence layer.

Major Learning Outcomes : Gained hands-on knowledge of techniques like cross-correlation, GCC-PHAT, and DoA estimation for detecting sound direction in real time.Learned to integrate AI models on edge devices (Raspberry Pi), optimizing performance under hardware constraints.Develo

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : During my PS-II, I worked in an environment that encouraged innovation, independence, and continuous learning. The workspace provided a balance between structured guidance and the freedom to experiment with new ideas—especially useful for a project involving hardware integration, audio signal processing, and AI-driven healthcare applications. The team fostered a collaborative atmosphere where discussions, brainstorming sessions, and technical reviews helped refine the solution at every stage. Regular interactions with mentors ensured that I stayed aligned with the project goals while also exploring creative approaches to improve system performance and reliability.

The company maintained a strong focus on practical, real-world problem solving. Access to necessary tools, hardware components, and documentation made it easier to iterate quickly. The environment also emphasized responsibility, ownership, and effective communication—skills essential for delivering a multidisciplinary project. Expectations from the company included timely progress updates, maintaining professional discipline, and ensuring that the project output contributed meaningfully to the broader objectives of the organization.

Academic courses relevant to the project : Internet of Things, Embedded systems, Signals and systems, Artificial Intelligence, Machine learning

PS-II Station : STN 10xscale Technology Private Limited - Marketing and Business growth, Hyderabad

Faculty

Name: Bhamidipati Vaishali .

Student

Name: JIYA SHARMA(2022B5PS1529P)

Student Write-up

PS-II Project Title: Business Analyst/Market Research

Short Summary of work done during PS-II : The working environment at 10xScale.ai was dynamic, growth-oriented, and collaborative, offering a balance of independence and guided mentorship. The team maintained an open and flexible culture where every intern was encouraged to learn by doing. I was given the opportunity to explore multiple aspects of the business—from product understanding to digital marketing, content design, and documentation—allowing me to gain a holistic view of how a tech-driven organization operates. Regular interactions with my mentor ensured continuous feedback and improvement. The environment encouraged creativity and initiative; I was trusted to handle marketing activities, such as creating promotional templates, and designing product videos, which made the experience both challenging and rewarding. The company expected timely completion of assigned work, accuracy in research and reporting, and professionalism in communication. A strong emphasis was placed on learning adaptability—whether it was researching, preparing documentation, or designing digital campaigns. The overall expectation was not only to deliver outputs but also to understand the “why” behind each task, ensuring meaningful contribution to organizational goals. Working at 10xScale.ai helped me strengthen my technical, analytical, and creative skills while adapting to a real-world corporate setup where teamwork, responsibility, and innovation are highly valued.

Tool used (Development tools - H/w, S/w) : Google Sheets, Google Docs, Google Slides, Excel, CRM/lead tracking sheets, AI-based research tools (ChatGPT, Perplexity), online competitor analysis tools, company products, and internal reporting templates.

Objectives of the project : 1) Contribute to Marketing efforts and lead-generation activities. 2) Support growth marketing initiatives by conducting research, identifying opportunities, and helping improve the company's customer acquisition and expansion strategy.

Major Learning Outcomes : Gained practical knowledge of digital marketing workflows, campaign planning, and customer engagement metrics.
Strengthened business analysis and market research skills through structured data gathering and insight generation.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at 10xscale Technology was collaborative, dynamic, and aligned with real industry practices. The team encouraged independent thinking, creativity, and ownership, giving me the flexibility to explore different approaches in market research and analysis. Regular interactions with mentors ensured continuous learning and clarity in tasks.
The company's expectations included delivering accurate research findings, maintaining consistency in documentation, meeting deadlines, and proactively identifying opportunities for business growth. I was encouraged to communicate openly, participate in discussions, and take initiative in improving processes. Overall, the environment enabled me to develop professionally, sharpen analytical thinking, and adapt to a fast-paced work culture.

Academic courses relevant to the project : Marketing Management, Business Analytics, Financial Management, Data Mining, Strategy & Consulting, Management Information Systems.

PS-II Station : STN 10xscale Technology Private Limited - Next Gen, Hyderabad

Faculty

Name: Mrityunjay Kumar

Student

Name: ARHAN S D(2022A8PS0595G)

Student Write-up

PS-II Project Title: AI Intern

Short Summary of work done during PS-II : II worked on building end-to-end products, including resume-enhancement systems, multi-node chatbots, and automated job-apply extension agents. I led, co-ordinated and contributed with different frontend, backend, AI teams to deliver requirements of multiple projects . I designed vector-database pipelines for RAG, fine-tuned LLMs, pre-trained SLMs, and developed multi-agent workflows using tools like LangGraph, AgentFlow, MCP, Playwright, Qdrant, PostgreSQL and memo etc.

Tool used (Development tools - H/w, S/w) : langchain , langraph , js , react , ts , tailwind , Python , ml libraries , vector databases.

Objectives of the project : To build support

Major Learning Outcomes : Iv'e learnt how to work in teams , contribute daily even in small proportions to not be the blocker for other teams. to have good communication with all people your working with , to have no misunderstandings . Quick learning of new tech stacks and libraries.

Details of Papers/patents : -None-

Brief Description of working environment, expectations from the company : WORKING ENVIRONMENT IS PRETTY FRIENDLY . There are time constraints as it is in the building phase

like most startups . It promotes growth and learning and helps you get good end to end real world projects onto your resume.

Academic courses relevant to the project : None for my particular role except maybe object orient programming.

PS-II Station : Supra Sciences Private Llmited, , Hyderabad

Faculty

Name: Bharathi R .

Student

Name: MANAV B .(2022A5PS1278H)

Student Write-up

PS-II Project Title: Synthesis of Amino Acids in Solid and liquid phase and their analysis.

Short Summary of work done during PS-II : During my Practice School–II internship at Supra Sciences Pvt. Ltd., Hyderabad, I worked in the R&D division focusing on peptide synthesis and quality control methodologies relevant to pharmaceutical research. The primary objective of the internship was to gain hands-on experience in the synthesis of amino acids and peptide chains using both liquid-phase peptide synthesis (LPPS) and solid-phase peptide synthesis (SPPS), along with the application of analytical techniques for quality evaluation. In the liquid-phase synthesis module, I was involved in the synthesis of Fmoc-protected amino acids, particularly Fmoc-Leu-OH, including reaction setup, controlled addition of reagents, monitoring reaction progress using thin-layer chromatography (TLC), and purification through recrystallization and solvent treatments. This provided practical exposure to protection strategies, reaction

optimization, and impurity removal. The internship also included an in-depth study and practical understanding of solid-phase peptide synthesis, covering resin selection and swelling, stepwise amino acid coupling, deprotection cycles, peptide chain elongation, and final cleavage from the resin. Reaction monitoring techniques such as the Kaiser test were used to verify coupling and deprotection efficiency.

Tool used (Development tools - H/w, S/w) : NA

Objectives of the project : To learn different methods and techniques of synthesizing amino acids and peptides, and understanding their scope of use.

Major Learning Outcomes : learnt about various synthesis techniques of amino acid

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at Supra Sciences Pvt. Ltd., Hyderabad, was professional, structured, and research-oriented, providing an excellent platform for learning industrial practices in peptide synthesis and quality control. The organization maintained well-equipped laboratory facilities with a strong emphasis on safety, documentation, and adherence to standard operating procedures. Team members were supportive and approachable, encouraging discussions and clarification of concepts whenever required. Regular guidance from experienced professionals helped bridge the gap between theoretical knowledge and practical industrial applications.

The company fostered a disciplined yet collaborative atmosphere, allowing interns to actively participate in laboratory work while maintaining high standards of quality and compliance. Exposure to real-time R&D workflows and analytical techniques contributed significantly to professional development.

Expectations from the company primarily included punctuality, adherence to laboratory safety norms, careful handling of chemicals and equipment, accurate record-keeping, and a willingness to learn and adapt. Interns were expected to follow instructions diligently, maintain confidentiality of proprietary processes, and demonstrate responsibility during experimental procedures. Overall, the environment promoted technical learning, discipline, and professional growth aligned with industrial pharmaceutical standards.

Academic courses relevant to the project : Pharmaceutical Chemistry, Medicinal Chemisitry

PS-II Station : SV INVESTMENT COMPANY, Ahmedabad

Faculty

Name: Perumal Jayakumar

Student

Name: DHYEY DESAI(2022AAPS0809G)

Student Write-up

PS-II Project Title: Equity Research

Short Summary of work done during PS-II : Work mainly focused on Equity Research majorly equity and Medium and small enterprises dominated, main motive of the research was to scout for good picks that can cater to return expectations of AIF and clients and to make a diversified investment portfolio.

Tool used (Development tools - H/w, S/w) : Financial services tools, excel, python and AI for basic data analysis

Objectives of the project : Equity research catering to the investment philosophy of the AIF and finding securities to optimise portfolio and returns

Major Learning Outcomes : Finance, excel, corporate skills and negotiation

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Good working atmosphere and friendly coworkers relationships

Academic courses relevant to the project : Finance minor

PS-II Station : Swiss Re Global Business Solutions India Private Limited, Bengaluru

Faculty

Name: Perumal Jayakumar

Student

Name: MANAS ABHINAV PATEL(2021B2A42565P)

Student Write-up

PS-II Project Title: Market Risk Management and Reporting : Implementing VaR, Stress Testing, and Process Automation using R and Python

Short Summary of work done during PS-II : Learning technical languages like Python and Data analysis language like R and using these skills to make useful dashboards for the organization and also learning for real world implementation of Stress and VaR metrics for real world company portfolio/assets and its monitoring

Tool used (Development tools - H/w, S/w) :

Objectives of the project : Learn about Market Risk Management and how it is implemented across organization through different metrics and its monitoring

Major Learning Outcomes : Languages like Python, R and Risk Management metrics like Stress, VaR, Shock size

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : It is a very nice place to work with flexible working hours and also provide necessary IT assets for any work that needs to be managed remotely. It has a very good cafeteria where one can have all 3 meals of the day. Also includes gym,sleeping pods and regular engagement sessions with employees and colleagues.

Academic courses relevant to the project : Finance Minor

Name: SHREERAM VERMA(2021B3A31049P)

Student Write-up

PS-II Project Title: Financial Model Validation

Short Summary of work done during PS-II : Part of model validation team, worked directly with my mentor who also lead the bangalore financial model validation team

Tool used (Development tools - H/w, S/w) : Dax Studio, R

Objectives of the project : To validate internal finance risk aggregation platform

Major Learning Outcomes : Model Validation

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Good culture, supportive teams, flexible work hours

Academic courses relevant to the project : Finance minor

PS-II Station : Synchrony, , Hyderabad

Faculty

Name: Y V K Ravi Kumar .

Student

Name: SAYAN BANERJEE(2021B5A71516P)

Student Write-up

PS-II Project Title: Development and Maintenance of CI/CD Pipelines

Short Summary of work done during PS-II : I created several new pipelines for our frontend web dev team. One of them is a pipeline which can prune stale branches from a repository while preserving the main and release branches which reduced maintenance overhead. Another one was automating CRUD operation of uDeploy application processes by creating a new pipeline. There were several other works like migration of credentials, migration of from environment variables to vault and onboarding several new projects on our pipeline.

Tool used (Development tools - H/w, S/w) : Jenkins, Cloudbees, uDeploy, Bash, Git, mJS

Objectives of the project : To create new CI/CD pipelines and maintaining the existing one

Major Learning Outcomes : Jenkins, Cloudbees, Urban Code Deploy

Details of Papers/patents : No papers or patents

Brief Description of working environment, expectations from the company : Synchrony is known for its work environment. It's ranked 2nd best place to work and rightfully so. Everyone is friendly and helpful. The work is completely remote. You have enough time to explore yourself.

Academic courses relevant to the project : OOPS, DSA, OS

Name: DHRUV GUPTA .(2022A7PS0104H)

Student Write-up

PS-II Project Title: Full Stack development

Short Summary of work done during PS-II : During my internship at Synchrony, I worked as part of the technology team on modernizing internal onboarding and partner management systems. My primary responsibility was migrating existing user interfaces from Spring Boot with Thymeleaf to React, helping improve performance, scalability, and user experience. I redesigned and rebuilt key screens such as the Partner Update page, implementing modern React components and ensuring seamless interaction with backend APIs. This involved fetching and rendering dynamic data like dropdown values and partner details, handling form state, validations, and submission workflows. I closely collaborated with backend services to integrate APIs securely and ensure accurate data flow between the frontend and backend systems. Additionally, I focused on improving code maintainability by organizing components, managing API calls efficiently, and handling loading and error states in the UI. Through this work, I gained hands-on experience with React hooks, asynchronous data fetching, REST APIs, and enterprise-level application workflows. Overall, the internship provided valuable exposure to real-world software development practices, strengthened my full-stack understanding, and enhanced my ability to build reliable, user-friendly web applications in a professional environment.

Tool used (Development tools - H/w, S/w) : VSCode, Intellij, Spring tool Suite, Postman, Swagger

Objectives of the project : To develop the page for their application

Major Learning Outcomes : I learned about react,spring boot,thymeleaf

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : It was good, not much pressure, Teams members were supportive

Academic courses relevant to the project : OOPS(only for Java)

Name: YUVRAJ CHAUHAN .(2022A7PS0135H)

Student Write-up

PS-II Project Title: Migration and Modernization of Partner Update Application using React and Spring Boot

Short Summary of work done during PS-II : During my PS-II at Synchrony Financial, I worked as a Full-Stack Development Intern with the RAPID team on a major application modernization initiative. My primary responsibility was the migration of the legacy Partner Update page from Thymeleaf to a modern React-based frontend while implementing corresponding backend services using Spring Boot. I studied the existing business logic, workflows, and database interactions to ensure complete functional parity with the legacy system. I developed reusable React components, integrated Redux-form for form handling, and implemented regex-based validations to improve data accuracy and user experience. On the backend, I implemented multiple REST APIs, services, and controllers to fetch, update, and persist partner-related data

from the RAPID database. Post mid-semester, I implemented several critical functional modules including On Hold Reasons, Decline Reasons, View/Add Notes, View/Add Contacts, and the ITMF (Internal Terminated Merchant File) module used in risk checks. I collaborated across multiple repositories, resolved merge conflicts, tested APIs using Postman, and merged code into the RAPID Bitbucket repository for deployment. This internship provided me with deep exposure to enterprise application development, system integration, and professional software engineering practices.

Tool used (Development tools - H/w, S/w) : Software Tools: React.js, Redux-Form, Spring Boot, Java, JavaScript, STS, IntelliJ, Bitbucket, JIRA, Confluence, Postman, Swagger, Git; Hardware: Laptop / Enterprise development environment provided by Synchrony

Objectives of the project : To modernize a legacy enterprise application by migrating the Partner Update page from Thymeleaf to React, implement scalable backend APIs using Spring Boot, ensure functional parity with the existing system, and enhance usability, maintainability, and performance.

Major Learning Outcomes : 1. Gained hands-on experience in enterprise-scale full-stack development
2. Learned to work with large, modular codebases and legacy system migration
3. Improved understanding of RESTful API design and backend service layers
4. Enhanced debugging.

Details of Papers/patents : Not applicable.

Brief Description of working environment, expectations from the company : Synchrony provided a highly professional and collaborative working environment. The team followed Agile methodologies with regular stand-ups, sprint planning, and code reviews. Expectations were clearly defined, with strong emphasis on code quality, adherence to enterprise standards, documentation, and timely delivery.
I was encouraged to take ownership of features, ask questions, and actively participate in discussions related to system design and business logic. The mentoring culture was supportive, and I received continuous feedback from my mentor and teammates. The environment fostered

learning, accountability, and professional growth, making it an excellent exposure to real-world enterprise software development.

Academic courses relevant to the project : Object-Oriented Programming, Data Structures and Algorithms, Database Systems, Software Engineering, Operating Systems, Computer Networks, Web Technologies

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Name: SAURAV SAHOO(2022A7PS0217G)

Student Write-up

PS-II Project Title: EIS Dashboard

Short Summary of work done during PS-II : I was assigned to create a dashboard which fetches data from excel reports and shows it in a visually appealing manner. It helps various teams inside the company gain an insight on how they are doing and identify any data leaks if any.

Tool used (Development tools - H/w, S/w) : VS Code, Material UI, Tailwind, React+Vite

Objectives of the project : To create a visually appealing dashboard which gets the data from the backend and presents it in a more appealing manner

Major Learning Outcomes : React+Vite, Frontend Development

Details of Papers/patents : N.A.

Brief Description of working environment, expectations from the company : Very Nice environment to work at pretty good work life balance and everyone is supportive and approachable one of the best working environments in the industry.

Academic courses relevant to the project : Computer Programming, CS-F111

PS-II Station : Tablespace Technologies - Corporate Finance, Bengaluru

Faculty

Name: Parag Rastogi

Student

Name: KHUSHI SATRAWLA(2022A2PS1103P)

Student Write-up

PS-II Project Title: Data Analytics and Automation for Cost, Operations, and Platform Insights

Short Summary of work done during PS-II : During PS-II, I worked on multiple data analytics and automation initiatives across operations, finance, ESG, and platform usage analytics. The primary focus was on SQL-based cost trending, where I designed an end-to-end data cleaning, mapping, and automation pipeline to compute OPEX per square foot across cities, facilities, categories, and operational time buckets. This involved handling missing values, chargebacks, incorrect dates, and anomaly detection, followed by dynamic SQL automation using stored procedures with validation checks. I analyzed service request data on a month-on-month basis, identifying duplicate entries, incorrect SLA definitions, and errors in closure time calculations. These issues were highlighted to stakeholders and visualized using dashboards to prevent misleading averages caused by outliers. Additionally, I contributed to ESG initiatives by conducting public transport connectivity analysis, green wall feasibility studies, ESG gap assessment questionnaires, and research on LEED certification. I also developed a platform usage dashboard to track weekly adoption, active users, and average usage time across internal platforms, automated for periodic CXO reviews. Further, I worked on consumption data analysis

by automating multi-month data collation using Python and identifying emerging trends. Overall, the internship emphasized automation, data integrity, and decision-oriented analytics.

Tool used (Development tools - H/w, S/w) : SQL (Stored Procedures, CTEs, Window Functions), Python, Microsoft Excel, Power BI

Objectives of the project : • Automate repetitive operational reporting workflows using SQL, Python, and Power BI • Clean, validate, and standardize large operational datasets to improve data reliability • Build cost and consumption trend analyses (OPEX / sq. ft., service requests, platform usage) • Identify anomalies, inefficiencies, and data quality issues impacting business decisions • Present actionable insights to senior leadership through dashboards and visual analytics.

Major Learning Outcomes : • End-to-end data cleaning, validation, and automation
• Writing scalable and dynamic SQL code
• Building CXO-level dashboards using Power BI
• Identifying and correcting flawed business metrics
• Applying analytics to operations, ESG, and platform usage

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment was fast-paced and execution-heavy, with high expectations placed on individual ownership from an early stage. Due to significant workload pressures across teams, structured onboarding and continuous guidance were limited, requiring interns to quickly become self-sufficient.

Interns were expected to independently understand business processes, data structures, and tools, and deliver outcomes within tight timelines. The emphasis was strongly on output, accuracy, and turnaround time. Support was available when escalated, but day-to-day problem-solving and learning were largely self-driven.

This setup created a steep learning curve and demanded sustained effort, adaptability, and resilience. While the exposure provided practical insight into real-world operational constraints, it also highlighted the challenges of performing in high-pressure environments with minimal handholding.

Academic courses relevant to the project : NA

PS-II Station : Tablespace Technologies, Bangalore

Faculty

Name: Parag Rastogi

Student

Name: YASH GOYAL(2021B2A12764P)

Student Write-up

PS-II Project Title: Business Analyst Intern

Short Summary of work done during PS-II : Made dashboards which gave data driven insights. Cleaned a large dataset which provided the occupancy trends of all our clients. Analysed consumptions metrics of our facilities.

Tool used (Development tools - H/w, S/w) : Sql, python, excel, power bi

Objectives of the project : Analytics

Major Learning Outcomes : Learned to do Web scraping
Used sql and excel for data cleaning
Got very well with excel

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The work in itself is good to learn, it's just that sometimes it gets too hectic and pretty spontaneous even when one has ample work

Academic courses relevant to the project : NA

Name: AAYUSH AASHISH MAHESHWARI(2022A1PS0593P)

Student Write-up

PS-II Project Title: Occupancy Reconciliation Model, Forecasting Utilities Trend for 2026, Market Research, Regression-Based Forecasting

Short Summary of work done during PS-II : During my PS-II at Table Space Technologies, I worked on multiple analytics-driven projects aimed at improving operational efficiency and decision-making. I conducted market research and competitive analysis across several Indian cities and micro-markets to understand industry trends, demand drivers, and competitive positioning. A key contribution was building an automated occupancy reconciliation model for over 350 clients, which compared manual logs with IT-sourced data and significantly reduced manual effort while improving accuracy. I also led centre and facility standardisation by mapping nearly 75 facilities across seven cities, ensuring consistency across datasets and enabling reliable cross-city analytics. In parallel, I analysed electricity and other utilities consumption data for multiple facilities, identifying trends and external influencing factors. I developed multi-model forecasts for future demand using regression-based approaches, lag techniques, and Python-based ARIMA and SARIMA models, selecting the most reliable methods through comparative evaluation. Additionally, I designed, tested, and validated interactive dashboards using Power BI and Advanced Excel to visualise occupancy, utilities, and key operational KPIs. These dashboards supported stakeholders with clear, data-driven insights and strengthened the company's forecasting and planning capabilities.

Tool used (Development tools - H/w, S/w) : Software: Python, Power BI, Advanced Excel, SQL Libraries/Techniques: ARIMA, SARIMA, regression models, bagging, lag techniques.

Objectives of the project : Analyse occupancy, utilities, and operational data to support data-driven decision-making. Build automated and scalable analytics models to reduce manual effort and errors. Forecast future utility demand to aid cost optimisation and capacity planning. Develop dashboards and tools to present insights clearly to business stakeholders.

Major Learning Outcomes : Gained hands-on experience in time-series forecasting using regression, ARIMA, and SARIMA models.
Developed strong proficiency in Python, SQL, Advanced Excel, and Power BI for business analytics.
Learned to standardise and reconcile large, multi-source data.

Details of Papers/patents : No research papers or patents were published or filed during PS-II.

Brief Description of working environment, expectations from the company : The working environment was execution-focused, with high expectations for early ownership and independence. Due to heavy workloads, structured onboarding and regular guidance were limited, requiring interns to quickly become self-sufficient.
Interns were expected to rapidly understand business processes, data structures, and tools, and deliver accurate outputs within tight timelines. While support was available through escalation, day-to-day learning and problem-solving were largely self-driven.
This created a steep learning curve, demanding adaptability and resilience, while also highlighting the challenges of working in high-pressure environments with minimal handholding.

Academic courses relevant to the project : PoE, Statistics, M-3

PS-II Station : Tata Institute of Fundamental Research, Hyderabad

Faculty

Name: Bhamidipati Vaishali .

Student

Name: ADITYA RAJ SRIVASTAVA(2022A1PS1572P)

Student Write-up

PS-II Project Title: LIQUID LEAF SHEET GENERATION

Short Summary of work done during PS-II : During my PS-II internship, I worked on the development and characterization of liquid jet and liquid sheet targets for high-intensity laser–matter interaction experiments. The work began with an extensive literature survey to understand the limitations of solid targets under high-repetition-rate laser systems and to explore the advantages of continuously refreshed liquid targets. I learned and applied CAD and simulation tools such as Solid Edge and COMSOL Multiphysics to design experimental components and perform preliminary fluid-flow simulations. Experimentally, I assembled a complete liquid jet generation setup, established safe operating procedures for high-pressure nitrogen systems, and successfully generated stable cylindrical liquid jets and flat liquid leaf sheets. I carried out systematic characterization of the jets and sheets using optical imaging, resolution targets, and ImageJ analysis to measure parameters such as diameter, width, length, velocity, and stability. I also developed diagnostic techniques to study jet jitter by analyzing laser intensity fluctuations and investigated controlled deformation of liquid sheets using gas flow and laser radiation pressure. Throughout the project, I gained valuable hands-on experience in experimental design, optical diagnostics, data analysis, and troubleshooting. This internship provided strong exposure to high-energy laser–matter interaction physics and laid a solid foundation for future work in advanced experimental research.

Tool used (Development tools - H/w, S/w) : Hardware: High-pressure Nitrogen (N_2) gas cylinder with pressure regulators and tubing Liquid jet nozzles (75 µm, 100 µm, 150 µm) Liquid

delivery system (syringe pump / pressure-driven setup) Blade assembly for liquid sheet (leaf) formation High-spee

Objectives of the project : The objective of this project was to develop and study stable liquid jet and liquid sheet targets for high-intensity laser applications. The work focused on understanding jet formation, improving target stability, and applying both simulation and experimental techniques to characterize their behavior. This project also aimed to build practical skills in computational modeling and optical diagnostics.

Major Learning Outcomes : This project helped me develop a strong understanding of liquid jet and liquid sheet formation and their role in high-intensity laser–matter interaction experiments. I gained practical experience in using simulation and design tools such as COMSOL.

Details of Papers/patents : No paper is published

Brief Description of working environment, expectations from the company : The working environment during my internship was highly professional, collaborative, and intellectually stimulating. I had the opportunity to work in well-equipped laboratory facilities with access to advanced experimental tools and strong technical support. The research culture encouraged curiosity, critical thinking, and open discussions, which helped me develop a deeper scientific mindset and problem-solving approach. I also benefited greatly from regular guidance and constructive feedback, which enabled me to steadily improve both my technical understanding and practical skills.

I expected to gain hands-on experience in experimental research, exposure to real-world scientific challenges, and mentorship from experienced researchers, and these expectations were fully met. The environment fostered independent thinking while also providing a strong support system, allowing me to confidently explore new ideas and techniques. Overall, the experience was extremely enriching, helping me develop not only technical competence but also professional discipline and research ethics.

Academic courses relevant to the project : Mechanics Oscillation and Waves and Fluid Mechanics

Name: ASOORI ROHINI .(2022A5PS1262H)

Student Write-up

PS-II Project Title: Cloning, Expression, Purification and Crystallization of SH3 Protein

Short Summary of work done during PS-II : The SH3 protein was successfully cloned, expressed, purified, and crystallized using an optimized workflow that significantly improved overall protein yield. The insert and vector from the pET28a expression system were isolated through restriction digestion using BamHI and NcoI. Following this, PCR amplification of both components was performed and the resulting products were digested again to generate complementary sticky ends for efficient ligation. Positive clones were confirmed through colony PCR, and the expressed protein underwent a two-step purification process involving ion-exchange chromatography followed by size-exclusion chromatography. The purified protein was then subjected to dialysis, lyophilization, and finally crystallization. These optimized steps collectively increased protein yield from 4 mg/L to 20 mg/L of culture and resulted in the successful production of high-purity SH3 protein suitable for downstream structural studies.

Tool used (Development tools - H/w, S/w) : NA

Objectives of the project : The objective is to purify the SH3 protein and increase its yield

Major Learning Outcomes : protein purification, cloning, crystallization and lyophilization

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : It was a research institute, the mentors were really helpful and guided me towards the successful completion of my project. They expected me to learn the experiments, read research papers...

Academic courses relevant to the project : NA

Name: PRAKRITI(2022A5PS1417P)

Student Write-up

PS-II Project Title: Development of a Chemogenetic Fluorescent Sensor for In-Vivo Detection of C3 Convertase Activity.

Short Summary of work done during PS-II : During PS-II, the work focused on developing a chemogenetic fluorescent sensor to detect C3 convertase activity during complement activation. The project involved synthesizing a Rhodamine 110–GLAR peptide probe, optimizing the reaction steps, and purifying the final product. Structural characterization was done using basic spectroscopic techniques, and the fluorescence response of the probe was tested after enzymatic cleavage. The work also included exposure to neuronal assays and imaging methods used to study complement activity in neuroinflammatory conditions.

Tool used (Development tools - H/w, S/w) : Used ChemDraw for structures, SciFinder for literature search, and BioRender for figure preparation.

Objectives of the project : This project involves the design, synthesis and characterization of a Rhodamine 110–GLAR peptide conjugate intended to selectively detect C3 convertase activity. The goal is to develop a reliable and sensitive probe that can be used to study the activity of the complement system in biological systems.

Major Learning Outcomes : Learned how to synthesize and purify a fluorescent probe and how to perform biological assays to study C3 convertase activity.

Details of Papers/patents : [1] Ricardo JMGE Brandwijk, Marloes AHM Michels, Mara van Rossum, Aline H. de Nooijer, Per H. Nilsson, Wieke CC de Bruin, and Erik JM Toonen. Pitfalls in complement analysis: A systematic literature review of assessing complement activation. Frontiers in

Brief Description of working environment, expectations from the company : The working environment was very good, supportive, and well-organized.

Academic courses relevant to the project : Medicinal Chemistry and Pharmacology

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Name: SOMYA GUPTA(2022A5PS1431P)

Student Write-up

PS-II Project Title: Impact of G4 insertion on mammalian replication origin

Short Summary of work done during PS-II : I contributed to the project investigating the impact of G-quadruplex (G4) structures on mammalian DNA replication. My work involved standardizing fluorescent probes, performing and optimizing cell culture conditions, and establishing the DNA fiber assay. I also optimized nucleotide analog addition and troubleshooting steps to improve fiber quality and replication track visualization.

Tool used (Development tools - H/w, S/w) : Fluorescence microscope, Cell culture hood, CO_2 incubator, Centrifuge, Water bath, Heating block, Microbalance, pH meter, Pipettes and micropipette tips, Glass slides and coverslips, Imaging software - CellSens (for analyzing fibers)

Objectives of the project : To understand how G4 presence affects the origin licensing and origin firing and how ultimately the replication dynamics are affected.

Major Learning Outcomes : Learnt how to optimize and standardize the probes using PCR along with interpretation of its results. I learnt mammalian cell culture and DNA fiber assay technique. Towards the end, I was focusing on optimizing the DNA Fiber technique.

Details of Papers/patents : 1. Nieminuszczy, J., Schwab, R. A., & Niedzwiedz, W. (2016). The DNA fibre technique–tracking helicases at work. Methods, 108, 92-98.

Roy, S. S., Bagri, S., Vinayagamurthy, S., Sengupta, A., Then, C. R., Kumar, R., ... & Chowdhury, 2. S. (2023). Artificia

Brief Description of working environment, expectations from the company : You will definitely learn techniques which will help you grow in case you are aiming research, but for me the environment could have been much better.

Academic courses relevant to the project : Molecular biology

Name: ROHAN VARMA PENUMETCHA .(2022A7PS2016H)

Student Write-up

PS-II Project Title: Image-Based Computational Pipeline for Quantitative Analysis of Tau Protein Condensate Morphology and Dynamics

Short Summary of work done during PS-II : During PS-II, I worked on building an image-based computational pipeline to study tau protein condensates using fluorescence microscopy data. The aim was to move away from manual, error-prone analysis and create an automated, reliable workflow that biologists can reuse for different experiments. I started by exploring existing pipelines and literature on condensate image analysis, then set up a Python and Jupyter-based environment tailored to this project. This included implementing preprocessing steps such as noise reduction and edge enhancement, followed by robust segmentation methods to clearly separate condensates from the background. Once the images were segmented, I wrote routines to extract meaningful quantitative features, including area, circularity, aspect ratio, and fractal-dimension-related measures, and organized them into clean tables for further statistics and plotting. To make the results interpretable, I generated visualizations like histograms, violin plots, and phase-diagram scatter plots, and used interactive viewers to inspect individual droplets and verify that the automated steps were behaving sensibly. To handle larger datasets efficiently, I incorporated parallel processing for the more expensive fractal-dimension calculations. Overall, this work resulted in a reusable, scalable pipeline that not only speeds up condensate analysis

but also provides richer, more consistent insights into how droplet size, shape, and intensity vary across different experimental conditions.

Tool used (Development tools - H/w, S/w) : Jupyter Lab, Python, OpenCV, ImageJ

Objectives of the project : To create a deep learning model for the image analysis of tau condensate droplets

Major Learning Outcomes : Developed the ability to build an end-to-end Python pipeline for microscopy image analysis, including preprocessing, segmentation, feature extraction, visualization, and statistical characterization of tau protein condensates

Details of Papers/patents : Carvalho, M., et al. (2025). A computational pipeline for image-based statistical analysis of biomolecular condensates dynamics using
morphological descriptors. Scientific Reports.
https://doi.org/10.1038/s41598-025-09148-y

Brief Description of working environment, expectations from the company : The working environment during PS-II was genuinely comfortable and easy to settle into, with a very welcoming lab culture. People were kind, friendly, and open to questions, so it never felt difficult to ask for help or clarification, whether it was about the biology, the code, or the experimental context.
My mentor was approachable and encouraged learning at a steady pace, prioritizing a clear understanding of the methodology and reasoning behind each step instead of pushing for rigid deadlines or rushed deliverables. This gave enough room to experiment, make mistakes, and refine the pipeline properly. At the same time, because the mentor's strength was more on the scientific side than in computer science, I often had to independently explore tools, libraries, and implementation details, which pushed me to become more resourceful and self-reliant. Overall, the company offered a supportive, low-pressure environment that balanced guidance with autonomy and strongly encouraged initiative and conceptual clarity. This was all I expected from a company, which was to be supportive and a low-pressure environment.

Academic courses relevant to the project : Deep Learning, Machine Learning

PS-II Station : Tavant, Bengaluru

Faculty

Name: Preethi N. G .

Student

Name: THIRUMALA SAI VARDHAN ELDURTHI .(2022A7PS0017H)

Student Write-up

PS-II Project Title: Touchless lending

Short Summary of work done during PS-II : During my Practice School–II internship at Tavant Technologies, Bangalore, I worked on building enterprise-grade engineering tools for the Touchless Lending™ platform, focusing on evaluation reproducibility, design–development alignment, and deterministic workflows. A major contribution was the development of an automated PDF-based experiment reporting system that converts raw LLM evaluation outputs into structured, audit-ready reports. This system normalizes experiment data, aggregates evaluation metrics, and generates consistent PDFs, improving clarity, traceability, and review efficiency for evaluation teams. I also engineered a Design System Synchronizer that automatically extracts design tokens from Figma using the Model Context Protocol (MCP), normalizes naming conventions, resolves conflicts, and generates platform-specific artifacts for Web, Flutter, and React Native. This significantly reduced UI inconsistencies and eliminated manual design-to-code handoffs. In addition, I implemented a deterministic Form Mode engine, a JSON schema–driven workflow framework for defining multi-step user journeys. This replaced ambiguous conversational flows with predictable, rule-based execution suitable for compliance-heavy lending workflows. Finally, I modernized Flutter mobile UI components by replacing hardcoded styles with synchronized design tokens, improving maintainability and ensuring visual

consistency across applications. Overall, the work strengthened internal tooling, improved engineering reliability, and provided practical exposure to enterprise architectures, design automation, and schema-driven systems.

Tool used (Development tools - H/w, S/w) : Programming Languages: Python, Dart, JavaScript

- Frameworks & Libraries: Flutter, ReportLab • Design Tools: Figma (via Model Context Protocol – MCP) • Workflow & Data: JSON, JSON Schema Validators
- Version Control: Git • Platforms: Web, Flutter.

Objectives of the project : Automate generation of reproducible PDF-based experiment reports.

- Synchronize Figma design tokens with Web, Flutter, and React Native codebases.
- Implement a deterministic, JSON-driven workflow engine (Form Mode). • Replace hardcoded mobile UI styles with token-based styling. • Gain experience in enterprise-scale system integration and tooling.

Major Learning Outcomes : Hands-on experience with enterprise-scale system architecture

- Designing reproducible LLM evaluation and reporting pipelines
- Implementing design token synchronization from Figma to code
- Building deterministic, schema-driven workflow engines

Details of Papers/patents : • Papers Published: Nil

- Patents Filed / Granted: Nil

Brief Description of working environment, expectations from the company : The working environment at Tavant Technologies, Bangalore was professional, collaborative, and engineering-driven. The team followed structured development practices with regular interactions between designers, engineers, and managers, which encouraged clear communication and cross-functional collaboration. Mentors provided continuous technical guidance through weekly reviews, design discussions, and code walkthroughs, creating a supportive learning environment. The company emphasized production-quality engineering, expecting solutions to be scalable, maintainable, and aligned with enterprise standards. Clear documentation, clean code, and adherence to architectural principles such as separation of concerns and deterministic behavior

were strongly encouraged. Version control, peer code reviews, and iterative feedback were integral parts of the workflow.

Tavant expected interns to take ownership of assigned modules, understand existing systems, and independently drive features from design to implementation. A strong focus was placed on problem-solving, learning new technologies, and adapting to real-world constraints, especially in compliance-sensitive financial systems. Timely delivery, responsiveness to feedback, and effective collaboration with stakeholders were key expectations.

Overall, the environment fostered practical learning, accountability, and exposure to real-world enterprise software development while maintaining a culture of mentorship and continuous improvement.

Academic courses relevant to the project : DSA

OOPS

IR

DBMS

PS-II Station : Techture Structures, Indore

Faculty

Name: Mahesh Kumar Hamirwasia .

Student

Name: SHREERAM JITENDRA PETKAR .(2020B3A21966P)

Student Write-up

PS-II Project Title: UNCTIONING OF THE PLANNING VERTICAL IN THE EPC WORK OF A DATA CENTER CONSTRUCTION PROJECT

Short Summary of work done during PS-II : Worked on a data center project under construction to understand its technicalities and appreciate the role of the Planning, Billing and Execution departments onsite apart from departments like MEP/Design Consultants etc.

Tool used (Development tools - H/w, S/w) : MS Projects, SAP.

Objectives of the project : To understand the workflow of on-site activities of an EPC contractor right from planning, execution etc.

Major Learning Outcomes : FUNCTIONING OF THE PLANNING VERTICAL IN THE EPC WORK OF A DATA CENTER CONSTRUCTION PROJECT

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Working environment is fast-paced yet encouraging. The company expects employees to be punctual and sincere. The working hours are Mon-Sat 9am-6pm.

Academic courses relevant to the project : 1. Design of Steel Structures
2. Construction Planning and Technology
3. Design of Reinforced Concrete Structures

Name: ARUSH MANGRULKAR(2022A3PS1272G)

Student Write-up

PS-II Project Title: Application of BIM, Data Analytics, and Workflow Automation in Industry

Short Summary of work done during PS-II : During the internship, I worked on BIM and MEP system design using Revit, created construction-ready drawings, cleaned and analysed data using Excel and Power BI, and built dashboards for insights. I also worked on automating workflows using APIs, Python, n8n, and schedulers. In addition, I contributed to lighting automation in Revit, workflow research, and retail data analysis projects. Overall, the work focused on improving efficiency, accuracy, and digital workflows.

Tool used (Development tools - H/w, S/w) : Hardware: Laptop / Workstation (Windows OS); Software & Tools: Autodesk Revit (BIM & MEP design), NonicaTab (Revit automation for lighting placement), Microsoft Excel (data cleaning and processing), Microsoft Power BI (dashboarding and visualisation), P

Objectives of the project : The objective of this internship was to gain practical industry experience by working on real projects using BIM, data analysis, and automation. The aim was to improve design coordination, support better decision-making using data, and reduce manual work by using tools like Revit, Excel, Power BI, APIs, and automated workflows, while also developing useful technical skills and understanding how digital engineering processes work in practice.

Major Learning Outcomes : This internship helped me understand how real industry projects are handled from start to finish. I learned how BIM models are created and coordinated in Revit, how clean data can be used to build meaningful dashboards, and how automation can reduce repet

Details of Papers/patents : This internship was focused on practical industry projects, and no research papers or patents were published or filed during the internship period.

Brief Description of working environment, expectations from the company : The working environment at Techture Structures was professional, supportive, and focused on learning. The company follows a collaborative culture where team members from different domains such as BIM, automation, and data analytics work closely together. Regular discussions, reviews, and guidance from supervisors helped in understanding project requirements and industry standards. The environment encouraged asking questions, exploring new tools, and learning through hands-on work.

As an intern, the expectations from the company were clearly communicated. I was expected to understand project goals, follow established workflows, and deliver tasks with accuracy and responsibility. The company also encouraged learning beyond assigned tasks, such as exploring automation tools and improving efficiency. Timely completion of work, proper documentation, and coordination with team members were key expectations.

Overall, the company provided a positive learning environment with exposure to real-world projects, modern tools, and professional work practices. The guidance and trust given during the internship helped in building technical skills, confidence, and a better understanding of industry-level engineering and automation workflows.

Academic courses relevant to the project : -

PS-II Station : Tectonic Technologies Inc - Software Engineering, Bengaluru

Faculty

Name: Pradheep Kumar K .

Student

Name: PRATHAM PRATEEK MOHANTY(2022A7PS1733P)

Student Write-up

PS-II Project Title: Building D2C storefronts

Short Summary of work done during PS-II : Good work, made a lot of live websites for a lot clients, did a lot of growth asks

Tool used (Development tools - H/w, S/w) : Builder, Shopify

Objectives of the project : Make Optimized storefronts

Major Learning Outcomes : Frontend Development

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : it was okay, but fine only.

Academic courses relevant to the project : None

PS-II Station : Tega Industries - Samali, Samali

Faculty

Name: Rakesha Chandra Dash .

Student

Name: ANSHUMAN PATHAK(2022A4PS1522G)

Student Write-up

PS-II Project Title: Root Cause Analysis of Defects in PU Products During Raw Material Transition and Strategies for Eliminating Flow Marks

Short Summary of work done during PS-II : A root cause analysis (RCA) was conducted on defects in MDI-based polyurethane casting. Major non-conformities identified include e moisture-induced white spots, air entrapment bubbles, incomplete filling near pot life, and surface

irregularities from oven temperature variations. Then these defects were linked to material reactivity, environmental factors, and process handling conditions. Then trying to reduce a specific defect known as flow marks. Find possible factors that contribute heavily and try to eliminate flow marks.

Tool used (Development tools - H/w, S/w) : SAP (System applications and products in data processing) Software, Excel, PowerPoint, Word

Objectives of the project : Finding causes of defects in PU casting and reducing a specific defect flow marks.

Major Learning Outcomes : — Learned how MDI differs from TDI in pot life, moisture sensitivity, curing time, and shrinkage based on the process evaluation.
— Studied major defects: flow marks, air bubbles, white spots, excess flash, reinforcement exposure, etc.
— Used structured R

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The staff and HOD were friendly and helpful with my task along the way. There was a professional work environment during my PS term here.

Academic courses relevant to the project : ME F219 - Manufacturing Processes

PS-II Station : Telus AI - Solution Engineering, Bengaluru

Faculty

Name: S.P.Vimal .

Student

Name: SHREYAS GHOSH(2021B4A72502P)

Student Write-up

PS-II Project Title: Solution Engineer

Short Summary of work done during PS-II : The work I do as a Solutions Engineering Intern at Telus International Gen AI Team, involves supporting the operations team by addressing and fulfilling daily requests that require technical problem-solving and software-based solutions. I collaborate with different stakeholders to analyze requirements, design and implement appropriate fixes or enhancements, and ensure smooth execution of client-facing and internal processes. The position requires a balance of technical expertise, adaptability, and communication skills to deliver timely solutions that optimize workflows, improve efficiency, and support the organization's GenAI-focused initiatives. One of the key areas that Telus International focuses on is data annotation and the provision of high-quality AI training data to support machine learning and generative AI development. In this domain, my role as a Solutions Engineering Intern involves ensuring the reliability and usefulness of data before it is utilized for model evaluation. Specifically, I perform quality checks on datasets acquired from external vendors, verifying that the annotations and structure meet project requirements. Once validated, these datasets are used to conduct benchmarking experiments on state-of-the-art large language models (LLMs) such as GPT-5, Claude 4-Sonnet, and others. The goal of these evaluations is to identify performance gaps by analyzing cases where the models underperform or fail to generate accurate outputs. These failure cases or challenging data points are highly valuable, as they reveal blind spots in cutting-edge AI systems. Telus International leverages this insight by providing such curated datasets to partner organizations and clients, enabling them to strengthen their own AI models, improve robustness, and accelerate innovation. Through this process, the company positions itself as a key contributor in the AI lifecycle, bridging the gap between raw data, model performance, and real-world application.

Tool used (Development tools - H/w, S/w) : Retool, N8N, internal applications of the company

Objectives of the project : Providing day to day technical support for various client requests.

Major Learning Outcomes : Creating Retool workflows and dashboards, creating N8N workflows, improving communication skills

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : Telus provides a great working environment, everyone in really helpful. Since my working hours were from 2pm to 10 pm IST, I usually worked from home. If you do your work that is assigned to you before the deadlines then the company does not mind this. The mentors always provided help when needed.

Academic courses relevant to the project : DBMS, OOP, DSA

PS-II Station : Telus AI - Machine Learning, Bengaluru

Faculty

Name: S.P.Vimal .

Student

Name: RAGHUVANSH S(2020B5A70335G)

Student Write-up

PS-II Project Title: CRB - an active learning pipeline , Attribute Automation using VLMs , ground mesh generation and alignment algorithms

Short Summary of work done during PS-II : I set up an active learning pipeline using the CRB method for 3D object detection. I benchmarked and experimented with using VLMs for automating extraction of attributes. I debugges and optimised code to generate and align ground meshes between different frames of reference.

Tool used (Development tools - H/w, S/w) : JupyterHub , Notion , Linear

Objectives of the project : To set up and active learning pipeline ; to automate extraction of attributes using VLMs ; to debug and optimise a code for ground mesh generation and alignment

Major Learning Outcomes : Deeper understanding of machine learning concepts and AI tools including LLMs

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Good working enviroment. Tasks are competitive and require good effort but also not overly pressurising. Very experimental and research oriented work given.

Academic courses relevant to the project : Machine Learning, Artificial Intelligence, DSA

PS-II Station : Telus International - Software Engineering, Bengaluru

Faculty

Name: S.P.Vimal .

Student

Name: ALI KAUSAR KAAMRAN(2021B3A72246G)

Student Write-up

PS-II Project Title: Development and Enhancement of Internal Data Processing Tools: Retool App and QA Platform

Short Summary of work done during PS-II : During Practice School–II, I worked on the development and enhancement of internal tools used for data processing, quality assurance, and operational analytics. A major part of the work involved building a Retool-based CSV processing application to replace an existing script-driven workflow. This required translating Python logic into in-browser JavaScript, handling large datasets, optimizing performance through chunking, and designing a user-friendly interface that could be used by non-technical users. The resulting tool improved accessibility, reliability, and efficiency of a critical operational process. In parallel, I contributed to the maintenance and improvement of a QA Platform used for managing data annotation and validation workflows. My work included fixing functional bugs, enhancing features, and improving user interface components such as user management views and comment input functionality. I also implemented structured export features to support operational reporting. These tasks required working with an existing production system and making incremental, well-tested changes to ensure system stability. In the later phase, I worked on designing and implementing an analytics dashboard using Retool to provide operational visibility across workflows. The dashboard consolidated batch status, backlog, QA performance, and workflow-level quality metrics into a single, filterable interface with export support. This enabled stakeholders to monitor system health, identify bottlenecks, and analyze performance trends without manual reporting.

Tool used (Development tools - H/w, S/w) : Software & Platforms: Retool (internal tool and analytics dashboard development) React (UI enhancements and bug fixes) JavaScript (in-browser data processing and logic) Git (version control and collaboration) CSV / Excel tools (data validation and ex

Objectives of the project : The objective of the project was to develop, enhance, and maintain internal tools for data processing, quality assurance, and operational analytics. This included building a Retool-based CSV processing application, improving a QA Platform through bug fixes

and UI enhancements, and developing an analytics dashboard to provide visibility into workflow performance, backlog, and quality metrics.

Major Learning Outcomes : Learned to build and maintain production-level internal tools with a focus on reliability, usability, and performance.
Gained experience in translating business and operational requirements into technical solutions and analytics.

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : The working environment was professional and focused on maintaining real production systems, with an emphasis on accuracy, stability, and accountability. The expectations involved not only completing tasks but also understanding how changes impact existing workflows and users.
The initial onboarding experience was not very structured and was largely team-dependent. Adapting to internal tools, workflows, and large codebases took time, making the transition from college to a corporate environment somewhat challenging at first. However, this also encouraged self-learning and independent problem-solving.
Support from team members and managers was helpful once work was underway, and feedback was constructive in aligning technical work with operational requirements. Overall, while onboarding could be improved through better documentation and clearer initial guidance, the environment provided valuable exposure to real-world systems and industry expectations.

Academic courses relevant to the project : OOPS, DBMS, DSA

Name: AYUSH SRIVASTAVA(2021B3A72462G)

Student Write-up

PS-II Project Title: Unified Observability

Short Summary of work done during PS-II : During my PS-II internship, I worked on implementing a Unified Observability setup to monitor microservices in a consistent and scalable way while avoiding dependence on any single vendor. The project focused on designing and integrating an open-source, vendor-agnostic telemetry pipeline that enables services to emit and route observability signals (metrics/logs/traces) and visualize them on standard monitoring stacks. I instrumented services using OpenTelemetry, including code/middleware level integration, and helped establish the flow of telemetry into platforms such as the Elastic Stack and Prometheus/Grafana for analysis and visualization. In parallel, I created operational dashboards and configured alerting for critical service endpoints. I set up on-call notifications for the developer team using Squadcast and Slack, supporting faster incident detection and response. Additionally, I participated in an on-call rotation, which gave me real production experience in handling incidents, investigating anomalies, and coordinating with stakeholders outside my immediate team. Overall, the internship strengthened my understanding of production systems, observability best practices, and DevOps-driven deployment/monitoring workflows.

Tool used (Development tools - H/w, S/w) : Software: Kubernetes, Helm, OpenTelemetry, Elastic Stack (ELK), Prometheus, Grafana, Slack, Squadcast, Git, CI/CD, programming in Go and Python.

Objectives of the project : 1) Develop a vendor-agnostic, unified observability platform for microservices using open-source tooling and an internal setup. 2) Create a common routing/telemetry pipeline so services can be instrumented and monitored consistently. 3) Enable end-to-end monitoring of microservices using standardized metrics, logs, and traces for faster troubleshooting and reliability. 4) Reduce dependency on external observability vendors and improve long-term cost efficiency and control over telemetry data.

Major Learning Outcomes : Practical experience with DevOps workflows: Kubernetes fundamentals, Helm charts, configuration management, deployments and rollouts.
Understanding of microservice deployment and operations, including monitoring best practices and production hygiene.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The work environment was pretty collaborative and people were generally helpful. I had the freedom to plan my tasks, try out different approaches, and improve things based on feedback. I was expected to take ownership of my work, but I could always reach out to teammates when I got stuck or needed guidance.

From the company's side, the main expectation was to build a reliable and scalable observability setup that doesn't depend on one vendor and can be used across multiple microservices. This meant making services easier to monitor using metrics/logs/traces, setting up dashboards, and creating alerts so on-call developers can respond quickly when something breaks. I also had to coordinate with different people (developers and platform/ops) during incidents and while checking if monitoring coverage was complete. Overall, it was a good real-world experience of DevOps and observability work.

Academic courses relevant to the project : DSA, DBMS

Name: ANURAG SINGH(2021B5A72874G)

Student Write-up

PS-II Project Title: Frontend Engineering for GTS (Annotation System)

Short Summary of work done during PS-II : During Practice School–II at TELUS International, I worked as a frontend engineer on large-scale annotation platforms used for computer vision workflows. My primary contributions included implementing end-to-end support for the LZF point cloud converter, which involved UI configuration, URL signing, service worker handling, parser validation, and 3D viewer integration. I also added frontend support for TIFF and WebP image formats using a service-worker-based decoding and caching pipeline to improve dataset compatibility. In addition to feature development, I focused on improving system reliability by resolving multiple beta and production issues during frontend on-call rotations. This involved debugging Sentry-reported crashes, handling malformed inputs, and adding defensive checks to prevent runtime failures. I designed and implemented Functional and Non-Functional Tests

(FNTs) from scratch for critical 3D viewer components to reduce regressions. I also enhanced QC dashboards by adding an Error Count column to improve task prioritization for reviewers. Overall, my work contributed to improving stability, scalability, and user experience across the frontend platform while providing valuable exposure to real-world production engineering.

Tool used (Development tools - H/w, S/w) : VS Code Git / GitHub (Monorepo) TypeScript, React Service Workers ThreeJS, KonvaJS Sentry Browser Developer Tools

Objectives of the project : To enhance the reliability and robustness of frontend annotation systems To add support for new media and point cloud formats To improve system stability through defensive programming and testing To support scalable and secure data handling for 2D and 3D workflows

Major Learning Outcomes : Gained experience working on large-scale production frontend systems
Learned to design reliable and defensive data pipelines
Developed strong debugging skills through on-call and Sentry-based issue resolution
Improved understanding of 3D data handling

Details of Papers/patents : Not applicable.

Brief Description of working environment, expectations from the company : The working environment at TELUS International was highly collaborative and supportive. The team followed structured development workflows with regular code reviews, sprint planning, and clear documentation. Mentors were approachable and provided timely guidance on both technical and architectural decisions. I was encouraged to take ownership of tasks and contribute to production systems, which helped build confidence and accountability.
The organization maintained a strong engineering culture focused on code quality, reliability, and long-term maintainability. Exposure to real production issues and on-call responsibilities provided valuable insight into industry expectations. Overall, the environment offered a balanced mix of guidance and independence, enabling effective learning and professional growth.

Academic courses relevant to the project : Data Structures and Algorithms
Object Oriented Programming

Computer Graphics
Operating Systems
Software Engineering

PS-II Station : Tenstorrent, Bengaluru

Faculty

Name: Shree Prasad M

Student

Name: HARSHIT SARAF(2021B1A32742P)

Student Write-up

PS-II Project Title: System IP Design Verification: From Testbench to SoC

Short Summary of work done during PS-II : I worked in SV UVM creating checkers, testbenches, scoreboard, debugged signatures, had a system wide learning.

Tool used (Development tools - H/w, S/w) : H/W- SV UVM, C++

Objectives of the project : Learn different aspects of Design Verification

Major Learning Outcomes : Learning about Hardware Engineering and Design Verification of Silicon

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Good Experience

Academic courses relevant to the project : Comp Arch

Name: NIKHIL MAHESH TAMBOLI(2021B2AA1603G)

Student Write-up

PS-II Project Title: RISCV Design Verification

Short Summary of work done during PS-II : Good learning experience.

Tool used (Development tools - H/w, S/w) : Bazel, Synopsis, SystemVerilog, UVM

Objectives of the project : Do design verification of Tenstorrent's processors

Major Learning Outcomes : RISCV, SystemVerilog

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Good

Academic courses relevant to the project : Computer Architecture, Digital Design

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Name: RISHAV BHOWMICK .(2021B4AA2788H)

Student Write-up

PS-II Project Title: Design Verification Intern

Short Summary of work done during PS-II : Worked on weekly regression failure debugs, comparing RISCV specs with the softwarew reference model to identify discrepancies, yest plan generation, creating MCP servers for various tools, scripting tasks

Tool used (Development tools - H/w, S/w) : Verdi coverage, waves, Cursor, Python

Objectives of the project : Scripting tasks for some works

Major Learning Outcomes : Working in a time bound fashion
Application of comp arch concepts
Understanding of python

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : Very helpful, strong work ethics with work to be done in a time bound manner, flexible office timings

Academic courses relevant to the project : Computer Architecture, Digital Design

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Name: SIDDHARTH R .(2021B5AA2382H)

Student Write-up

PS-II Project Title: Design and Implementation of Hardware Debug Components

Short Summary of work done during PS-II : Worked with the RTL design team to evaluate feature requirements, explore feasibility and effort to implement, and implement fixes and updates for a Tenstorrent IP.

Tool used (Development tools - H/w, S/w) : VCS, SpyGlass, Bazel

Objectives of the project : Implement RTL for hardware debug components

Major Learning Outcomes : Gain a deep understanding of the process involved in RTL design, collaborating with architecture team and other design teams to converge on an optimal solution.

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The work environment is extremely supportive. People are willing to help you get up to speed on the internal infrastructure and documentation. The work culture emphasizes having open discussions to resolve doubts or converge on solutions. Almost everyone at the office is approachable for discussing any work related stuff. Not much emphasis on office times or WFO mandates, focus is on getting the work done.

Academic courses relevant to the project : Digital Design, Microprocessor Programming and Interfacing, Computer Architecture, Communication Networks

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Name: ARYAMAN KUSHWAHA .(2021B5AA2412H)

Student Write-up

PS-II Project Title: Debugging and AI based Triage Tool

Short Summary of work done during PS-II : Built a tool incorporating AI in the backend to help triage failures to already filed JIRAs and decrease the time and manual effort spent by our team on this task.

Tool used (Development tools - H/w, S/w) : -

Objectives of the project : Use AI to triage failures to already filed JIRAs

Major Learning Outcomes : Spent hours trying to make AI understand the architecture of our chip, use it to debug failures and automate the process by building a tool.

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Communication helped complete tasks faster than relying solely on our own effort. People around teach you exactly what's needed, and more, than any other documentation. That's how the working environment is.

Academic courses relevant to the project : -

PS-II Station : Texas Instruments - AI/ML, Bengaluru

Faculty

Name: Sathisha Shet K .

Student

Name: SAIKRISHNA SUDHARSHAN(2021B5A71645G)

Student Write-up

PS-II Project Title: AI Driven Schematic Reviewer

Short Summary of work done during PS-II : During my Practice School–2 Internship at Texas Instruments, I designed and developed an AI-powered schematic review system aimed at automating and accelerating the SoC integration validation process. Schematic review is a critical phase in the hardware design lifecycle, ensuring that Texas Instruments System-on-Chip (SoC) components are correctly integrated into customer hardware while meeting stringent electrical, thermal, and layout requirements for reliable operation. Traditionally, these reviews are performed manually by TI engineers, relying on deep domain expertise but requiring significant time and effort. I addressed key limitations of this approach—long turnaround times, reviewer subjectivity, and the risk of overlooking subtle or repetitive design issues—by leveraging Large Language Models (LLMs) to automate schematic analysis. The resulting AI-driven system reduced review times from hours to minutes while improving consistency, transparency, and explainability. It also proved effective in identifying systematic design flaws, missing information, and hidden dependencies that are difficult to detect through manual review. Over the course of the internship, I iteratively evolved the system from Version 1.0 to Version 4.4. Early versions were based on prompt engineering, while later iterations adopted modular, declarative, and agent-based architectures using frameworks such as DSPy and ReAct. This progression enabled self-improvement, targeted reasoning, and scalable analysis. By Version 4.3, the system achieved human-level accuracy (100%) with an average processing time of approximately 10 minutes, establishing it as a production-ready solution. The final framework delivers a transparent, interpretable, and scalable schematic review pipeline, representing a significant advancement toward industrial-grade AI-assisted hardware design validation at Texas Instruments.

Tool used (Development tools - H/w, S/w) : Python, MCP, Claude

Objectives of the project : To develop an AI Agent to fully automate Schematic Verification of Customer Boards

Major Learning Outcomes : Gen AI Pipelines and Workflows

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Being at TI, I gained understanding of the complete electronic design lifecycle, from initial concept and specification through implementation, verification, and final product delivery.

Beyond theoretical knowledge, I witnessed how fundamental electronic principles translate into real-world applications, gaining appreciation for the complexity and precision required in commercial electronic systems.

I developed deep knowledge of semiconductor packaging processes, including die attach, wire bonding, encapsulation, and thermal management considerations.

Most significantly, this experience provided authentic exposure to corporate dynamics, professional workflows, and industry standards that cannot be replicated in academic settings.

Academic courses relevant to the project : None

PS-II Station : Texas Instruments - Analog, Bengaluru

Faculty

Name: Sathisha Shet K .

Student

Name: AMBAR BRAHMACHARI(2021B1A82811G)

Student Write-up

PS-II Project Title: SWEB validation and Active inductor design

Short Summary of work done during PS-II : Learn validation and design

Tool used (Development tools - H/w, S/w) : cadence virtuose ,oscillosocope ,isopulse

Objectives of the project : SWEB validation and Active inductor design

Major Learning Outcomes : Learn validation and design

Details of Papers/patents : none

Brief Description of working environment, expectations from the company :

Academic courses relevant to the project : ES

Name: ABHIRAM SISTLA .(2021B3AA0612H)

Student Write-up

PS-II Project Title: Precision Notch Filter Design for accurate THD+N measurement by Audio Analyser Signal Chain Enhancement

Short Summary of work done during PS-II : My work was to design a high performance notch filter with very specific requirements to be used in a circuit meant to improve the THD+N measurement process of audio signals

Tool used (Development tools - H/w, S/w) : LT Spice, MATLAB, Audio Precision analysis

Objectives of the project : Improvement of existing validation instrument to make it more efficient and cost effective

Major Learning Outcomes : Learnt the real life implications of theory learnt in college, as well as different roadblocks we have to deal with in a practical scenario

Details of Papers/patents : plans of writing a paper and presenting at IEEE conference

Brief Description of working environment, expectations from the company : Work environment is very relaxed but very busy at the same time. Flexible timings as well

Academic courses relevant to the project : Analog Electronics, Communication Systems, Digital Signal Processing

Name: MALPANI GOVIND NANDKISHOR(2021B5A32280H)

Student Write-up

PS-II Project Title: CAAH Validation Projects: 1)Jitter- generation, measurement and analysis on bit clock of audio amplifier. 2) Addressing Op-amp instability issues(OPA541) while driving 10-30uf cap at the output. 3) Measuring Electrical characteristics of audio amplifier o

Short Summary of work done during PS-II : The project is divided into three phases, each focusing on different aspects of audio and signal processing technology. Phase 1: Jitter Generation and Analysis. This phase introduces jitter into TDM Clock (SBCLK) and SWI3S Clock signals to evaluate its impact on system timing. It includes random jitter (pink and white noise) and deterministic jitter (sine wave). Key metrics such as Time Interval Error (TIE) and Phase Noise are measured, particularly above 100 Hz. The goal is to replicate a customer-provided phase noise profile using a buffer IC and modulating its supply voltage. Phase 2: Op-Amp Stability with Capacitive Loads This phase addresses the challenges of driving capacitive loads with op-amps, specifically the OPA541 and OPA891. The introduction of an isolation resistor (Riso) is explored for stabilization, but it can lead to output drift and frequency response variations. The project considers the effects of component tolerances on stability. A proposed solution is to set Riso to 0 ohms to reduce variations, while managing overshoot and ringing with a lookup table. Phase 3: Electrical Performance Verification of Audio Amplifier. The final phase measures electrical parameters of an audio amplifier on a stereo coupon card and compares them to those from a mono coupon card. Parameters include Idle Channel Noise (ICN), Dynamic Range (DNR), Output Offset Voltage (Vos), and efficiency, measured at different power levels using a class-D amplifier. The project aims to confirm that the stereo measurements match those of the mono

card, with preliminary results showing consistency except for variations when both devices are powered.

Tool used (Development tools - H/w, S/w) : Audio Precision APx55, Oscilloscope, Waveform Generator, Op-Amp EVM, MATLAB, Altium Designer, Tina Ti.

Objectives of the project : Phase 1: Exploring different Jitter injection methods and Jitter analysis on BCLK of Class-D Amplifier. Phase 2: Study of Op-Amp instability issues for PSRR application with Class -D Amplifiers. Phase 3: Bring up & Verification of Electrical performance parameters on Newly designed Stereo Board.

Major Learning Outcomes : My internship at TI greatly enriched my understanding of both analog and digital fields. I had the opportunity to apply my theoretical knowledge to real-world projects, each with its own set of challenges. Frequently, addressing one issue unveiled another

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The working environment at Texas Instruments offers an excellent opportunity for exploration. If you are passionate about analog electronics and mixed-signal design, I highly recommend considering a position at TI. As a validation intern, you will enjoy the freedom to work with various lab equipment. During my internship, I had the chance to explore a wide range of operational amplifiers, evaluation modules (EVMs), motherboards, audio amplifiers (including class-D amplifiers), and much more.
Texas Instruments is an outstanding place to apply your academic knowledge in practical settings. Having a supportive mentor is a significant asset. With effective guidance, you can learn immensely. I was able to complete three projects in just 4.5 months, largely due to the support of my mentor.

Academic courses relevant to the project : Phase 1: Communication Systems, Signal and System, Digital Signal Processing. Phase 2: Analog Electronics, Electrical Science. Phase 3: Analog Electonics

PS-II Station : Texas Instruments - Embedded Software, Bengaluru

Faculty

Name: Sathisha Shet K .

Student

Name: KARTIK VERMA .(2021B3AA0554H)

Student Write-up

PS-II Project Title: Code coverage for ROM

Short Summary of work done during PS-II : I did code coverage

Tool used (Development tools - H/w, S/w) : Proprietary software, python, C

Objectives of the project : Complete code coverage

Major Learning Outcomes : Learnt how Rom code works

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : Very good, people are helpful

Academic courses relevant to the project : N/A

Name: SHASHANK KUMAR .(2021B3AA0776H)

Student Write-up

PS-II Project Title: DLPC900 Feature Enhancement

Short Summary of work done during PS-II : Enhanced DLPC900 firmware reliability by resolving critical bugs and adding new features for 6+ industrial and biomedical DLP systems. •Optimized DMD sequence architecture, eliminating redundant vector repeats and reducing flicker by ~40% for stable light output in 3D printing and imaging applications. •Enabled flash programming without DMD connection, cutting setup time by 60% and streamlining production workflows. •Automated mode switching using batch scripts and added a non-blocking delay command, improving transition time by 80% and ARM core responsiveness.

Tool used (Development tools - H/w, S/w) : Software:-DLP Composer, VS Code , QT software, JTAG Flash programmer, Tera Term 5. Hardware tools:- Picoscope, Oscilloscope.

Objectives of the project : Enhance the DLPC900 controller firmware and software tools to address critical customer issues and implement requested features that improve usability and reliability.

Major Learning Outcomes : Added features and modified the existing architecture in DLPC900 for sequence execution. Learnt the whole process from issue reproduction to different debugging techniques in embedded SW finally to building the firmware changes and testing it on the hardware.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : They require basic knowledge of programming in C/C++. Also you should be well versed with basics of MPI for embedded software. Other than that they will teach everything you will require to execute your project. People at Texas are very helpful and would help with everything but to be on the safe side be good with your basics.

Academic courses relevant to the project : MPI, FPGA Lab, Digital Design, Computer Programming

Name: ARPIT VARAHMIHIR(2021B4AA1499P)

Student Write-up

PS-II Project Title: STM32 TI ARM MCU Portfolio Migration

Short Summary of work done during PS-II : During my PS-II internship at Texas Instruments, I worked on three major deliverables focused on enabling developers to transition from STM32G474x microcontrollers to TI's ARM MCU ecosystem. My primary task was creating a comprehensive STM32G474x → TI ARM MCU Migration Guide. This involved studying both MCU architectures in depth, comparing peripheral functionalities, identifying equivalent modules, analyzing driver models, and documenting the complete migration process in a clear and structured manner. In parallel, I developed practical migration examples on various peripherals that demonstrated end-to-end porting of application code from the STM32 environment to TI's development workflow, including adapting startup code, configuring key peripherals, and validating functionality using Code Composer Studio and TI's driver libraries. To support training and onboarding, I contributed to TI Academy by converting the migration work into easy-to-understand educational content. This required simplifying complex technical concepts, organizing them into learning modules, and preparing documentation that is accessible to both new engineers and external customers. Throughout the internship, I strengthened my skills in embedded C programming, debugging, peripheral configuration, and technical documentation while gaining hands-on experience with TI tools such as CCS, SysConfig, and MCU software packages. Overall, my work contributed to improving the migration experience for developers and expanding TI's training resources.

Tool used (Development tools - H/w, S/w) : Sysconfig, CCS

Objectives of the project : Develop a comprehensive STM32G474x → TI ARM MCU Migration Guide,Create practical migration examples on various peripherals demonstrating end-to-end porting,Contribute to TI Academy by designing and preparing educational content

Major Learning Outcomes : During my internship, I gained a strong understanding of TI ARM MCU architecture, tools, and development workflows while learning how to systematically migrate applications from STM32G474x devices to TI MCUs. I developed practical skills by creating a com

Details of Papers/patents : STM32G474 TI ARM MCU Migration Guide

Brief Description of working environment, expectations from the company : The working environment at Texas Instruments was highly collaborative, structured, and conducive to continuous learning. I was integrated into a professional engineering team where communication was open, approachable, and supportive. My mentor and team members encouraged me to ask questions, explore alternative solutions, and take ownership of my tasks. Weekly sync-up meetings, review discussions, and regular feedback sessions helped maintain clarity on expectations and ensured that my work stayed aligned with project goals. The culture emphasized trust, technical curiosity, and a strong commitment to quality—values that created a motivating and productive atmosphere.

TI provided access to extensive internal documentation, training modules, tools, and development boards, enabling me to quickly understand the MCU ecosystem and work independently. I was expected to deliver work that was accurate, well-documented, and customer-ready. The company also encouraged proactive communication, timely updates, and responsible handling of assigned tasks. Another expectation was to continuously upskill by exploring TI Academy content, understanding internal workflows, and applying good engineering practices.

Overall, TI offered a professional environment that balanced independence with guidance, giving me the freedom to experiment and the support needed to resolve challenges. The experience helped me grow both technically and professionally, while aligning with the company's culture of innovation, learning, and ownership.

Academic courses relevant to the project : Embedded systems for electronics

Name: LALITH REDDY TEKULAPALLI .(2022A3PS0638H)

Student Write-up

PS-II Project Title: Gesture detection

Short Summary of work done during PS-II : During my PS-II at Texas Instruments, I worked on a gesture detection project using machine learning techniques. The work involved understanding the existing gesture recognition pipeline and extending it to handle challenging real-world conditions such as rain. I worked extensively with MATLAB and Python for data preprocessing, feature vector generation, annotation, training, and testing of classification models. Multiple datasets were analyzed, including controlled, random, and rain-only data, to evaluate model robustness. In addition to model development, I integrated trained classifiers into embedded C workflows using TI's SDK and Code Composer Studio. I developed supporting scripts to generate configuration files, binary feature files, and classifier weights required for deployment on evaluation modules. I also performed debugging, validation, and performance analysis to ensure correct predictions on hardware. Alongside the core project, I worked on running and validating additional demos such as Kick-to-Open and ADAS BSD, participated in internal review meetings, and documented workflows for reproducibility. This internship provided strong exposure to applying machine learning in an embedded, production-oriented environment. Tool used (Development tools – H/w, S/w) Hardware: AWRL1432, AWRL6844 Evaluation Modules Software: MATLAB, Python, Code Composer Studio (CCS), TI mmWave SDK, Radar Toolbox, UniFlash

Tool used (Development tools - H/w, S/w) : AWRL1432, AWRL6844 Evaluation Modules Software: MATLAB, Python, Code Composer Studio (CCS), TI mmWave SDK, Radar Toolbox, UniFlash

Objectives of the project : To design, train, and deploy a machine learning–based gesture detection system that can operate reliably under varying environmental conditions, including rain, and be integrated into an embedded platform.

Major Learning Outcomes : • Understanding of end-to-end machine learning pipelines for real-world sensor data
• Hands-on experience with data preprocessing, feature extraction, training, and testing
• Integration of ML models into embedded C workflows
• Debugging and validation

Details of Papers/patents : Not applicable

Brief Description of working environment, expectations from the company : Texas Instruments provides a highly collaborative and technically driven working environment. Team members are approachable and encourage interns to ask questions and take ownership of tasks. Regular discussions, review meetings, and debugging sessions helped me understand both the technical depth and practical constraints of industrial projects.
The expectations from interns include proactive learning, independent problem-solving, clear communication of progress, and timely completion of assigned tasks. Emphasis is placed on understanding the system holistically rather than only executing instructions. Overall, the environment promotes learning, responsibility, and professional growth.

Academic courses relevant to the project : Machine Learning, Neural Networks and Fuzzy Logic, Signals and Systems, Embedded Systems

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Name: KHUSH JAIN(2022A8PS0490G)

Student Write-up

PS-II Project Title: Security Implementation for SecOC module on AM26xx devices

Short Summary of work done during PS-II : I started with ramping up on the AM263PX devices learning about the boot flow and secure devices. This helped me to develop security services involving CMAC generation and verification which are essential for SecOC module. I used these services to implement a reference application for SecOC module on AM263PX devices involving

both CMAC and freshness values based on multiple CAN IDs. I was able to demonstrate how effective the SecOC module is in the automobile industry and how it prevents the system from various attacks and keeps it secure and safe ensuring smooth functioning.

Tool used (Development tools - H/w, S/w) : VSCode, Code Composer Studio, TeraTerm, AM263PX control cards

Objectives of the project : The objective of the project was to implement our own security services involving CMACs and use them to develop a comprehensive reference showcasing clients how to implement SecOC module on their own without assistance from any 3rd party.

Major Learning Outcomes : I learnt how to create our own services which can be used as APIs for future development. The majority of the project was focussed on the SecOC module and securing the CAN communication network between ECUs in automobiles.

Details of Papers/patents : Security Implementation for SecOC module for AM26xx devices. (Abstract selected for TIIITC, full paper submission is done, it is under review)

Brief Description of working environment, expectations from the company : The working environment is very warming and pleasant. Everyone is very friendly and welcoming. I could freely interact with everyone and always used to learn something from them. Overall TI takes great care of its employees in every aspect be it mentally or physically. For me, it was a great experience overall.

Academic courses relevant to the project : Nil

PS-II Station : The Affordable Organic Store, Hyderabad

Faculty

Name: Parag Rastogi

Student

Name: THAMATANI VISHAL .(2020B4A42364H)

Student Write-up

PS-II Project Title: AI automation in e-commerce

Short Summary of work done during PS-II : As an AI development Intern at The Affordable Organic Store, I have applied my AI and machine learning skills to solve real-world business problems. I developed a semantic FAQ search platform using Large Language Models (LLMs) and vector embeddings, which significantly improved query resolution and reduced the need for support agent escalations. This platform enhanced search accuracy and efficiency, leading to considerable operational cost savings and enabling our team to manage a much larger volume of user inquiries. Additionally, I have experience with prompt engineering and the OpenAI API, which I used to build a zero-shot classifier for intent classification of Instagram comments. This classifier effectively identified high-intent leads, streamlining our lead generation process by reducing manual review time and improving the quality of leads and customer acquisition.

Tool used (Development tools - H/w, S/w) : S/w - Python3, TensorFlow, Keras, NumPy, Pandas, Scikit-learn, Transformers (Hugging Face), SQL, Docker, Large Language Models (LLMs), OpenAI API, Vector Embeddings, RAG systems, n8n; H/w - GCP, my Macbook

Objectives of the project : Automate tasks using AI to improve customer experience and reduce costs, human effort

Major Learning Outcomes : Advanced AI and Machine learning, Full stack AI development, Leadership and Project management

Details of Papers/patents : None

Brief Description of working environment, expectations from the company :
I successfully developed a functional RAG prototype within one month and demonstrated it to my mentor.
After BITS Pilani's intervention, the company is making efforts to use moral principles to make choices that prioritise what is right over what is profitable. I think it's a decent place for someone who's self driven, passionate about what they're doing and doesn't mind working from a 3 bhk house for an office. The work hours have been relaxed too.

Academic courses relevant to the project : AI for Robotics, Data Mining, FDSA, DBMS, ASM

Name: YASH KUMAR .(2022A4PS1732H)

Student Write-up

PS-II Project Title: MANAGEMENT TRAINEE

Short Summary of work done during PS-II : Negotiating rates with courier partners, onboarding courier partners, checking warehouse processes, increasing supply chain efficiency

Tool used (Development tools - H/w, S/w) : Excel, google sheets, quadratic AI, shopify

Objectives of the project : Enhance the supply chain operations and logistics of the company

Major Learning Outcomes : Learned about how the supply chain of an organization works, how to find and onboard courier partners and negotiate rates from courier partners, what are the different metrics for analysing supply chain efficiency (NDR, delays, damages), how the process

Details of Papers/patents : NIL

Brief Description of working environment, expectations from the company : Flexible working timings, neither too less work nor too much, the work can span across different departments at

times like customer excellence, procurement, logistics etc. for the same person, people are fun-loving and helpful in the office with montlhy parties and games organised by the CEO.

Academic courses relevant to the project : SUPPLY CHAIN MANAGEMENT

PS-II Station : THINKBYTE TECHNOLOGIES PRIVATE LIMITED, Vijayawada

Faculty

Name: Anjani Srikanth Koka .

Student

Name: DAMERLA TARUN SAI(2021B1A12741P)

Student Write-up

PS-II Project Title: Founder's Office Intern

Short Summary of work done during PS-II : Multiple things- sales, growth marketing, digital marketing, seo of 4 clients end to end

Tool used (Development tools - H/w, S/w) : NA

Objectives of the project : Multiple things- sales, growth marketing, digital marketing, seo execution for 4 clients end to end

Major Learning Outcomes : Multiple things- sales, growth marketing, digital marketing, seo of 4 clients end to end

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Everything is good. The learning scope and potential here are good

Academic courses relevant to the project : NA

PS-II Station : Tidy Rabbit, Coimbatore

Faculty

Name: Garima Jindal

Student

Name: ADLA SUJIT NEEL .(2022A4PS1110H)

Student Write-up

PS-II Project Title: Operations Intern

Short Summary of work done during PS-II : -

Tool used (Development tools - H/w, S/w) : None

Objectives of the project : NA

Major Learning Outcomes : Upskilled myself during free time

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company :

Academic courses relevant to the project : None

PS-II Station : Times Internet Limited, Noida

Faculty

Name: Harish Kumar Aggarwal .

Student

Name: SAKSHAM JAIN .(2021B4A82925H)

Student Write-up

PS-II Project Title: Multiple Projects

Short Summary of work done during PS-II : Worked on multiple digital product projects at Times Internet, The Times of India, including Live Videos, Video Listing Pages, TOI Year Ender, Careers, Study Abroad, College Rankings, Global Search, and Newsletter Management. Defined user flows, designed prototypes, coordinated with cross-functional teams, tested and optimized features, handled APIs and data integration, tracked user engagement metrics, and implemented strategies to improve UX, content discoverability, and newsletter subscriptions.

Tool used (Development tools - H/w, S/w) : JIRA, GA4 (Google Analytics 4), Excel, Lovable AI, Gemini, Perplexity, GrowthRX, Denmark, Darwin, Figma, Slike, Postman

Objectives of the project : Enhance user engagement, content discoverability, and digital experiences across The Times of India browser platform including verticals like videos, search, newsletters, surveys, and data-driven features.

Major Learning Outcomes : Cross-functional collaboration and stakeholder management
Product lifecycle understanding from ideation to launch
User-centric design and UX/UI improvements
Data-driven decision making and user behavior analysis
API structuring and content optimization.

Details of Papers/patents : No opportunities for publishing papers or filing patents were available during this internship.

Brief Description of working environment, expectations from the company : The work environment at Times Internet offered exposure to multiple projects beyond those formally assigned, the Product Management team was generally supportive, allowing interns to provide inputs. However, there were challenges in motivation & rationale for certain tasks. Managing multiple projects came with pressure due to tight deadlines, and coordination with other teams often required continuous follow-ups, and resistance to trying new approaches sometimes slowed progress. At times, it felt that interns were being used to handle employees' workload rather than being treated as individuals with their own responsibilities and learning goals.
Interns are expected to be self-sufficient in terms of equipment, as laptops, ID cards, or AI subscriptions are not provided. In my case, when my laptop broke, my request for a replacement laptop was rejected with the reason that interns are not eligible for company laptops. ID cards were not issued, requiring manual entry at the office entrance everyday. This highlighted a gap in infrastructure support for interns, making it challenging to work efficiently in certain situations.
Overall, the environment provides valuable exposure to professional workflows, cross-team collaboration, and project management, though it requires adaptability and initiative from the intern.

Academic courses relevant to the project : None

PS-II Station : TKIL Industries Pvt. Ltd (formerly known as thyssenkrupp Industries India Pvt. Ltd.), Pune

Faculty

Name: Ravi Shrikrishna Reosekar .

Student

Name: RINISHA BARMAN(2022A1PS1340P)

Student Write-up

PS-II Project Title: Delay Analysis of GNFC Project and Assessment of Lactic Acid Production

Short Summary of work done during PS-II : During PS-II at TKIL Industries Pvt. Ltd., an EPC company, I worked on two major areas: project delay analysis and a techno-economic study of lactic acid production. In the project management part, I studied the Engineering–Procurement–Construction (EPC) workflow of an ongoing GNFC project. I analyzed project schedules, contractor performance, and procurement data to identify causes of delay. Tools such as L3 scheduling, Pareto analysis, Why-Why analysis, and work breakdown structures were used to identify critical delay drivers. Based on the findings, corrective and preventive actions were recommended to improve resource planning, contractor coordination, procurement strategy, and schedule control. In parallel, I worked on the process technology and economics of lactic acid production. Different production routes and feedstocks such as molasses, starch, and lignocellulosic biomass were studied, with a focus on fermentation-based processes. The complete process flow for lactic acid production was analyzed, including fed-batch fermentation, product recovery, and gypsum formation. Applications of lactic acid and its derivatives, especially polylactic acid (PLA), were studied along with market demand and commercialization potential in India. Methods for gypsum utilization and elimination were also evaluated from technical and sustainability perspectives. Overall, the internship strengthened my understanding of industrial

project execution, process selection, and techno-commercial decision-making in the chemical industry.

Tool used (Development tools - H/w, S/w) : MS Excel (data analysis, scheduling, Pareto and Why-Why analysis), MS PowerPoint (presentations and reporting), MS Word (documentation and report preparation)

Objectives of the project : The objective of the project was to analyse delays in an EPC project using the L3 schedule to identify major causes and recommend corrective measures, while also evaluating the techno-economic feasibility of lactic acid production through a study of process routes, feedstocks, and market potential.

Major Learning Outcomes : Gained practical understanding of EPC project execution and scheduling through L3-based delay analysis, developed the ability to identify and prioritise critical delay factors using Pareto and root cause analysis, acquired exposure to engineering–procurem

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment during my PS-II was professional and well-structured, with strong emphasis on safety and standard operating procedures. The work culture was disciplined, and interactions with engineers and supervisors were mostly formal but supportive, allowing scope for learning through observations, discussions, and assigned tasks. Guidance was provided when required.

Academic courses relevant to the project : Heat Transfer, Mass Transfer, Thermodynamics, Process Equipment Design, and Process Control

PS-II Station : Tyfone CDI - Tech, Hyderabad

Faculty

Name: Perumal Jayakumar

Student

Name: SAMARTH SAHU(2021B4A41539P)

Student Write-up

PS-II Project Title: CONFIGURATION MANAGEMENT APPLICATION FOR CREDIT UNIONS

Short Summary of work done during PS-II : The first phase of the internship lasting nearly 2 months mostly involved understanding the existing codebase, attending bootcamp sessions, and refactoring code for improvements and/or new features. The next phase involved fullstack development of a configuration management system using Java Spring Boot and React.

Tool used (Development tools - H/w, S/w) : Git and Github, Windsurf Agentic IDE, Java Eclipse IDE, Postman, Docker, MySQL Workbench

Objectives of the project : Develop an enterprise grade internal tool that allows the engineering and delivery teams to onboard new customers seamlessly. The tool provides a centralised management system for nearly 100 million database records.

Major Learning Outcomes : 1. Exposure to complete development lifecycle of an enterprise grade application and working with industry standard tech.
2. A good understanding of the corporate space
3. Improved professional communication and presentation skills.
4. Improved time management

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : 1. The company is lenient with regards to work hours as long as deadlines are kept in check, it is however normalised to work over the weekends during crunch periods.

2. Peers and mentors are supportive.
3. Language is sometimes a barrier to effective professional communication, the student MUST be proactive to ensure there are no gaps.
4. There isn't a lot of feedback provided, however the projects are very relevant and interesting. Again, the student must be proactive and open for a lot of on-the-job learning.

Academic courses relevant to the project : Brushing up fundamentals of any programming language will help.

Name: VIVIAN PYARRY JOHN .(2021B4A43149H)

Student Write-up

PS-II Project Title: AI engineering intern

Short Summary of work done during PS-II : NA

Tool used (Development tools - H/w, S/w) : NA

Objectives of the project : To train a voice AI agent

Major Learning Outcomes : NA

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : NA

Academic courses relevant to the project : NA

Name: THATHAPUDI HARSHITH(2021B5A83165H)

Student Write-up

PS-II Project Title: 1.YOGI & 2.PENNI AI

Short Summary of work done during PS-II : During my internship at Tyfone, I focused on two strategic initiatives: Yogi and Penni AI. I developed Yogi, a centralized Configuration Management Application designed to resolve the complexity of managing unique client settings for Credit Unions. By replacing fragmented spreadsheets with a standardized, automated platform, I helped establish a "single source of truth." This streamlined the Delivery Team's onboarding process and provided the Engineering Team with validated data, significantly decoupling configuration from the core codebase to improve scalability. Concurrently, I contributed to Penni AI, a next-generation digital assistant. Moving beyond traditional chatbots, I helped implement a Retrieval-Augmented Generation (RAG) architecture that integrates trusted federal data (FDIC, SEC) with internal banking contexts. I worked on enabling five distinct search segments—ranging from general financial literacy to specific "concierge actions" like card management. This system leveraged vector search and machine learning to deliver accurate, context-aware responses, ultimately reducing support costs and enhancing user engagement. These projects collectively advanced Tyfone’s operational efficiency and its competitive edge in AI-driven digital banking.

Tool used (Development tools - H/w, S/w) : Spring Boot 3, Java 21, HTML, CSS, React, Typescript, Git, Figma, SQL Workbench, JIRA, Python, Excel, etc

Objectives of the project : Yogi (Delivery Team's Configuration Management Web App. Tool) & Penni AI (AI Semantic Search Engine)

Major Learning Outcomes : Acquired practical experience in enterprise system design by developing a centralized Configuration Management platform to automate complex banking workflows. Deepened expertise in Applied AI and RAG architectures, implementing vector search

Details of Papers/patents : N.A.

Brief Description of working environment, expectations from the company : The working environment at Tyfone is highly demanding and operates with a steep contrast between the training phase and project execution. While the initial months offered a balanced schedule, the onset of the Yogi project shifted expectations dramatically, frequently necessitating overnight work and mandatory weekend contributions (spanning 7-8 weekends) to meet aggressive deadlines.
However, the technical mentorship provided by the immediate team was the sole redeeming factor. Mentors were patient, supportive.

Academic courses relevant to the project : OOPs, DBMS, CN, ML, AI, DL, etc

PS-II Station : UBER - Data Analytics, Hyderabad

Faculty

Name: Ashish Narang .

Student

Name: ARYAN PARAG PHANSE(2021B2A32284G)

Student Write-up

PS-II Project Title: Data Analytics

Short Summary of work done during PS-II : During my Practice School-II internship at Uber's Data Analytics division in Hyderabad, I worked with the Community Operations Learning & Development (L&D) Analytics & Insights team on building and strengthening enterprise-scale learning analytics infrastructure. My work focused on integrating data from multiple systems and

enabling data-driven decision making for training programs supporting over 34,000 customer support agents globally. A major component of my role involved developing secure, role-based business intelligence dashboards for global trainer performance tracking, integrating data from Workday, Fieldglass, ticketing systems, and learning platforms. I engineered complex SQL queries in BigQuery to consolidate heterogeneous data sources and implemented row-level security to ensure appropriate access for BPO partners, internal employees, and leadership. I also designed and enhanced an L&D delivery scorecard using advanced formula engineering and weighted metrics to evaluate training effectiveness across regions, lines of business, and learner segments. In addition, I automated several manual reporting and data processing workflows using Python, improving efficiency and data reliability. I conducted extensive API validation for the Learning Content Management System, migrated critical Tableau data sources to optimized pipelines, and debugged production-level data engineering issues. Toward the end of the internship, I contributed to the development of an adaptive learning system using machine learning to predict course enrollment and enable personalized training recommendations.

Tool used (Development tools - H/w, S/w) : Python (Pandas, NumPy, scikit-learn), SQL (BigQuery, Spark SQL, Presto), Google BigQuery, Looker Studio, Tableau, Postman, Google Sheets, Piper/uWorc data pipeline framework, Learning Management Systems (LMS/LCMS), Workday, Fieldglass.

Objectives of the project : The objective of this project was to build a scalable and reliable data analytics foundation for Uber's Learning & Development organization. The work focused on integrating data from multiple enterprise systems, developing secure and interactive dashboards for global performance tracking, automating manual reporting processes, and enabling data-driven evaluation of training effectiveness. Additionally, the project aimed to lay the groundwork for adaptive learning through predictive analytics and machine learning–based course recommendations.

Major Learning Outcomes : Through this project, I gained practical exposure to enterprise-scale data analytics and data engineering in a real-world organizational setting. I developed strong skills in writing and debugging complex SQL queries, integrating data.

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The working environment at Uber was highly professional, collaborative, and fast-paced, reflecting the scale and complexity of a global technology organization. I worked as part of the Community Operations Learning & Development Analytics & Insights team, which collaborated closely with cross-functional stakeholders including engineering, program management, operations, and regional L&D teams across multiple geographies. The culture emphasized data-driven decision making, ownership of deliverables, and clear communication, while also encouraging learning, documentation, and knowledge sharing.

As a Practice School-II intern, I was treated as a contributing member of the team and was entrusted with production-level responsibilities. The company expected a strong sense of accountability, adherence to data governance and security standards, and the ability to work independently on complex analytical tasks. Timely delivery, accuracy of insights, and proactive problem-solving were highly valued. I was also expected to clearly document my work, participate in technical discussions, and incorporate feedback from mentors and stakeholders.

Academic courses relevant to the project : Data Structures and Algorithms, Probability and Statistics, Machine Learning

PS-II Station : UBER - Data Science, Hyderabad

Faculty

Name: Ashish Narang .

Student

Name: OJAS PUNGALIA(2021B4A71552P)

Student Write-up

PS-II Project Title: Comms platform team

Short Summary of work done during PS-II : Uber | Data Science & Product Strategy Intern Communications Platform Team Developed ACER (Akshara Component Error Rate): Designed a novel, entropy-weighted metric to evaluate Hindi ASR (speech recognition) performance. This framework addressed the linguistic inadequacies of standard Word Error Rate (WER), enabling accurate vendor benchmarking for Uber's support automation. Built Comms Gateway Dashboard: Engineered a "Single Source of Truth" dashboard to unify fragmented lifecycle data across Push, SMS, and WhatsApp. This identified a critical latency mismatch in fallback logic, preventing redundant message firing and resulting in projected savings of ~$195,000/month. Led Cost Optimization Strategy: Conducted a rigorous analysis of global channel economics, identifying a ~$1.38M annual saving opportunity by strategically diverting marketing traffic from SMS to WhatsApp in high-penetration regions like India and Brazil.

Tool used (Development tools - H/w, S/w) : SQL | Google Suite | other Uber internal tools

Objectives of the project : Cost optimization | increasing efficiency of channels.

Major Learning Outcomes : SQL.

Details of Papers/patents : worked on a mathematical framework, paper rejected

Brief Description of working environment, expectations from the company : I do not wish to answer

Academic courses relevant to the project : foundations of data science

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Name: MS. AKSHATA KHANDELWAL(2021B4A71700P)

Student Write-up

PS-II Project Title: Data driven improvement in customer support automation

Short Summary of work done during PS-II : During my PS-II, I worked on "Data-Driven Improvements for Mobility Automation" to optimize support costs and enhance the user experience. My work followed a three-phased approach: Discover, Quantify, and Scale. First, I conducted a deep dive into chatbot quality to uncover the root causes of low customer satisfaction scores. By analyzing high-volume workflows, I identified that intent mismatches—specifically within the "Lost Item" flow—were a primary failure point, often routing users to incorrect solutions. Second, I focused on sizing proactive agent handoffs. Using unsupervised clustering, I identified complex, safety-critical issues like Account Takeovers and Third-Party Lost Items that automation could not effectively resolve. I demonstrated that these scenarios required immediate routing to human agents to ensure user safety and trust. Finally, I led a project to size the potential for Contextual AI. I developed a Python pipeline utilizing Large Language Models to audit generic chatbot responses. This analysis revealed that a large portion of these interactions were missed opportunities for personalization. My findings validated a strategic roadmap to deploy GenAI solutions, aiming to significantly improve resolution rates and user sentiment globally

Tool used (Development tools - H/w, S/w) : Languages: SQL, Python, Internal Tools: Internal Query Tools, Internal Clustering Systems, Experimentation Platform , Visualization: Data Studio / Dashboarding Tools, Spreadsheets , AI Models: GenAI / LLMs (GPT family)

Objectives of the project : To identify the root causes of low Customer Satisfaction (CSAT) scores in the company's automated chatbot interactions. To quantify "unsolvable" automation issues (such as Account Takeovers and Third-Party Lost Items) that require proactive handoff to human agents. To size the opportunity for using GenAI (LLMs) to transform generic chatbot responses into contextual, personalized interactions. To optimize Business Process Outsourcing (BPO) spend by reducing unnecessary escalations to human agents through better intent detection.

Major Learning Outcomes : Root Cause Analysis: Learned to diagnose automation failures by deep-diving into specific workflows (like "Lost Item") and identifying intent mismatches where users were guided to the wrong solutions.
Strategic Sizing: Gained proficiency.

Details of Papers/patents : Na

Brief Description of working environment, expectations from the company : The environment is fast-paced and heavily relies on "first-principles" thinking. Interns are treated as full-time owners of their projects. The expectation is not just to pull data, but to derive actionable insights that drive business strategy.
There is a strong emphasis on "Deep Dives"—superficial analysis is discouraged. For example, simply seeing a low metric isn't enough; one must find the "Why" (e.g., identifying specific intent failures in the Lost Item flow). Collaboration is key, as I worked with product managers and engineers to validate my sizing models. The culture values data-backed storytelling, as evidenced by the requirement to present findings in a structured "Data Story" format (Discover, Quantify, Scale).

Academic courses relevant to the project : Natural Language Processing (NLP)
Machine Learning / Data Mining (Clustering techniques)
Database Management Systems (SQL)
Probability and Statistics (for sizing and extrapolation)
Business Analytics

PS-II Station : UBER - Software Engineer, , Hyderabad

Faculty

Name: Akshaya G .

Student

Name: GOURA SINGH .(2021B1A43129H)

Student Write-up

PS-II Project Title: Automation of CI generation process

Short Summary of work done during PS-II : My work consisted of mostly automation of a pre-exisitng generation method to decrease manual intervention . I created a tooling endpoint to trigger workflows to overcome the cadence blob size limitation which was earlier causing workflows to fail and hence causing delays in preview invoice generation which would further lead to customer delays. Also created multiple alerts that helped in identifying missing classification group ids , so that we are notified in advance about the missing group id and we can add it to the line item so that invoices would not fail during generation.

Tool used (Development tools - H/w, S/w) : Goland, Java , Git , Phabricator , QueryBuilder

Objectives of the project : End to end automation of CI generation process to eliminate manual intervention

Major Learning Outcomes : Go , Java , Sql , Apache Spark

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment at Uber was friendly, collaborative, and fast-paced. Team members were approachable, and creative ideas were encouraged. Interns were always appreciated for asking questions, being curious, and actively participating in discussions, which made the learning experience engaging and rewarding.

At the same time, the work could be demanding. There were instances when working late nights was required to meet deadlines or deliver on important projects. The company sets high expectations from its interns; however, there is strong support in place to help them meet these expectations. Mentors and teammates are generally willing to guide, provide feedback, and share their experiences.

Uber is an intern-friendly organization overall, and the experience largely depends on the team, mentor, and manager you are assigned to. In terms of a Pre-Placement Offer (PPO), outcomes can vary based on performance as well as the level of support from mentors and managers. While different interns may have different experiences, my internship was a positive one.

Overall, the internship provides valuable exposure to the corporate environment, real-world problem solving, and professional growth. Making the most of the opportunity depends on one's willingness to learn, take initiative, and adapt to a dynamic work culture.

Academic courses relevant to the project : OOPs , OS, Computer Architecture , Computer Networks (CN)

Name: PALAK SEERVI(2021B2A42752P)

Student Write-up

PS-II Project Title: Data Central Lineage Revamp

Short Summary of work done during PS-II : Architected a unified lineage ingestion framework across Presto, Spark, Neutrino, Piper & QR to standardize data flow and improve reliability.

Tool used (Development tools - H/w, S/w) : S/w- java , golang and Sql

Objectives of the project : To revamp the flow view of Data Central lineage revamp

Major Learning Outcomes : Learned to work with various language codebases - java , golang and sql simultaneously working with data and tables to enhance it's flow

Details of Papers/patents : Na

Brief Description of working environment, expectations from the company : Working environment nice and learnt a lot in process

Academic courses relevant to the project : Oops , Dsa

Name: WALEED IQBAL SHAIKH .(2021B3A70559H)

Student Write-up

PS-II Project Title: 1. Push Notifications for UEM Website. 2. Integrating Agent in UEM website

Short Summary of work done during PS-II : For my first project, I integrated push notifications in the UEM website by making changes in the backend, in an existing notification delivery pipeline for Uber Eats Manager mobile app. I also made changes in the frontend allowing users to subscribe to the push notifications. For my second project, I'm exploring the possibilities of integrating an AI agent into UEM website.

Tool used (Development tools - H/w, S/w) : Golang(backend), Typescript, React, Fusion.js(frontend)

Objectives of the project : 1. To enable push notifications on Uber Eats Manager website

Major Learning Outcomes : Helped me learn more about the ways things work in corporate.

Details of Papers/patents : Didn't make any

Brief Description of working environment, expectations from the company : I really love the work environment here at Uber. Everyone in my team is super nice. The working hours are from 10 am to 5 pm typically, but can differ depending on your team.

Academic courses relevant to the project : OOP, but you need to learn a lot of stuff by yourself. None of the other academic courses really help a lot. OS and networking can be relevant for concepts like interprocess communication and understanding different types of API calls, like RPC.

Name: ANIRUDH JAYAKISHAN(2021B3A70979G)

Student Write-up

PS-II Project Title: Integration of Uber.com content with NOVA

Short Summary of work done during PS-II : I was working on Uber's customer support AI chat agent. It is a Retrieval Augmented Generation based system. My project involved modifying the source that the agent was retrieving content from. I had to build a pipeline to construct a semantic index of a store of new content that was provided to me. Once that was done, I had to modify the agent's code to retrieve the new content along with the original content. There were several additional steps in deciding the exact approach for integration, such as auto evaluation of the agent using LLM-as-a-judge, and prompt fine tuning.

Tool used (Development tools - H/w, S/w) : Python Cursor Arcanist

Objectives of the project : Integrating the content of uber.com web pages with Uber's AI support chat agent

Major Learning Outcomes : How to write and push production level code.
RAG based agent architecture

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The expectations of the company are a bit high for someone who has never had a corporate experience before. The workload itself is fine, but the expectations regarding how much knowledge of corporate culture you should have are too high. The work environment is team dependent. In general, the workload is a bit high, but manageable, at least for interns. Full time employees seem to have a much larger work load. My team was relatively okay in this regard.

Academic courses relevant to the project : AI DSA DBMS

Name: SHREYANSHI GARG .(2021B5A41891H)

Student Write-up

PS-II Project Title: ETL transformations and optimizations

Short Summary of work done during PS-II : We receive a large amount of data from the Uber app, which helps us understand user behavior and recommend the most suitable products based on that behavior. My primary work involved optimizing these data pipelines by restructuring their design to reduce time and resource usage. Additionally, I added new features to existing pipelines, which improved the accuracy of the machine learning model's predictions.

Tool used (Development tools - H/w, S/w) : Spark, Querybuilder.

Objectives of the project : Learning how data pipelines at uber are made, maintained and optimized.

Major Learning Outcomes : Learned how big data is processed, learned how to make ETL pipelines using uber's internal tools

Details of Papers/patents : none

Brief Description of working environment, expectations from the company : Initially, you are expected to complete the onboarding process and familiarize yourself with the internal systems used at Uber. Once this is done, you are assigned a project that you are expected to complete independently. This was the case for me, as my mentor didn't provide any time to me. However, typically, interns have daily meetings with their mentors to discuss their approach, progress, and any improvements that may be needed. How you present your knowledge and work during these interactions plays a key role in demonstrating your competence, and the impact of your project reflects how valuable you can be to the company.

Academic courses relevant to the project : DBMS,OOPs

Name: RITABRATA CHAKRABORTY(2022A4PS0843P)

Student Write-up

PS-II Project Title: Object Tracking Validation

Short Summary of work done during PS-II : Data labeling automation

Tool used (Development tools - H/w, S/w) : Git, Phabricator

Objectives of the project : High Quality Image Annotations

Major Learning Outcomes : -

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Professional working environment

Academic courses relevant to the project : FODS, ML, DL, CV

Name: IKSHITA KUMAR .(2022A4PS1030H)

Student Write-up

PS-II Project Title: Increase Image Coverage at Uber Eats

Short Summary of work done during PS-II : Build an end-to-end pipeline to enhance and expand image coverage for Uber Eats menus. Beginning with one of the most consumed CPG categories, the project showed that a well-defined methodology can successfully counter the challenge of mapping varied menu items to a normalized catalogue and also enrich them with high-quality images. The combination of SQL-based filtering, business rules hardcoded, classification and mapping using LLM, and Python scripting to create image links was an extremely powerful combination, producing strong and scalable outcomes.

Tool used (Development tools - H/w, S/w) : cadence, llms, postman, cursor, presto sql engine

Objectives of the project : The main aim of this project is to increase image coverage of Uber Eats US menus to provide customers with a better visually appealing and informative experience when selecting items

Major Learning Outcomes : How to write a fully functional code alomg with various types of testing

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Uber is a fast paced company, although you will be provided with proper guidance but most of the timw you are expected to know things before hand, there's no spoon feeding.

Academic courses relevant to the project : DBMS, DSA

Name: MD TANAIM SHAREEB .(2022A4PS1147H)

Student Write-up

PS-II Project Title: Rule life cycle management , enzyme to rtl migration , dqm

Short Summary of work done during PS-II : Made a new page with multiple filters and multiple views . Two api calls on the same page

Tool used (Development tools - H/w, S/w) : Cursor

Objectives of the project : Enhance user experience

Major Learning Outcomes : learned making new components on react

Details of Papers/patents : No papers

Brief Description of working environment, expectations from the company : Great work environment

Academic courses relevant to the project : None

Name: SAKSHAM KUMAR GUPTA(2022AAPS0816G)

Student Write-up

PS-II Project Title: Integration Testing for Microservices

Short Summary of work done during PS-II : I contributed to a project which was focused on automating how we verify integrations between different microservices. The main goal was to shift from fixing problems after they happened to proactively ensuring that different services could work together smoothly. As part of this effort, I worked on enhancing the backend contract management service. I designed and implemented an API for managing stale API contract data, with a focus on clean design and scalability. Worked on implementing an adapter layer in the backend service codebase that simplified complex configurations, making the system easier to understand and use. This helped other teams onboard more quickly and work with the system

more efficiently. A significant part of my work was involved in enhancing an existing non-scalable middleware to a generic and scalable middleware designed to transparently integrate across any microservice, independent of the specific integration testing framework being used. The high-level purpose of this middleware is to provide visibility into usecase coverage by observing what usecases are being tested when the service communicates. Essentially, it silently instruments integration tests to identify which specific scenarios (or "usecases") are exercised by the code, providing crucial insights into our test gaps without requiring any changes to existing test frameworks. Using this tool, we were able to increase usecase coverage for one of the API contracts from 6.3% to 97.5%, demonstrating how effective tooling can uncover test gaps and drive substantial improvements. Additionally, I worked on developing a kafka event replay tool that enabled our team to ingest and replay production events locally directly from the handler layer. This provided near-identical simulation of production flows, which are helpful for debugging production issues.

Tool used (Development tools - H/w, S/w) : Go Lang, Kafka, gRPC, Protobufs, Thrift, Terrablob, MySQL, Hive, Middlewares

Objectives of the project : To provide a standardized framework that helps fintech teams write and maintain integration tests efficiently.

Major Learning Outcomes : Communication Skills,
Gained experience in writing clean, maintainable, and scalable code,
Learned how distributed systems interact and how microservices communicate effectively,
Learned to design generic and reusable components that work across differen

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The workplace was very supportive and team-oriented, and there was always someone willing to help whenever I got stuck. Team members were approachable and open to questions, which made it easy to learn and grow. The company provided good infrastructure, reliable internal tools, and clear documentation, all of which made the development process smoother and more efficient.

There was a strong focus on taking ownership of work, and I was responsible for my tasks end-to-end, starting from the initial design and planning stage. This helped me understand the full lifecycle of a feature, from idea to implementation and testing.
Code quality was taken seriously across the team. I was expected to write clean, readable code, ensure proper test coverage, maintain clear documentation, and make thoughtful design decisions that would scale well over time.
Effective communication was another key aspect. Explaining solutions to senior engineers, who may not be familiar with low-level details, required a clear understanding of the components I was working on.
Beyond individual tasks, the environment encouraged proactive communication, asking clarifying questions, and actively participating in discussions.

Academic courses relevant to the project : None.
But I think, having a basic knowledge of Operating Systems, DBMS, and Communication Networks helps in understanding the system initially.

PS-II Station : UBS - RAS Executive Treasury, Pune

Faculty

Name: Niranjan Swain .

Student

Name: VANDAN SHEETALKUMAR DOSHI(2022A7PS0369G)

Student Write-up

PS-II Project Title: Ras-Treasury

Short Summary of work done during PS-II : During my Practice School-II internship at UBS Business Solutions (Pune) in the Reporting and Analytics Services (RAS) – Group Treasury team, I contributed to global treasury reporting, reconciliation, and data quality processes. Our team supports internal partners by consolidating treasury data, ensuring accuracy, and providing critical insights to regulators, auditors, and senior management. I worked extensively on OneRisk and FRS systems to monitor daily metric completeness, identify breaches, and resolve discrepancies. I enhanced my technical skills using Power BI, SQL, and advanced Excel to perform data validation, reconciliation, and automation of recurring processes. My key tasks included NFRI remediation—integrating multiple datasets into a unified curated source to reduce redundancy and operational risk—along with building Power BI dashboards that highlight missing data and offer actionable summaries. I also supported metrics mapping for new treasury metrics and created automated workflows using Power Automate to streamline file transfers into FRS. Overall, the internship strengthened my analytical thinking, communication, and cross-team collaboration while giving me hands-on experience in real-world financial data operations.

Tool used (Development tools - H/w, S/w) : Powerbi/sql/database

Objectives of the project : Transformation

Major Learning Outcomes : how to communicate/learned few technical skills like powerbi,SQL

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : During my Practice School-II internship at UBS Business Solutions, I worked within the Reporting and Analytics Services (RAS) – Group Treasury (GT) function, which operates in a highly structured, data-driven, and collaborative environment. The working culture emphasized accuracy, accountability, and timely delivery, given the critical role of treasury data in regulatory reporting and global financial compliance. Daily workflows involved coordinating with cross-functional teams across regions, ensuring seamless communication and alignment on data quality, breach resolution, and reporting timelines.

The environment encouraged proactive problem-solving, with interns expected to quickly understand treasury systems such as OneRisk and FRS, navigate large datasets, and contribute to daily monitoring processes. Regular discussions with team members helped clarify tasks,

review outcomes, and refine analytical approaches. Despite a fast-paced workflow, the team maintained a supportive atmosphere where guidance was always available and knowledge-sharing was encouraged.

The company expected interns to demonstrate professionalism, ownership, consistency, and attention to detail. We were expected to deliver accurate results, adapt to new tools such as Power BI, SQL, and automation platforms, and handle ad-hoc tasks raised by regulatory or reporting teams. UBS placed strong emphasis on data integrity, and interns were trusted to assist in validating metrics, resolving discrepancies, and contributing to ongoing projects like NFRI remediation and process automation.

Overall, the working environment was structured yet collaborative, and the expectations focused on technical competence, reliability, and continuous learning—preparing interns for real-world financial and analytical roles.

Academic courses relevant to the project : database system

PS-II Station : UBS - RAS One AIM, Pune

Faculty

Name: Niranjan Swain .

Student

Name: CHAITANYA KRISHNA .(2022A7PS0231H)

Student Write-up

PS-II Project Title: Power Apps Development

Short Summary of work done during PS-II : I had to develop a power apps application which would serve as an inhouse tool, for handling power bi applications within the team. It would specify owners and which order it would go through for reviewing. Apart from this, I also worked on Power BI, to help make dashboards look a bit better.

Tool used (Development tools - H/w, S/w) : Microsoft Power Apps, Microsoft power automate

Objectives of the project : To build an internal tool for the team using power apps

Major Learning Outcomes : Teamwork, systems thinking, Analysis

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The work life was good, it was between 12am-9pm and I never had to stay past 9pm to work. There were a lot of events within the office to get to know other interns, it was a good place overall.

Academic courses relevant to the project : Oops, ML, DBMS, DSA

PS-II Station : UBS- Global Quantitative Risk Modelling, Mumbai

Faculty

Name: Niranjan Swain .

Student

Name: SHOBHIT RATHI(2021B3A30980P)

Student Write-up

PS-II Project Title: Quantitative Risk Modelling

Short Summary of work done during PS-II : During the Practice School-II internship at UBS, I worked on enhancing and governing the Shock Generator framework, a core engine used for scenario analysis and stress testing. The work focused on restructuring the scenario generation pipeline, aligning it with an updated model vision, and authoring the new model documentation. A key contribution involved automating the documentation process using in-house tools, improving consistency and reducing manual effort. I was involved in asset class stratification across risk factors, where asset classes were reorganized into parent groups, regular expressions were generated, and Python scripts were developed to segregate and validate core variables. The internship also provided exposure to model governance activities, including updating Confluence documentation for Intra Quarter (IQ) and Long-Term Equilibrium Convergence (LTEC) models, assisting in IQ model confirmation, and working on an Immaterial Model Change to enhance RMSE-based backtesting methodology. Additionally, I contributed to ALR sets analysis, asset class definition (ACD) framework design using YAML, and the development of a Key Model Performance Indicator (KMPI) to monitor model performance across stress scenarios. Overall, the internship strengthened my skills in risk analytics, automation, and model governance within a regulated financial environment.

Tool used (Development tools - H/w, S/w) : R, Python, MS Office products

Objectives of the project : Model Development, Automation

Major Learning Outcomes : Quant models development and maintenance, Shock Generator framework

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment was very healthy, inclusive, and supportive. I always felt comfortable sharing my thoughts, asking questions, and learning from the team, which made the overall experience very positive and enriching.

Academic courses relevant to the project : FINANCIAL RISK ANAL AND MGMT; and basics of coding

Name: DAGGUMALLI MANISH(2021B3A31900H)

Student Write-up

PS-II Project Title: Quantitative Risk Model Design and Implementation

Short Summary of work done during PS-II : Was part of Lombard Lending team, work done majorly revolved around modification and assessment of the various models used to calculate the haircut on collateral assets. Was required to implement, modify and maintain these models based on company requirements. Typically this involves analyzing large sets of data on R, Python and Excel using Pandas, Numpy and other similar libraries.

Tool used (Development tools - H/w, S/w) : R, SQL, Excel, VBA, Python

Objectives of the project : Design and Debug proprietary Key Model Performance Indicators used to assess model performance that are used for lombard loans assesment.

Major Learning Outcomes : Econometrics, R, Quantitative Risk Modelling, Corporate Work culture, Organizational Documentation

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The major expectation is getting the work assigned to you done. What is required is that you take initiative and drive the work forward and get it done, despite whatever logistical constraints that may arise. Even if people aren't easily available, it's expected you schedule meetings and contact them and move the work forward. As long as you meet those assigned targets, your work hours aren't really a concern.

Academic courses relevant to the project : Econometrics

Name: CHINTA KARTHIK(2021B3A82150G)

Student Write-up

PS-II Project Title: Automation on the Implementation of the Ratings model

Short Summary of work done during PS-II : ternship Work Summary (Corporate Credit Risk Modelling) 1. Worked in the Corporate Credit Risk Modelling & Maintenance team, supporting Issuer Risk, Sovereign Risk, and CS AIRB frameworks, including bespoke and expert-based PD/LGD and internal ratings models, with exposure across development, calibration, documentation, and governance. 2. Contributed to regulatory-grade model documentation and quarterly validation processes, using R Studio to automate verification checks, improving consistency, traceability, and validation efficiency. 3. Completed an intensive quantitative programming bootcamp, gaining hands-on proficiency in Python, R, SQL, and VBA, along with a strong foundational understanding of financial products such as equities, fixed income, derivatives, and structured products. —— Core Ownership & Impact (Primary Contribution) 4. Led the automation of model implementation in R for internal credit rating estimation, enabling systematic verification of data at multiple checkpoints within the system for supranational entities. 5. Reduced model verification time from approximately one week of manual effort to around five hours, significantly improving operational efficiency, accuracy, and repeatability of the credit rating process. 6. Developed robust data validation and control checks within the automated framework, ensuring alignment with internal risk standards and regulatory expectations across all model checkpoints. —— Advanced Modelling Exposure & Ongoing Contributions 7. Gained in-depth understanding of Low Default Portfolio (LDP) modelling logic, used for estimating probability of default for supranationals and similar entities, by reviewing and interpreting existing production code. 8. Worked on Margin of Conservatism (MoC) methodology, understanding its application within the model framework and its role in ensuring prudence and compliance; will

assist the team in preparing the March confirmation report. 9. Currently developing and automating test cases for the upcoming confirmation report, identifying validation steps that can be systematized to improve efficiency and reduce manual dependency in future reporting cycles.

Tool used (Development tools - H/w, S/w) : R

Objectives of the project : To automate the implement

Major Learning Outcomes : Model Documentation, R , Latex , Making confirmation reports

Details of Papers/patents : --

Brief Description of working environment, expectations from the company : Brief description of the working environment, expectations from the company (in no more than 250 words)

Academic courses relevant to the project : FRAM

Name: UMANG AGARWAL(2021B5A40848P)

Student Write-up

PS-II Project Title: Market Risk Stress Testing

Short Summary of work done during PS-II : I supported Market Risk Economic Capital (Pillar 2) by helping develop and maintain models using scenario bootstrapping. I built Spark-based KMPI data-quality checks, upgraded our historical simulation for VaR calculation, and created automated R scripts for economic narratives, along with performing regular breach confirmations across MR portfolios.

Tool used (Development tools - H/w, S/w) : R, Python

Objectives of the project : Support Pillar 2 regulatory compliance and internal risk governance.

Major Learning Outcomes : Ability to analyze portfolios under adverse market scenarios.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Flexible, supportive, collaborative, and globally distributed; work hours depend on the team.

Academic courses relevant to the project : NA

PS-II Station : UBS- Group Risk Control Data Intelligence, Hyderabad

Faculty

Name: Niranjan Swain .

Student

Name: ADITYA KUMAR GHOSH .(2021B5A33176H)

Student Write-up

PS-II Project Title: Developing Metric to Optimise and Enhance Data Control Profiling

Short Summary of work done during PS-II : During my PS-II internship at UBS, Hyderabad, I worked as a Data Engineer Intern within the Group Risk Control team. The primary focus of my role was to improve data quality and integrity by contributing to a Python-based data control framework used for detecting anomalies and outliers in risk-related datasets. I applied statistical analysis and data profiling techniques to analyze historical data patterns and define acceptable

ranges and thresholds for various data attributes. These enhancements helped improve the effectiveness of the outlier detection system by reducing false positives and increasing detection accuracy. I also worked extensively with SQL to extract, validate, and cross-check data from underlying databases, ensuring consistency across different sources. Through this project, I gained hands-on exposure to enterprise-scale data quality management in a banking environment, along with practical experience in Python, SQL, and GitLab for collaborative development. Overall, the internship helped me develop a strong foundation in data engineering concepts while understanding the importance of robust data controls in financial risk management.

Tool used (Development tools - H/w, S/w) : Python, SQL, GitLab, RiskLab, Excel.

Objectives of the project : 1) To strengthen data integrity and reliability within UBS's Group Risk Control systems. 2) To design and enhance an automated framework for detecting anomalies and outliers in large datasets. 3) To define statistically sound data thresholds through profiling and analysis, reducing false positives and manual validation effort. 4) To support risk reporting by ensuring high-quality, consistent data inputs.

Major Learning Outcomes : 1) Gained hands-on experience in applying statistical analysis and data profiling techniques to real-world financial datasets.
2) Developed proficiency in building and enhancing Python-based data quality and control frameworks.
3) Improved understanding

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at UBS, Hyderabad, was structured and process-driven, with clearly defined roles, tasks, and reporting mechanisms. Work followed established development and review workflows, emphasizing data accuracy, security, compliance, and proper documentation. Collaboration involved regular updates and feedback within the team.
The company expected interns to understand requirements, meet deadlines, and deliver accurate, well-documented work. Interns were required to apply Python and SQL skills for data analysis and development tasks, follow coding standards, use version control systems, and

comply with internal data governance policies. Proactive communication, task ownership, and responsiveness to feedback were essential.

Academic courses relevant to the project : DSA (in depth knowledge of Data Structures), OOPS (good coding practices), OS (optimizing using multithreading)

PS-II Station : UBS- RAS Executive Treasury, Pune

Faculty

Name: Niranjan Swain .

Student

Name: ATHARVA NATANI(2022A3PS1196P)

Student Write-up

PS-II Project Title: Treasury Reporting and Analytics

Short Summary of work done during PS-II : During my Practice School–II internship at UBS Business Solutions, I worked with the Reporting and Analytics Services (RAS) team within the Treasury domain. I was involved in sourcing and preparing data, ensuring its completeness and consistency before it was consumed for reporting and downstream analysis. I worked on building Power BI dashboards. In addition to dashboard development, I assisted in investigating data-related issues. These investigations required understanding data flows across systems and providing clear commentary on root causes and resolutions. I also contributed to process improvement initiatives, including basic automation of recurring tasks, which helped reduce manual effort and improve reporting efficiency for finance teams. Through this internship, I gained exposure to treasury reporting workflows, data analytics, and data visualization.

Tool used (Development tools - H/w, S/w) : PowerBI, MS Excel, MS Access Database, SQL, Power Automate

Objectives of the project : To support treasury reporting by processing, validating, reconciling, and monitoring regulatory metrics across internal systems

Major Learning Outcomes : Gained an understanding of treasury reporting processes. Developed the ability to design clear Power BI dashboards with proper data relationships, while also understanding data pipeline and workflows.

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment at UBS Business Solutions was professional and cool. I worked with the Reporting and Analytics Services (RAS) team in the Treasury domain, where accuracy and timely delivery of reports were critical. I was expected to understand data flows across internal systems, perform validation and reconciliation checks, and contribute to reporting and analytics tasks.

Academic courses relevant to the project : Finance Minor

PS-II Station : UBS-RC MRR, Pune

Faculty

Name: Niranjan Swain .

Student

Name: VISHAKHA MOHANTA(2022B3PS1520P)

Student Write-up

PS-II Project Title: Valuations and analysis of VaR numbers

Short Summary of work done during PS-II : We supported the Market Risk team by analyzing Value at Risk (VaR) numbers and monitoring key risk drivers. We assisted in reviewing daily VaR movements, investigating fluctuations, and validating risk figures. We also supported the Market Risk Officer (MRO) in finalizing market risk reports through data checks and concise summaries, gaining practical exposure to real-world market risk management

Tool used (Development tools - H/w, S/w) : S/w- Pivort tables, organizational basec analysis tools such as cubes and variance

Objectives of the project : Monitoring risk at portfolio level and ensuring that risk is held within desired risk appetite of the Bank on daily basis to ensure a smooth VaR closure.

Major Learning Outcomes : The process of validating and analysis the market risks

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment was professional, collaborative, and supportive. Team members were approachable and encouraged open discussions, making it easy to ask questions and learn. The culture emphasized accuracy, teamwork, and continuous learning, which helped me gain confidence and develop both technical and professional skills

Academic courses relevant to the project : All finance courses

PS-II Station : Universal Software, Ahmedabad

Faculty

Name: Eht E Sham

Student

Name: MAHIN PATEL(2021B3A41086P)

Student Write-up

PS-II Project Title: Business analyst

Short Summary of work done during PS-II : Worst experience ever, was a joke i learned nothing there. I gave knowledge to them not the other way around

Tool used (Development tools - H/w, S/w) : Notion

Objectives of the project : Get details from the client and helping team to make the product

Major Learning Outcomes : Nothing

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Worst, 9.5 hrs working everyday no flexible hours, director calls even after working hours and tell us to do work

Academic courses relevant to the project : NA

Name: KUSHAGRA SANDEEP SINGHVI(2021B4A21718P)

Student Write-up

PS-II Project Title: Business analyst

Short Summary of work done during PS-II : Business analyst

Tool used (Development tools - H/w, S/w) : Business analyst

Objectives of the project : Business analyst

Major Learning Outcomes : Business analyst

Details of Papers/patents : Business analyst

Brief Description of working environment, expectations from the company : Business analyst

Academic courses relevant to the project : Business analyst

PS-II Station : Urjacart Energy Labs Private Limited, Lucknow

Faculty

Name: Rakesha Chandra Dash .

Student

Name: JATIN DHINGRA(2022A4PS0254P)

Student Write-up

PS-II Project Title: Performance marketing and content strategy for solar tech startup

Short Summary of work done during PS-II : I had ran meta ads for the company for few weeks. Also worked to build the content calender for 2 months. Also, worked in SEO for few weeks to rebrand the company.

Tool used (Development tools - H/w, S/w) : Semrush, Meta ads manager

Objectives of the project : To gain traction in he market with the help of content strategy. To increase customers with performance marketing on meta

Major Learning Outcomes : Got a really good professional experience and hands on experience with a lot of software.

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment was great. Everyone is so helpful to sort you out of any problem. We were having brain storming sessions. Our demands are also being taken care of.

Academic courses relevant to the project : Creative writing

PS-II Station : UST Global, Thiruvananthapuram

Faculty

Name: Sindhu S .

Student

Name: ATHARVA SINGH RATHORE(2022A7PS1203G)

Student Write-up

PS-II Project Title: Automation of IS infra

Short Summary of work done during PS-II : During my PS-II at UST, I worked on automating closure notes generation for ServiceNow incidents and enhancing CMDB automation processes. The project involved developing a backend solution that extracts relevant incident details and historical data to generate structured closure notes, reducing manual effort and improving consistency. Initially, the automation logic was developed and tested using multiple positive and negative scenarios. A basic UI was later implemented to interact with the solution, along with KB article generation. The project evolved to use historical incidents instead of work notes due to access constraints, improving robustness and accuracy. I worked extensively on deploying and debugging the solution on a ServiceNow temporary instance, resolving issues related to access, AI Search, and system restrictions. Comprehensive documentation including KT and BRD was prepared. Multiple demos were conducted, culminating in a final presentation to senior leadership and key stakeholders. Overall, the project provided real-world exposure to enterprise automation, platform debugging, and collaborative development.

Tool used (Development tools - H/w, S/w) : Hardware: Laptop / Workstation Software & Platforms: ServiceNow (Temp Instance) ServiceNow Incident Management & CMDB ServiceNow AI Search JavaScript (ServiceNow Scripting) Microsoft Word & PowerPoint

Objectives of the project : Automate the generation of accurate and consistent closure notes for ServiceNow incidents. Reduce manual effort and dependency on human intervention in ticket closure. Improve data quality by leveraging historical incident data and AI Search. Enhance CMDB reliability through automation and structured validation. Deliver a scalable, maintainable solution deployable on ServiceNow instances.

Major Learning Outcomes : Hands-on experience with ServiceNow platform development and ITSM workflows.
Practical understanding of automation in enterprise IT environments.
Exposure to AI Search, historical data utilization, and system debugging.
Improved documentation, presenta

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : UST provided a professional and collaborative working environment that emphasized learning, ownership, and innovation. Interns were encouraged to work on real production-level problems and interact with multiple teams including ITSM, Core Computing, and leadership.
The company expected interns to be proactive, adaptable, and accountable for assigned tasks. Clear communication, documentation, and the ability to present solutions effectively were strongly emphasized. Regular reviews, demos, and feedback sessions helped maintain alignment with business objectives.
The environment promoted independent problem-solving while also encouraging teamwork and mentorship.

Academic courses relevant to the project : Software Engineering
Database Systems
Object Oriented Programming
Operating Systems
Artificial Intelligence
Data Structures and Algorithms

PS-II Station : UST- Infinity Labs Trivandrum, Thiruvananthapuram

Faculty

Name: Sindhu S .

Student

Name: MARUVADA POORNA SAI VENU DEEP(2021B5A43160H)

Student Write-up

PS-II Project Title: Digital Twin Simulation of a robotic arm

Short Summary of work done during PS-II : During PS-II, I worked on developing a Digital Twin of a robotic arm using Unity as the primary simulation environment. The project involved importing a rigged 3D robotic arm model, configuring its parent-child hierarchy, and implementing joint-level control through Unity scripts. A user interface with sliders was designed to control individual joints, enabling smooth and accurate arm movement in real time. The system was extended to support bidirectional communication, where control commands sent from the Unity interface actuate the robotic arm, and feedback data from the robot is reflected back in the digital model. This ensured synchronization between the physical and virtual systems. Significant effort was spent on debugging transform mismatches, latency issues, and ensuring correct joint orientation. The digital twin provides a reliable virtual representation of the robotic system, useful for visualization, testing, training, and future predictive analysis. This project aligns with Industry 4.0 concepts and demonstrates how digital twins can improve operational efficiency and reduce physical testing risks.

Tool used (Development tools - H/w, S/w) : Software: Unity3D, C#, Visual Studio Hardware: Robotic Arm (physical system), PC/Laptop Others: Serial/Network communication protocols, UI Sliders, Transform-based control

Objectives of the project : To design and develop a real-time Digital Twin of a robotic arm using Unity, enabling accurate visualization, control, and monitoring of joint movements. The project aims to establish bidirectional communication between the physical robotic system and its virtual counterpart, allowing real-time command execution and feedback. This digital twin is intended to

enhance system understanding, testing, and future scalability for industrial automation and simulation purposes.

Major Learning Outcomes : Understanding the concept and architecture of Digital Twins in robotics
Practical experience with Unity for real-time robotic simulation
Implementation of joint control using transforms, sliders, and UI elements
Knowledge of bidirectional data flow betwee

Details of Papers/patents : No papers or patents were published as part of this project.

Brief Description of working environment, expectations from the company : The working environment was technically focused and project-driven, encouraging independent learning and problem-solving. Regular guidance was provided by the mentor, with expectations to explore solutions through documentation, experimentation, and debugging. The company emphasized timely deliverables, clear documentation, and practical implementation aligned with real-world industrial requirements. Collaborative discussions and periodic reviews helped in refining the project and improving technical clarity.

Academic courses relevant to the project : Robotics, Automation Systems, Control Systems, Mechatronics, Object-Oriented Programming, Computer Graphics, Industrial Automation

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Name: RISHI DESHMUKH(2022A3PS1131G)

Student Write-up

PS-II Project Title: Obstacle Detection and Path Planning for Drone Navigation

Short Summary of work done during PS-II : This project focuses on developing the core perception and navigation components of an autonomous drone system using computer vision and classical path-planning techniques. The work was carried out as part of an internship and

aims to enable safe drone navigation in cluttered, low-altitude environments. Obstacle detection was implemented using the YOLOv8 deep learning model, fine-tuned to detect drone-relevant obstacles such as trees, poles, walls, and overhead cables. The model provides real-time bounding box detections with high accuracy and serves as the primary perception module. Depth estimation techniques, including monocular depth estimation using MiDaS and stereo depth estimation using StereoSGBM, were explored to provide distance awareness. However, due to inconsistent results and hardware limitations, depth estimation was not integrated into the final navigation pipeline. Path planning was implemented using A* for grid-based optimal navigation and RRT/RRT* for sampling-based exploration in complex environments. The planners operate on 2D occupancy maps generated from visual detections to produce collision-free paths. Simulation-based validation using ROS 2, PX4, and Gazebo was attempted, but full integration was limited by system resource constraints. The project establishes a strong foundation for future autonomous drone research, including simulation validation, SLAM integration, and real-world deployment.

Tool used (Development tools - H/w, S/w) : Intel RealSense, Python, OpenCV, YOLOv8 (Ultralytics), ROS 2, Gazebo, PX4 Autopilot, QGroundControl, Git/GitLab

Objectives of the project : Detect obstacles relevant to low-altitude drone flight Explore depth estimation techniques for distance awareness Implement path planning algorithms for collision-free navigation Attempt simulation-based validation using ROS 2, PX4, and Gazebo.

Major Learning Outcomes : Developed practical experience in computer vision–based obstacle detection, classical path-planning algorithms, and robotics middleware integration, while gaining insight into system-level challenges in autonomous drone development.

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : 5 days/week. Moderate work load.

Academic courses relevant to the project : ML

Name: DEVANG MAHESHWARI .(2022A3PS1473H)

Student Write-up

PS-II Project Title: Autonomous Drone farming in tea estates

Short Summary of work done during PS-II : This project focused on developing an automated machine learning solution to detect and localize tea plant diseases using high-resolution aerial drone imagery. The primary objective was to replace labor-intensive manual inspections with a scalable AI-driven surveillance system capable of identifying pathologies such as Red Spider Mite, Tea Mosquito Bug, and Blight. My core contribution was the development of a Hybrid Vision Transformer (ViT) model. This architecture integrates a CNN backbone for extracting local textural features with Transformer blocks to capture global context, ensuring high accuracy even in complex field environments. To guarantee real-world robustness, I curated a custom "degraded" dataset that simulates specific drone flight conditions, such as motion blur and resolution variance. To translate model predictions into actionable insights, I engineered a Grid Analysis inference pipeline. This system segments large 4K aerial maps into patches, classifies them individually, and reconstructs the full image with precise disease hotspots marked. This end-to-end solution provides tea estates with a tool for rapid, non-invasive disease monitoring, enabling early intervention and targeted treatment.

Tool used (Development tools - H/w, S/w) : VS Code, Linux

Objectives of the project : To develop a machine learning model capable of automating the detection and localization of tea plant diseases using high-resolution aerial drone imagery.

Major Learning Outcomes : Computer Vision

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The internship provided a highly stimulating and supportive working environment. I worked under the direct mentorship of Sachin, who fostered a collaborative atmosphere that encouraged technical

curiosity and innovation. The culture emphasized hands-on problem-solving and open communication, creating an ideal setting for applying theoretical machine learning concepts to real-world agricultural challenges. The team was approachable, ensuring I had the necessary guidance while maintaining the autonomy to explore novel architectures like Hybrid Vision Transformers.

The company expected a high degree of technical proficiency and independence in developing the aerial disease detection pipeline. Key expectations included researching and implementing state-of-the-art models to achieve robust classification accuracy on degraded drone imagery. I was responsible for delivering a complete end-to-end solution—from dataset curation and noise simulation to model deployment and grid-based inference. Beyond technical execution, there was a strong emphasis on documenting the workflow, adhering to project timelines, and producing a scalable prototype ready for potential field application.

Academic courses relevant to the project : Machine Learning, Natural Language Processing, Deep learning

PS-II Station : UST- SI Digital Transform, Thiruvananthapuram

Faculty

Name: Sindhu S .

Student

Name: KAUSTUBH SHARMA(2022A1PS1126P)

Student Write-up

PS-II Project Title: File translator

Short Summary of work done during PS-II : Agentic system was made

Tool used (Development tools - H/w, S/w) : Python

Objectives of the project : make a File translator

Major Learning Outcomes : python , Agentic systems

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Good

Academic courses relevant to the project : NA

Name: AADRISH GUHA MAJUMDAR(2022A3PS1147G)

Student Write-up

PS-II Project Title: Implementing Business transformation Solutions through Agentic AI.

Short Summary of work done during PS-II : This project focuses on the design and implementation of an AI-driven system for automating multilingual document translation and file transformation across diverse formats. The solution addresses key challenges faced in enterprise environments, including loss of formatting, inconsistent translations, and the high manual effort required to process complex documents such as PDFs, spreadsheets, and office files. The system employs a modular architecture with a React-based frontend and a FastAPI backend to enable secure, scalable, and asynchronous processing. Format-specific translator modules handle structured, semi-structured, and visual documents while preserving layout, styling, and business logic. Advanced techniques such as bounding-box-based PDF reconstruction, OCR integration for image-embedded text, and encoding-aware CSV processing ensure high fidelity and accuracy. A unified AI translation engine powered by Azure GPT and LangChain provides

consistent multilingual translation while optimizing performance through batching and selective language detection. Security is implemented using OAuth2 principles with JWT-based authentication, salted password hashing, and time-limited access tokens, with the groundwork laid for role-based access control. Overall, the system demonstrates a scalable, enterprise-ready approach to document automation, significantly reducing manual effort, improving translation consistency, and accelerating business workflows.

Tool used (Development tools - H/w, S/w) : VSCode, Fastapi React, Streamlit

Objectives of the project : Creation of an Application for seamless translation of files from Chinese/Japanese/Korean to English

Major Learning Outcomes : Agentic AI implementation, App development through React and FastApi

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Working Environment was great.

Academic courses relevant to the project : None that I attended.

PS-II Station : Varaha ClimateAg Private Limited, Gurgaon

Faculty

Name: Gaurav Nagpal .

Student

Name: ICY TRISHA(2022A2PS1655P)

Student Write-up

PS-II Project Title: Regenerative agriculture and Afforestation in South Asia

Short Summary of work done during PS-II : It was a startup so a complete mix of everything and anything. You would be jumping from project to project, without any training, to learn hands-on by helping out with currently ongoing work that is priority. I was involved in around 4 different projects, working with various people. I oversaw the on-ground operations and brainstorm solutions for problems we face. I also was involved in a strategy analysis and executive report for a month. I did financial modelling from scratch for 2 of their projects. Most of my time was spent of data cleaning and automating the entire process.

Tool used (Development tools - H/w, S/w) : Excel

Objectives of the project : Clean, analyse, automate data; strategy reports for ongoing projects; financial modelling

Major Learning Outcomes : Excel

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : You will be expected to learn on your own by doing and seeing the other employees. It's a startup where senior people and managers are always involved in hectic work, so very less direct communication and work with the one assigned to you. So you are expected to keep up the communication from your end. Good for people who want to explore various things in a short period of time. Work changes constantly and is unstructured, due to nature of a typical startup.

Academic courses relevant to the project : NA

PS-II Station : VICCO Laboratories, Nagpur

Faculty

Name: Pavan Kumar Potdar .

Student

Name: NARENDRA NAIK(2022A1PS1555G)

Student Write-up

PS-II Project Title: Advanced Product Strategy and Market Intelligence: Sunscreen Development, Vicco Turmeric Facewash Relaunch GTM Strategy, and Advertising Analytics at Vicco Laboratories

Short Summary of work done during PS-II : Conducted four advanced strategic projects: (1) Sunscreen development analyzing 36 brands and 198 SKUs with 12 SKU recommendations across 3 price tiers (₹150-1,200); (2) Vicco Turmeric Facewash relaunch strategy development addressing ₹120-150 crore market opportunity through four-stage framework (positioning, execution, evaluation, optimization), identifying four target segments and unique white-space positioning; (3) TV and social media advertising analytics assessing 500+ TV slots and 200+ social channels, optimizing media placement for 5-6x CAC improvement; (4) Integrated competitive intelligence synthesis consolidating cross-project insights into strategic roadmap. Deliverables: comprehensive market analysis reports, relaunch execution framework with Feb 1 go-live timeline, real-time monitoring dashboards, media optimization recommendations with ₹50-100 lakh incremental revenue projection.

Tool used (Development tools - H/w, S/w) : Google Forms, SurveyMonkey, Microsoft Excel, Google Sheets, Powerpoint, Figma (Design), Google Analytics, CRM Database Tools, Tableau (Data Visualization)

Objectives of the project : Develop comprehensive sunscreen product development strategy; design four-stage relaunch strategy for Vicco Turmeric Facewash addressing ₹120-150 crore market opportunity; analyze TV and social media advertising data for optimal media placement; establish integrated strategic intelligence framework supporting executive decision-making.

Major Learning Outcomes : Mastered four-stage relaunch framework development; developed advanced product management competencies in market sizing, positioning strategy, and real-time monitoring; gained expertise in data-driven advertising optimization; learned to synthesize comple

Details of Papers/patents : Advanced Product Strategy report (30+ pages), Sunscreen Market Analysis database (36 brands, 198 SKUs), Vicco Relaunch GTM Framework (comprehensive four-stage strategy document)

Brief Description of working environment, expectations from the company : Vicco Laboratories provides collaborative, professional environment with experienced mentors (Director Amit Pendharkar, Head of Marketing Argha Bhaduri) offering continuous guidance. Company expected systematic market research, data-driven strategic recommendations, and actionable frameworks supporting executive decision-making. Work spans product development, strategic marketing, and organizational capability building. Team structure enables cross-functional collaboration with sales, marketing, and product development teams. Learning environment prioritizes real-world application of product management concepts with emphasis on rigorous analysis and business impact.

Academic courses relevant to the project : Product Management Fundamentals, Market Research & Analysis, Strategic Marketing, Consumer Behavior, Data Analytics, Business Strategy, Competitive Intelligence

PS-II Station : VIDVANCONNECT SOFTWARE AND SOLUTIONS PRIVATE LIMITED - (Wadhwani Foundation), Bengaluru

Faculty

Name: Sanjay Vidhyadharan .

Student

Name: SHRUTI SOUMYA ROUT(2022AAPS1144G)

Student Write-up

PS-II Project Title: Development and Enhancement of Internal AI & Language Technology Tools

Short Summary of work done during PS-II : During PS-II, I worked on two internal tools used within the organization. My involvement included understanding the systems from the ground up, contributing to initial feature development, fixing early issues, and helping build foundational parts of the codebase. I also supported tasks related to language processing, translations, and AI-assisted functionalities as they were being set up. The work gave me exposure to day-to-day development practices, version control, testing, and working across different parts of a project. In addition to this, I contributed to the initial development of a new product the organization is building for multiple state governments to help rural children learn different languages using AI. This involved supporting early-stage implementation, setting up basic components, and helping shape the initial version of the platform. Overall, the experience helped me understand how products are built from scratch and how teams work together to bring new ideas into working systems.

Tool used (Development tools - H/w, S/w) : Claude Code, Git/GitHub, Node.js, JavaScript/TypeScript, Python, APIs, ReactJS, ConvexDB,

Objectives of the project : To support the development, improvement, and maintenance of two internal tools and one government initiative application by contributing to features, testing, and backend workflows.

Major Learning Outcomes : Understanding how real-world software systems are structured, learning how internal tools are built and maintained, working with APIs, and collaborating in a development team.

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : The environment was collaborative and supportive. The company expected regular updates, steady progress, and a willingness to learn the tools and workflows used internally. I was encouraged to communicate clearly, understand requirements, and contribute to ongoing development tasks at a steady pace.

Academic courses relevant to the project : Computer Programming, Artificial Intelligence, Machine Learning.

PS-II Station : Virgio - UI Engineering, Bengaluru

Faculty

Name: Mohammad Saleem Bagewadi .

Student

Name: MIT SHETH(2022A4PS0079G)

Student Write-up

PS-II Project Title: Cross Platform App development

Short Summary of work done during PS-II : During my Practice School–II internship at VIRGIO (Ameyam Enterprises Pvt. Ltd.), I contributed to the cross-platform mobile application built using React and React Native. My work focused on end-to-end feature development, UI consistency, and performance optimization across Android and iOS platforms. I developed and enhanced several core product features including Product Detail Page (PDP) components, Returns and Exchange flows, Gift Cards module, Quick Delivery enhancements, and the “Contribute to IRL” media upload feature. I also contributed to large-scale event-driven modules such as the Eco-nic Fair 2025 (Curtain Raiser, Presale, Sale, and Post-Sale flows). In addition, I worked on improving authentication and session management, implementing global dark mode (ChicFlix theme), and restructuring the bottom drawer architecture. A significant portion of the internship involved refactoring the codebase by removing outdated libraries, enabling Tailwind CSS, upgrading React Native versions, and reducing technical debt. I integrated analytics using Statsig, assisted in initiating a new native checkout flow with PhonePe and PayU, and performed extensive debugging and testing using Reactotron, Android Studio, and Xcode. Overall, my contributions improved application scalability, stability, and user experience.

Tool used (Development tools - H/w, S/w) : H/w: Type C to Type C cable (for running bundled app on phone and development on laptop), Android & iOS physical mobile devices, Laptop | S/w: Android Studio, XCode, any code editor (VSCode, Cursor, etc..), Firebase, iOS simulator, Android emulator

Objectives of the project : The primary objective was to contribute to the end-to-end development, enhancement, and optimization of VIRGIO’s cross-platform mobile application.

Major Learning Outcomes : Cross-platform app development using React Native, Testing & Debugging , Deployments and app releases , code pushes , patches.

Details of Papers/patents : N.A.

Brief Description of working environment, expectations from the company : The working environment at VIRGIO (Ameyam Enterprises Private Limited) was collaborative, fast-paced, and learning-oriented. The company fostered an open culture where interns were treated as integral contributors to the product development process rather than observers. Regular interactions with product managers, designers, backend developers, and senior engineers encouraged cross-

functional learning and clear alignment on goals. Mentorship and guidance were readily available, while independent problem-solving and ownership of tasks were strongly encouraged.

The organization followed agile development practices, with clearly defined sprint goals, timely feedback, and iterative feature releases. High standards were maintained for code quality, performance, and user experience, providing exposure to real-world production-level systems. Interns were expected to be proactive, adaptable to changing requirements, and responsive to feedback while meeting development timelines. Clear communication, accountability, and professionalism were emphasized throughout the internship.

The company expected interns to quickly familiarize themselves with the existing codebase, tools, and workflows, and to contribute meaningfully to feature development, bug fixes, and refactoring tasks. Attention to detail, willingness to learn new technologies, and effective collaboration were valued alongside technical competence. Overall, the working environment promoted continuous learning, responsibility, and professional growth, offering an industry-relevant experience aligned with real product development and deployment cycles.

Academic courses relevant to the project : -

PS-II Station : Viridium.AI India Private Limited, Pune

Faculty

Name: Chetana Anoop Gavankar .

Student

Name: KAVISH CHANDRA(2022A3PS0523P)

Student Write-up

PS-II Project Title: Software Engineering Intern

Short Summary of work done during PS-II : Built a knowledge graph for parts and materials datausing neo4j and built a copilot to query over in natural langauge.

Tool used (Development tools - H/w, S/w) : protege, python, flask, azure AI foundry

Objectives of the project : Build a new product on parts and materials data using an alternative db

Major Learning Outcomes : Industry experience at an AI startup, demostrate the power of LLMs

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The work environment and culture at the company is quite liberal. Their team, though lean is full of young professionals who are skilled at their domain in tech. The mentors and other employees encourage a methodology of questioning and reasoning at all stages of the project. The VAI executive team consists of seasoned professionals in big tech and serial entrepreneurs.
Overall, the company culture is great for somebody who is willing to put in the time and effort.

Academic courses relevant to the project : Object Oriented Programming CS F213

PS-II Station : Virtuoso Optoelectronics Ltd - Manufacturing, Nashik

Faculty

Name: Samata Satish Mujumdar .

Student

Name: PRASOON CHATUPHALE(2022A4PS1320G)

Student Write-up

PS-II Project Title: Design and Development of a Centralized KPI and Data Management Portal with Proximity Sensor Integration

Short Summary of work done during PS-II : During the internship, the main focus was to conceptualize and design a centralized data portal for a multi-plant manufacturing organization. The work started with plant visits, process mapping and FMEA to understand existing waste, quality issues and data gaps. Based on these observations, a digital “Centralized Workspace” concept was developed to bring together production, quality and supply-chain information, with scope for integrating proximity sensors on critical machines for real-time tracking.A dummy data model and dashboards were built in Airtable and spreadsheets to validate how such a system could function, what KPIs it should track and what data structures would be required. Parallelly, side projects were taken up around PLI scheme proposals for heat sinks and multilayer PCBs, supply chain management checklists and understanding BIS/compliance workflows. These helped connect the technical portal design with incentives, regulatory requirements and actual business priorities.The final outcome was a set of structured documents: KPI framework, data models, sensor-deployment blueprint, regulatory/compliance trackers and PLI proposal support, all packaged so the company can implement pilots and extend the system in the future.

Tool used (Development tools - H/w, S/w) : Airtable; Microsoft Excel; Google Sheets; Lucidchart; Figma; PowerPoint; Google Docs; basic policy/government portals; company ERP/Odoo (planned); email and collaboration tools

Objectives of the project : To design a unified digital workspace that centralizes production, quality and supply chain data across multiple plants, integrates proximity sensor–based automation, and enables KPI tracking and actionable insights for management decision-making

Major Learning Outcomes : Improved understanding of how real manufacturing data is captured, structured and used for decision-making.
Hands-on exposure to FMEA, KPI design, Lean Six Sigma thinking and policy frameworks like PLI.

Practical skills in modelling data and workflows.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment was professional, open and supportive. The company gave access to multiple plants, allowing direct observation of manufacturing, quality and supply chain processes. Mentors and senior management were approachable and willing to discuss ideas ranging from Lean Six Sigma and FMEA to digitalization, sensors and PLI policy.Expectations from the company side were primarily to understand existing systems, think critically about improvement opportunities, and propose practical, implementable solutions rather than purely theoretical models. There was a strong emphasis on structuring data properly, ensuring that any dashboard or automation initiative would align with real constraints like current data availability, operator workload and infrastructure readiness.The environment encouraged independent work with periodic reviews. Interns were expected to take ownership of learning tools such as Airtable, ERP concepts and policy documentation, and then translate that learning into clear outputs: checklists, frameworks, models and presentations that management could use directly. Overall, the culture balanced guidance with autonomy, giving enough freedom to explore while still being anchored to the company's priorities.

Academic courses relevant to the project : ME F316
Manufacturing Management
ME F219
Manufacturing Processes
ME F315
Advanced Manufacturing Process

PS-II Station : Virtuoso Optoelectronics Ltd - Supply Chain & Analytics, Nashik

Faculty

Name: Samata Satish Mujumdar .

Student

Name: RUCHIT ABROL(2022A4PS0925P)

Student Write-up

PS-II Project Title: Centralized Workspace

Short Summary of work done during PS-II : During PS-II, work focused on three major streams: process analysis, digital transformation design, and policy/compliance support. The first phase involved plant visits, process mapping, FMEA, basic Lean Six Sigma application, and identification of issues such as high PPM levels and waste management gaps. This led to the design of a centralized KPI-driven “workspace” concept and an Odoo-based data architecture for integrating production, quality, and inventory data. A key outcome was the proximity-sensor-based automation blueprint for real-time data capture into Odoo, with defined KPIs, data structures, and a phased implementation roadmap. In parallel, a full dummy data model and dashboards were built in Airtable to validate data structures, drill-downs, and use cases before any ERP deployment. Later phases shifted into side but strategic projects: preparing PLI scheme proposals for PCB and heat-sink manufacturing, researching BIS requirements, and drafting checklists and trackers for supply-chain and compliance processes. Across the six months, the work moved from observation and analysis to solution design, prototyping, documentation, and policy-linked project support, ending with well-structured handover-ready documentation and concepts that can be directly piloted or scaled by the company.

Tool used (Development tools - H/w, S/w) : Airtable for database design, dummy data modeling, and dashboard prototyping. Google Sheets / Excel for KPI formulas, FMEA, capacity calculations, and PLI financials. Lucidchart / Figma for process maps, dataflows, and UI/UX mockups of the centralized w

Objectives of the project : To establish In house DBMS for organization to help in real-time decision making, data tracking and accuracy.

Major Learning Outcomes : Exposure to the manufacturing domain, gained knowledge about technicalities involved.

Details of Papers/patents : No formal papers or patents were filed during the PS-II period. The work resulted in internal project documents, concept notes, and draft proposals (e.g., PLI applications, KPI frameworks, and proximity-sensor integration blueprints) intended for in-house

Brief Description of working environment, expectations from the company : The working environment combined on-ground manufacturing exposure with a strong emphasis on independent problem-solving. Initial weeks were focused on understanding shop-floor realities through plant tours, interactions with engineers, and observation of processes, which created a practical context for later analytical and digital work. Expectations from the company side were clear: identify meaningful problem areas, propose structured, data-backed solutions, and ensure outputs were usable by management rather than purely academic.
The culture allowed autonomy in exploring tools (Airtable, dashboards, FMEA, Lean Six Sigma) while still expecting regular reviews, documentation, and alignment with business priorities like PLI, BIS, and future ERP/Odoo integration. Over time, expectations shifted from just analysis towards building implementation-ready blueprints (KPI definitions, sensor dataflows, compliance checklists) that could be piloted later. Overall, the environment was realistic, industry-facing, and encouraged mapping classroom concepts (quality tools, Industry 4.0, policy schemes) to live organizational constraints and opportunities.

Academic courses relevant to the project : Manufacturing Management, Supply Chain Management, Mnaufacturing Processes

PS-II Station : Vishnu Stores, Jodhpur

Faculty

Name: Atul Kumar Arora

Student

Name: HIMADRI MATHUR .(2022A5PS1448P)

Student Write-up

PS-II Project Title: STRATEGIC EXPANSION INTO OTC PHARMACEUTICALS: A BUSINESS DIVERSIFICATION PROJECT

Short Summary of work done during PS-II : The project began with a study of pharmaceutical regulations and licensing requirements relevant to OTC distribution. This was followed by market mapping and competitive analysis of pharmacies across Rajasthan. Subsequently, data was prepared and processed to build a pharmacy segmentation model and a monthly OTC demand forecasting model. The outputs were analyzed to generate cluster-wise strategic recommendations for Vishnu Stores, with the final step focusing on dashboard development for operational use.

Tool used (Development tools - H/w, S/w) : Programming & Analysis: Python, Data Handling: Pandas, NumPy, Machine Learning: Scikit-learn (K-Means, PCA), XGBoost Visualization: Matplotlib, Seaborn Documentation & Planning: Microsoft Word, Excel, Google Docs Diagramming: Draw.io Dashboard Devel

Objectives of the project : The primary objective of this project was to support Vishnu Stores in its strategic expansion into the OTC pharmaceutical segment through a structured and data-driven approach. This included understanding regulatory feasibility, analyzing the competitive pharmacy landscape in Rajasthan, segmenting pharmacies based on behavior and characteristics, and developing a machine-learning model to forecast monthly OTC demand. The project aimed to enable informed decision-making for profitable and scalable OTC market entry.

Major Learning Outcomes : By the end of the project, I developed a strong understanding of pharmaceutical distribution dynamics, regulatory frameworks, and OTC market behavior. I gained hands-on experience in applying machine learning techniques such as clustering and regression.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Vishnu Stores provided a professional and supportive working environment with exposure to real-world wholesale distribution operations. The organization encouraged independent thinking and allowed flexibility in exploring analytical approaches. Regular interactions with management and field staff helped align analytical work with practical business realities.

Academic courses relevant to the project : SCM, SCME

PS-II Station : Visit Health - Non Tech, Mumbai

Faculty

Name: Atul Kumar Arora

Student

Name: KABRA ROHAN SANJAY(2022A1PS1040P)

Student Write-up

PS-II Project Title: Growth Consultant

Short Summary of work done during PS-II : Internship Role: As a Provider Network Assisted with sourcing, onboarding, and maintaining relationships with provider partners (hospitals, clinics,

diagnostics), ensuring data integrity in records and online platforms. Duties included updating and verifying provider information, supporting negotiations, scheduling onboarding calls, tracking contract renewals, analysing cost savings, and maintaining comprehensive databases. Provide a streamlined onboarding process, improved provider engagement, accurate provider data for decision-makers, and support cost optimization via negotiated tariffs. Tasks were prioritized based on onboarding deadlines, renewal schedules, and real-time provider queries. Coordination involved working with both internal tech teams and external provider contacts, ensuring timely follow-ups and documentation. Regular audits, version controls, and centralized records in cloud-based spreadsheets/databases ensured data accuracy and compliance.

Tool used (Development tools - H/w, S/w) : Covalence Portal, Catalyst Portal, and Amazon Quick Suite

Objectives of the project : Expanding Visit Health's Network by onboarding new Diagnostic Centers, Hospitals.

Major Learning Outcomes : Communications: Developed clear, polite communication skills for both internal teams and external providers, aiding in negotiations and conflict resolution.
2. Teamwork: Learned to coordinate across departments and integrate feedback from tech, operation

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : My working department environment is competitive. Apart from the skills required in the Job description, it requires you to be sharp and curious.

Academic courses relevant to the project : Humanities Electives are most relevant for this role. It's a sales exective role.

PS-II Station : Visit Health - Tech, Mumbai

Faculty

Name: Swarna Chaudhary .

Student

Name: DEVAAMSH RAJESH(2020B2A31349G)

Student Write-up

PS-II Project Title: Intern - Data Analytics

Short Summary of work done during PS-II : I completed a Data Analytics internship at Visit Health, where I worked on maintaining and improving data infrastructure. My primary responsibility was migrating existing data pipelines from Apache Airflow 2.x to Airflow 3.0, ensuring compatibility, stability, and minimal disruption to scheduled workflows. I assisted in debugging and resolving database-related tickets, including query issues, pipeline failures, and data inconsistencies. Through this role, I gained hands-on experience with production data systems, workflow orchestration, and troubleshooting real-world data engineering problems in a health-tech environment, while collaborating with engineers to support reliable data operations.

Tool used (Development tools - H/w, S/w) : MySQL, Python, Apache Airflow, AWS, S3

Objectives of the project : Data Pipeline Migration

Major Learning Outcomes : MySQL, Apache Airflow 2.x, Apache Airflow 3.0, Python

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Supportive, On par expectations

Academic courses relevant to the project : DBMS

PS-II Station : Voicegain (Resolvity, Inc), Bengaluru

Faculty

Name: Monali Tushar Mavani .

Student

Name: RAHUL PRASATH(2022A7PS0016G)

Student Write-up

PS-II Project Title: ML intern

Short Summary of work done during PS-II : deployed a complete ASR + speaker diarization pipeline using NVIDIA Riva on A100 GPUs, enabling low-latency transcription with support for up to four speakers. I developed a Whisper hallucination-removal algorithm that successfully eliminated 100% of hallucinations in controlled tests and removed all nine repetitions in a 30-minute real production call. To support benchmarking, I compared HuggingFace Whisper and fast-whisper across multiple datasets, achieving a 1.7× throughput improvement and an 11× GPU–CPU speedup. I also deployed and evaluated several frontier LLMs—including GPT-4.1, Kimi-K2, DeepSeek V3p1, and GPT-OSS—using a 22-test evaluation suite. In addition, I created an LLM-powered vocal analytics system capable of generating 28+ vocal and behavioral metrics via structured gRPC outputs. I also processed over 10,000 TFRecord samples and extracted

nearly 15,000 WAV files to support Whisper retraining workflows. Overall, this PS greatly strengthened my real-time ML engineering, model deployment, and evaluation skills

Tool used (Development tools - H/w, S/w) : NVIDIA Riva, Whisper (HF + fast-whisper) PyTorch, TensorRT, CUDA, ROS Google Cloud (Vertex AI, Document AI, Firestore) Node.js, Express, MongoDB gRPC, Docker, Lambda Labs GPU instances NumPy, Pandas

Objectives of the project : Deploying ML components into production

Major Learning Outcomes : Developed full-stack ML engineering skills including dataset extraction, TFRecord processing, model deployment, and gRPC-based analytics.
Improved understanding of real-time streaming systems, latency optimization, and production-grade ML deployment.

Details of Papers/patents : No papers or patents were produced during the PS-2 period. However, the work contributes toward internal R&D on hallucination-free ASR, multi-speaker diarization, and LLM-based analytics.

Brief Description of working environment, expectations from the company : Voicegain operates in a fast-paced startup environment with small, highly collaborative teams working across ML, speech engineering, and product development. I worked closely with senior researchers and engineers, including BITSian mentors, with daily stand-ups, asynchronous communication, and continuous experimentation on GPU clusters. The environment encouraged autonomy, rapid prototyping, and end-to-end ownership of ML systems—from data preparation to deployment and testing.

Academic courses relevant to the project : Machine Learning
Data Structures & Algorithms
Probability & Statistics
Operating Systems
Digital Signal Processing (relevant for ASR domains)
Computer Networks (for real-time streaming)
Software Engineering

Name: MOKSHITH REDDY VURIBINDI(2022A7PS0763G)

Student Write-up

PS-II Project Title: enhancing voicegain products

Short Summary of work done during PS-II : optimized voicegain existing services. Also implemented and contributed to future voicegain products. voicegain as a company offers sppech to text services, IVR platforms and voice agents.

Tool used (Development tools - H/w, S/w) : java, python, spring boot, postman, node.js

Objectives of the project : to optmize existing services at voicegain, implementing and extending the services

Major Learning Outcomes : i got familiar with audio systems, TTS and other IVR platforms. gained experience how to build end -end systems.

Details of Papers/patents : none

Brief Description of working environment, expectations from the company : working environment is very good, but you must be a self learner
expectations are pretty clear you must complete the task assigned to you, work load is not high.

Academic courses relevant to the project : computer networks, DBMS

PS-II Station : WCB Robotics India Pvt Ltd - Mechanical, Hyderabad

Faculty

Name: Rakesha Chandra Dash .

Student

Name: ABHI KUMAR(2022A4PS0558P)

Student Write-up

PS-II Project Title: Mechanical Design Intern

Short Summary of work done during PS-II : I have worked on multiple mechanical design and development projects focused on improving safety, manufacturability, and reliability of robotic systems. One of my key projects involved designing a versatile fairlead mechanism to transfer high impulse loads from a robotic platform to a drop-safety system. The primary challenge was ensuring adaptability during installation while maintaining structural robustness. Drawing inspiration from an existing fairlead design, I modified and optimized it to meet new versatility requirements. Careful material selection was critical, leading to the use of carbon fiber rods to withstand large impulse loads. This mechanism plays a vital role in preventing chassis loss during critical failure scenarios such as power or suction loss. In another project, I developed snap-fit mechanisms that allow plastic components to be joined without the use of nuts and bolts. This significantly improved assembly speed, reduced part count, and simplified packaging. The snap designs were implemented and tested across multiple components on the robot as well as on other projects. This work required analytical calculations to estimate maximum allowable plastic deflection, along with extensive simulations to validate performance under bending loads and operational displacements. Additionally, I led a project focused on optimizing adhesive bonding processes. This involved researching various glue brands and products to identify the most suitable adhesive and bonding procedure for specific components. To ensure repeatability and quality, I designed custom fixtures such as stands and mechanisms to control glue application pressure. I also evaluated variations in the bonding process to understand their impact on bond strength. Collectively, these projects strengthened my skills in mechanical design, materials selection, simulation-driven validation, and manufacturing process optimization.

Tool used (Development tools - H/w, S/w) : Autodesk Inventor, Autodesk Fusion, Bambu/Prusa Slicer, Ansys

Objectives of the project : Developing critical skills required by mechanical design engineers while helping design parts that are robust, resilient and strong

Major Learning Outcomes : CAD Design, FEA Simulation design, 3D Printing, Mechanical design for 3D Printing

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment was very good and conducive to learning. All of the people in the mechanical division were extremely helpful and they gave us many opportunities to learn from them and others.

Academic courses relevant to the project : CAD, MEchanics of Solids, Design of Machine elements

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PS-II Station : WestRock India Private Limited, Valsad

Faculty

Name: Raghuraman S .

Student

Name: DHRUV VERMA(2022A4PS1281P)

Student Write-up

PS-II Project Title: Optimisation of fluid flow in Coolinf tower using CFD analysis

Short Summary of work done during PS-II : Worked on a improving the efficiency of the axial fan in the cooling tower of the power plant by designing a set of necessary anti-swirl stators to reduce swirl in the fluid flow of the cooling tower fan by inducing the same amount of flow in less fan power.

Tool used (Development tools - H/w, S/w) : Fusion 360, SolidWorks, ANSYS Fluent

Objectives of the project : Reduction of power consumption of cooling tower fan

Major Learning Outcomes : CFD Analysis and digital twin design

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The company was open to new projects and was helpful to provide all the information necessary for new projects and future works on the current systems.

Academic courses relevant to the project : Fluid Mechanics, CAD, CFD

PS-II Station : WILP - AR/VR, Hyderabad

Faculty

Name: Naga Vamsi Krishna Jasti .

Student

Name: ANKIT SAINI(2022B2PS1534P)

Student Write-up

PS-II Project Title: Design, Modelling and simulation of IIoT Water Bottling Plant using AR technology

Short Summary of work done during PS-II : During PS-II at the Centre for Immersive Learning (CIL), WILP–BITS Pilani Hyderabad, I worked on the design, modelling, and simulation of an IIoT-based Water Bottling Plant using Augmented Reality technology. The project aimed to develop an interactive AR learning module for Smart Manufacturing students who lack regular access to real industrial equipment. My work involved setting up the AR environment in Unity using AR Foundation and ARCore, integrating 3D plant and sensor models, and implementing gesture-based interactions such as tap-to-place, scale, rotate, and drag. I contributed to developing learning, experiment, and quiz modules, integrating animations for water flow, bottle filling, conveyor movement, and sensor operations. Voiceovers and UI panels were synchronized with visual content to enhance conceptual understanding. I also participated in testing, debugging, performance optimization, and APK deployment for Android devices. The final outcome was a stable, user-friendly AR application that visually demonstrates industrial processes and sensor working principles. This project provided strong exposure to immersive technologies, digital twins, and Industry 4.0-oriented educational tools.

Tool used (Development tools - H/w, S/w) : Hardware: Android mobile devices (ARCore supported) Desktop / Laptop for development Software: Unity 6.x AR Foundation & ARCore Blender (3D Modelling & Animation) C# (Unity scripting) Figma (UI/UX design) Android SDK & Build Tools

Objectives of the project : To design, model, and simulate an interactive IIoT-based water bottling plant using Augmented Reality (AR) technology to enhance smart manufacturing education through immersive visualization and hands-on learning.

Major Learning Outcomes : Gained hands-on experience in developing AR-based learning applications using Unity and AR Foundation.
Understood smart manufacturing workflows, industrial sensors, and PLC-based automation.

Learned to convert physical industrial systems into interactiv

Details of Papers/patents : Papers: Not published
Patents: Not filed

Brief Description of working environment, expectations from the company : The working environment at the Centre for Immersive Learning (CIL), WILP–BITS Pilani Hyderabad was highly academic, collaborative, and innovation-driven. The lab encouraged experimentation with emerging technologies such as AR, VR, and digital twins. Faculty mentors and technical staff were approachable and provided regular feedback, enabling continuous improvement throughout the project lifecycle.
The expectations from the organization focused on developing a functional, curriculum-aligned AR learning module with high technical accuracy, stable performance, and strong educational value. Emphasis was placed on understanding real industrial systems, maintaining documentation standards, meeting timelines, and collaborating effectively within a multidisciplinary team.
The environment promoted self-learning, problem-solving, and responsibility, allowing students to work independently while still receiving structured guidance. Overall, it provided an excellent balance of academic rigor and practical exposure.

Academic courses relevant to the project : Smart Manufacturing
Industrial Internet of Things (IIoT)
Sensors and Instrumentation
Industrial Automation & PLC
Computer Graphics / 3D Modelling
Human–Computer Interaction
Embedded Systems

Name: MS.EKTA(2022B5PS1532P)

Student Write-up

PS-II Project Title: Design, Modeling and simulation of IIoT Water Bottling Plant using AR technology

Short Summary of work done during PS-II : During PS-II, I contributed to the project “Design, Modeling, and Simulation of an IIoT Water Bottling Plant Using AR Technology” in the roles of Texturing and Quality Assurance (QA). In the Texturing role, I applied realistic textures and materials to the 3D models. This involved ensuring visual accuracy, consistency, and proper texture mapping. The focus was on creating visually appealing models while maintaining performance for smooth operation in the AR application. In the QA role, I systematically tested the AR, VR, and WebGL applications to identify functional issues, UI/UX inconsistencies, and audio/VO mismatches. I documented all bugs with clear descriptions and validated interactive elements such as buttons, sliders, and panels to ensure a seamless user experience. This experience enhanced my attention to detail, problem-solving, and professional documentation skills, and provided practical exposure to 3D texturing and QA testing in immersive AR, VR, and WebGL applications.

Tool used (Development tools - H/w, S/w) : H/w - Laptop, Tablet, S/w - Blender, Unity, Google Sheets

Objectives of the project : Designing and developing immersive applications that enhance technical education., Encouraging innovation in 3D modelling, animation and interactive game design and incorporating it in the curriculum., Collaborating with faculty and industry partners to create meaningful, curriculum-aligned learning tools., Providing students hands-on experience with emerging technologies like AR/VR, digital twins, and virtual laboratories.

Major Learning Outcomes : Gained hands-on experience in applying textures to 3D models.
Developed systematic QA skills, including identifying UI/UX issues, functional bugs, and audio/VO mismatches in AR, VR and WebGL applications.
Learned to document and report bugs effectively.

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment during PS-II was collaborative, supportive, and learning-oriented. Team members

were approachable and open to discussions, which helped in understanding project requirements and resolving issues effectively. Regular feedback sessions and reviews provided clear guidance and helped improve the quality of work. The environment encouraged attention to detail, timely task completion, and professional communication, which contributed positively to the overall learning experience.

Overall, the organization provided a platform that supported skill development, teamwork, and hands-on learning, making the training productive and meaningful.

Academic courses relevant to the project : NA

Name: MS.MANSI(2022D2PS1553P)

Student Write-up

PS-II Project Title: Design, Modelling and simulation of IIoT Water Bottling Plant using AR technology

Short Summary of work done during PS-II : During PS-II at the Centre for Immersive Learning (CIL), WILP–BITS Pilani Hyderabad, I worked on the design, modelling, and simulation of an IIoT-based Water Bottling Plant using Augmented Reality technology. The project aimed to develop an interactive AR learning module for Smart Manufacturing students who lack regular access to real industrial equipment. My work involved setting up the AR environment in Unity using AR Foundation and ARCore, integrating 3D plant and sensor models, and implementing gesture-based interactions such as tap-to-place, scale, rotate, and drag. I contributed to developing learning, experiment, and quiz modules, integrating animations for water flow, bottle filling, conveyor movement, and sensor operations. Voiceovers and UI panels were synchronized with visual content to enhance conceptual understanding. I also participated in testing, debugging, performance optimization, and APK deployment for Android devices. The final outcome was a stable, user-friendly AR application that visually demonstrates industrial processes and sensor working principles. This project provided strong exposure to immersive technologies, digital twins, and Industry 4.0-oriented educational tools.

Tool used (Development tools - H/w, S/w) : Hardware: Android mobile devices (ARCore supported) Desktop / Laptop for development Software: Unity 6.x AR Foundation & ARCore Blender (3D Modelling & Animation) C# (Unity scripting) Figma (UI/UX design) Android SDK & Build Tools

Objectives of the project : To design, model, and simulate an interactive IIoT-based water bottling plant using Augmented Reality (AR) technology to enhance smart manufacturing education through immersive visualization and hands-on learning.

Major Learning Outcomes : Gained hands-on experience in developing AR-based learning applications using Unity and AR Foundation.
Understood smart manufacturing workflows, industrial sensors, and PLC-based automation.
Learned to convert physical industrial systems into interactiv

Details of Papers/patents : Papers: Not published
Patents: Not filed

Brief Description of working environment, expectations from the company : The working environment at the Centre for Immersive Learning (CIL), WILP–BITS Pilani Hyderabad was highly academic, collaborative, and innovation-driven. The lab encouraged experimentation with emerging technologies such as AR, VR, and digital twins. Faculty mentors and technical staff were approachable and provided regular feedback, enabling continuous improvement throughout the project lifecycle.
The expectations from the organization focused on developing a functional, curriculum-aligned AR learning module with high technical accuracy, stable performance, and strong educational value. Emphasis was placed on understanding real industrial systems, maintaining documentation standards, meeting timelines, and collaborating effectively within a multidisciplinary team.
The environment promoted self-learning, problem-solving, and responsibility, allowing students to work independently while still receiving structured guidance. Overall, it provided an excellent balance of academic rigor and practical exposure.

Academic courses relevant to the project : Smart Manufacturing

Industrial Internet of Things (IIoT)
Sensors and Instrumentation
Industrial Automation & PLC
Computer Graphics / 3D Modelling
Human–Computer Interaction
Embedded Systems

PS-II Station : WILP - Electric and Hybrid Vehicle (EHV) Lab, Hyderabad

Faculty

Name: Madhuri Bayya .

Student

Name: PIYUSH(2021B1A32743P)

Student Write-up

PS-II Project Title: DESIGN AND IMPLEMENTATION OF A CAN-BASED DIAGNOSTIC TEST AUTOMATION FRAMEWORK

Short Summary of work done during PS-II : The project involved designing and implementing a modular, hardware-independent automation framework for automotive diagnostic testing over the CAN bus. I developed a system that allows test engineers to define diagnostic scenarios in human-readable Excel files, which are then parsed into structured JSON test plans. A keyword-driven execution engine was built to interpret these plans and communicate with ECUs via a hardware abstraction layer supporting Vector and Kvaser interfaces. I also created a Python-based GUI to manage test selection, execution, and real-time logging. The framework includes a

"dry-run" mode for simulating CAN messages when physical hardware is unavailable, ensuring high development efficiency.

Tool used (Development tools - H/w, S/w) : Vector and Kvaser CAN interfaces, python-can library, Tkinter, JSON, Excel

Objectives of the project : The primary objective of this project is to design and implement a modular, CAN-based diagnostic test automation framework that enables structured, repeatable, and hardware-independent execution of diagnostic test cases.

Major Learning Outcomes : Deepened understanding of CAN-based diagnostic communication and ECU testing workflows. Practical experience with industry-standard hardware (Vector/Kvaser) and the python-can library.

Details of Papers/patents : A modular CAN-based diagnostic test automation framework was designed and implemented to enhance the efficiency and repeatability of ECU validation. The project involved developing an end-to-end workflow where human-readable test specifications are authored.

Brief Description of working environment, expectations from the company : The environment at WILP, Hyderabad, was highly professional and collaborative, focusing on integrating academic knowledge with industry practices. I had access to advanced R&D tools, hardware interfaces, and extensive documentation for automotive systems. Mentors provided consistent technical guidance, detailed feedback on system design, and industry perspectives that were pivotal for project success.

Academic courses relevant to the project : Computer Programming, Power electronics

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Name: AYUSHMAN NEERAJ(2022A8PS1357G)

Student Write-up

PS-II Project Title: No specific project title (Main work was in Power Electronics)

Short Summary of work done during PS-II : Created many lab manuals, helped in setting up the Power Electronics Lab. Worked with converters, rectifiers, inverters, etc.

Tool used (Development tools - H/w, S/w) : TI Boards, MATLAB, Code Composer Studio (TI software)

Objectives of the project : Work in Power Electronics (Working on converters, inverters, rectifiers, etc)

Major Learning Outcomes : Learnt MATLAB, how to work on TI Boards, how to create lab manuals and many Power Electronic concepts.

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Flexible work environment....just be regular.

Academic courses relevant to the project : Power Electronics

PS-II Station : WILP- Additive Manufacturing, , Hyderabad

Faculty

Name: Panchagnula Jayaprakash Sharma .

Student

Name: VEDAANT ACHUTHAN(2021B5A41173G)

Student Write-up

PS-II Project Title: Study in the wear properties of 3D Printed PEEK

Short Summary of work done during PS-II : Conducted a study in the wear properties of PEEK. Started study with a literature review, before learning how to operate 3D printers in order to print all the required samples, then started testing them on a pin-on-disc tribometer. Reviewed a lot of research on PEEK, its mechanical properties, DMA and additive manufacturing. Also printed DMA samples for use for future studies.

Tool used (Development tools - H/w, S/w) : CreatBot F160 PEEK 3D printer, CreatWare, Creative 3D, K1 Printer, Pin-on-Disc Tribometer

Objectives of the project : Conduct wear testing on 3D Printed PEEK samples

Major Learning Outcomes : Operation of 3D printers, use of pin-on-disc tribometer, experimental setup and analysis

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : Working environment was fine. Lab technicians were all helpful, faculty in charge is fairly unyielding and only came to the lab on alternate days. Faculty in charge expected results with little handholding.

Academic courses relevant to the project : None

PS-II Station : WILP- Intelligent systems Lab, Hyderabad

Faculty

Name: Rajiv Ranjan Gupta .

Student

Name: ARYAN RAI .(2022A4PS1175H)

Student Write-up

PS-II Project Title: Image synthesis through various models

Short Summary of work done during PS-II : .

Tool used (Development tools - H/w, S/w) : .

Objectives of the project : .

Major Learning Outcomes : .

Details of Papers/patents : .

Brief Description of working environment, expectations from the company : .

Academic courses relevant to the project : .

Name: SRIROOP GADAGOJU .(2022AAPS0439H)

Student Write-up

PS-II Project Title: Dynamic Offset Generator in Autonomous Vehicle

Short Summary of work done during PS-II : Worked on Autonomous Navigation in 4 wheelers.

Tool used (Development tools - H/w, S/w) : Autoware, Python, SQL, ROS2,

Objectives of the project : To optimise navigation of autonomous vehicles

Major Learning Outcomes : ROS2, python, c++, AV software & hardware, research methodologies

Details of Papers/patents : Currently under review

Brief Description of working environment, expectations from the company : Great

Academic courses relevant to the project : ML, Control Systems,

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PS-II Station : WILP Special projects- BITS-Spanda Foundation, Hyderabad

Faculty

Name: Shreyas Suresh Rao .

Student

Name: RITHVIK SRIRANGA MYNAMPATI .(2022A7PS0162H)

Student Write-up

PS-II Project Title: Situated Learning Assignment Application

Short Summary of work done during PS-II : During PS-II, I worked on developing a Situated Learning Application specifically designed for WILP students. The application enables students to generate academic assignments that are tailored to their course content and real-world work environments. Students provide inputs such as their course, work domain, relevant topics, and workplace context, which are used by an AI model (Meta Llama 3.3) to generate situated learning assignments.Students can submit their solutions to these assignments and receive AI-generated formative feedback in the form of a SWOT analysis, highlighting strengths, weaknesses, and areas for improvement. This iterative feedback loop allows students to refine their submissions multiple times before finalizing them for faculty review. Once submitted, faculty members can trigger an AI-assisted evaluation using a predefined and hard-coded rubric, ensuring consistent and structured assessment. The system supports session-based interactions, real-time response streaming, and separation of student and faculty workflows. Through this project, I gained practical experience in applying Generative AI to educational settings, particularly for working professionals, and in building scalable, full-stack AI-driven applications.

Tool used (Development tools - H/w, S/w) : Backend: Python, FastAPI Frontend: React.js, Vite, JavaScript AI Model: Meta Llama 3.3 (OpenAI-compatible API) Database: MySQL Other Tools: Git, REST APIs, Docker (for services setup)

Objectives of the project : To develop a Situated Learning Application for WILP students that generates workplace-contextualized academic assignments using a large language model. The objective is to enable students to apply course concepts within their real work environments, receive iterative AI-driven feedback, and support faculty in evaluating submissions using a predefined rubric.

Major Learning Outcomes : Understanding the design and implementation of Situated Learning systems for working professionals
Hands-on experience with large language models (Meta Llama 3.3) for educational content generation
Ability to design AI-driven formative feedback mechanism.

Details of Papers/patents : Nil

Brief Description of working environment, expectations from the company : The PS-II was carried out at the BSF BITS Spanda Foundation Lab. The working environment consisted of a multidisciplinary team comprising four technical interns, one non-technical project management intern, three managers, and one senior research associate, all working from the same lab with adjoining desks. This setup encouraged collaboration, peer learning, and regular interaction with mentors.The work involved handling multiple projects simultaneously, with coordination required with Single Points of Contact (SPOCs) responsible for eleven different projects. Meetings were conducted primarily online, with occasional in-person discussions to review progress, clarify requirements, and address challenges. The environment emphasized accountability, clear communication, and adaptability to changing project needs.

The organization expected interns to independently understand problem statements, design and implement technical solutions, and deliver features within defined timelines. Emphasis was placed on learning new technologies, incorporating feedback from managers and SPOCs, and maintaining proper documentation. Interns were also expected to collaborate effectively within the team, participate actively in discussions, and contribute to project execution in a professional manner. Overall, the work environment balanced guided mentorship with autonomy, allowing interns to gain practical experience in real-world software development projects.

Academic courses relevant to the project : OOPS, DBMS, ML

Name: HARSH RAJ(2022A8PS0570P)

Student Write-up

PS-II Project Title: Application Development

Short Summary of work done during PS-II : During PS-II, I worked on AI/ML and full-stack application development projects in collaboration with BITS WILP, focusing on educational analytics and automation. My primary contribution was leading the development of an At-Risk Student Prediction Platform, where I designed a hybrid ML + GenAI system to predict student dropout risk and provide personalized counselor recommendations. This involved building multi-

source data pipelines across ERP, LMS, Moodle, and Salesforce; developing a multi-modal modeling framework combining Random Forests with Transformer encoders; and implementing a Gated Mixture-of-Experts fusion layer. I also integrated SHAP-based explainability and created React dashboards for visualizing behavioral analytics, risk scores, and AI-generated next steps. In the Operation Chatbot project, I engineered a Promptfoo-based behavioral testing framework for evaluating a RAG-powered student support chatbot. This included creating async Python providers for concurrent API testing, designing YAML/CSV-based test suites, and implementing semantic grading and embedding-based scoring pipelines. The framework ensures accuracy, safety, and consistency before deployment. I also contributed to the Question Review System, building backend AI analysis modules to split exam papers into questions, evaluate them based on rubrics (clarity, complexity, Bloom's level), and compute similarity scores. I collaborated on microservice design, caching, and high-throughput LLM evaluation workflows that supported reviewer assignment for live semester evaluations. Overall, the PS-II experience strengthened my skills in AI/ML, Generative AI, backend engineering, data pipelines, and scalable application development.

Tool used (Development tools - H/w, S/w) : Software & Development Tools: Python, PyTorch, Scikit-learn Transformers (HuggingFace) FastAPI, ReactJS PostgreSQL, ClickHouse, Redis MLflow (model tracking) Docker, Docker Compose Promptfoo (LLM testing) OpenAI / vLLM APIs Git, GitHub VS Code,

Objectives of the project : To design and develop AI-powered application modules that enhance educational analytics and student support systems within the WILP ecosystem. To implement machine learning and generative AI models for tasks such as student-risk prediction, behavioral evaluation of chatbots, and automated question analysis.

Major Learning Outcomes : Gained hands-on experience in building and deploying end-to-end AI/ML systems, including data pipelines, model training, evaluation, and integration with real applications.
Developed expertise in Generative AI and LLM-based workflows, including prompt.

Details of Papers/patents : No papers or patents were published as part of this project.

Brief Description of working environment, expectations from the company : The working environment at WILP SPANDA Collaboration was highly collaborative, research-oriented, and aligned with real-world educational technology needs. I worked closely with faculty mentors, technical teams, and other contributors on projects involving AI/ML, Generative AI, backend systems, and full-stack application development. The environment encouraged independent ownership of modules while maintaining regular reviews, discussions, and feedback sessions to ensure alignment with academic and institutional requirements.

The workspace provided access to modern development tools, cloud resources, and structured data, allowing me to work on scalable AI systems, behavioral testing frameworks, and backend microservices. The culture emphasized problem-solving, experimentation, and building deployable solutions rather than just prototypes. This helped me understand production constraints, data privacy, model reliability, and evaluation best practices.

From the company, the expectations were to quickly understand project requirements, contribute to the design and development of AI-driven applications, and deliver components that integrated seamlessly with existing processes at BITS WILP. I was expected to follow good coding practices, document my work, participate in technical discussions, and ensure that the solutions developed were accurate, maintainable, and ready for eventual deployment. Additionally, the organization expected professionalism, timely communication, and the ability to work independently when needed.

Academic courses relevant to the project : Artificial Intelligence
Machine Learning
Introduction to Large Language Models (LLMs)
Data Structures & Algorithms (DSA)
Object-Oriented Programming (OOPs)
Operating Systems
Database Systems / SQL

PS-II Station : WILP-IoT Lab, Bengaluru

Faculty

Name: Prakruthi Hareesh .

Student

Name: KARRI KISHORE RAMACHANDRA REDDY(2022A3PS1328G)

Student Write-up

PS-II Project Title: Data Analyst

Short Summary of work done during PS-II : PS 2 is okay in this company and not too much hectic. Better choose others as you wont get PPO.

Tool used (Development tools - H/w, S/w) : Sql, Power BI

Objectives of the project : To provide the data analysis for existing data

Major Learning Outcomes : Learnt sql, Power BI etc

Details of Papers/patents : Nothing

Brief Description of working environment, expectations from the company : --

Academic courses relevant to the project : Nothing

PS-II Station : WILP-Vehicle security penetration testing facility in collaboration with Bosch, Hyderabad

Faculty

Name: Dr Ramya K

Student

Name: SUTIRTH RATH(2022A4PS0669P)

Student Write-up

PS-II Project Title: Knowledge Distillation for Lightweight ECU Fingerprinting in CAN Bus Security

Short Summary of work done during PS-II : Literature Review, Reverse Engineering of Code required, Multiple training and testing, Automation, Modularization of Script, Distillation to MCU ready format

Tool used (Development tools - H/w, S/w) : Google Colab, Gemini, ChatGPT

Objectives of the project : To build a lightweight IDS for MCUs CAN Networks

Major Learning Outcomes : Learning how to optimize ML algorithms and make them MCU deployable

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Work on project you decide on your own, make it worthy of being published in a conference or journal, Help in day to day activities of WILP.

Academic courses relevant to the project : NA

Name: GAUTHAM A NAIR .(2022A4PS1651H)

Student Write-up

PS-II Project Title: Securing Wi-Fi Home Security Camera OTA Updates Against DNS Spoofing and Protocol Downgrade Attacks Using Packet-Level Analysis

Short Summary of work done during PS-II : During my PS-II internship, I worked on a cybersecurity research project focused on securing over-the-air (OTA) firmware updates in IoT devices against network-level attacks such as DNS spoofing and protocol downgrade. The work involved designing and implementing a lightweight, packet-level detection framework capable of identifying malicious DNS responses and insecure fallback behaviors during firmware update processes. Realistic attack scenarios were simulated in a controlled virtual testbed, and the detector's performance was evaluated in terms of accuracy, detection latency, and resource overhead, making it suitable for resource-constrained IoT environments. In parallel, I was actively involved in setting up a cybersecurity research and testing lab in collaboration with Bosch Global Software Technologies. This included discussions on lab objectives, toolchains, and infrastructure required for future research in embedded and hardware-level security. I had multiple one-to-one technical interactions with Bosch professionals, where we discussed secure boot, hardware root of trust, firmware protection mechanisms, and planned research directions using real hardware platforms. Additionally, I gained hands-on exposure to embedded systems and security fundamentals by learning and demonstrating entry-level experiments on hardware modules allotted to interns. These activities strengthened my understanding of hardware–software interaction, practical security testing, and experimental documentation, complementing the network-security research carried out during the internship.

Tool used (Development tools - H/w, S/w) : Android Studio Android Debug Bridge (ADB) Ghidra Oracle VirtualBox Python Scapy Wireshark tcpdump Kali Linux Ubuntu Linux Android test devices Embedded development modules (intern allotment)

Objectives of the project : To prevent any OTA(Over-The-Air) attacks on an IoT device like the security wifi home camera

Major Learning Outcomes : Gained practical understanding of IoT OTA security vulnerabilities, specifically DNS spoofing and protocol downgrade attacks, through realistic attack simulation and analysis.
Developed hands-on expertise in packet-level network monitoring and analysis u

Details of Papers/patents : My paper was selected for publication at ICCFN Egypt,2025 and for poster presentation at SPACE 2025,IIT GUWAHATI.

Brief Description of working environment, expectations from the company : The working environment is good . We could work on our projects well enough , the connectivity is good and also there were regular visits to the lab by esteemed people. We could connect well enough with them , ask any career related doubts wth them if any. The Bosch instructors also were very friendly and interactive . They would teach the cybersecurity concepts very well and provide a very good base for the students to then build upon and study more on that topic.

Academic courses relevant to the project : Don't know. Any cybersecurity related courses would be helpful

PS-II Station : WizLearnr, Hyderabad

Faculty

Name: Mrityunjay Kumar

Student

Name: ADITYA ATYAM .(2022AAPS2023H)

Student Write-up

PS-II Project Title: A REPORT ON OCR PIPELINES

Short Summary of work done during PS-II : During my Practice School–II internship at Wizlearnr, I worked on building and optimizing backend AI pipelines, with primary focus on a large-scale OCR system. I designed an end-to-end pipeline using YOLOv8 to detect document elements such as text, titles, tables, lists, and figures, along with preprocessing steps like deskewing and blur-based model routing. The system supported GPU-based batch processing, structured JSON outputs, and mAP evaluation. I also contributed to backend migration tasks and UI improvements for internal products.

Tool used (Development tools - H/w, S/w) : Python, FastAPI, Docker, Google Colab, Hugging Face Hub, Git

Objectives of the project : To develop an end to end pipeline for ocr and batch processing of documents

Major Learning Outcomes : Built a production-grade OCR pipeline for large-scale document processing

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : The working environment at Wizlearnr was that of a fast-paced, remote startup with a strong focus on building practical, production-ready AI systems. The team encouraged ownership, independent problem-solving, and regular communication through updates and discussions. I was expected to quickly understand existing codebases, contribute to live projects, and design scalable solutions under real-world constraints such as GPU memory and data quality issues. The company emphasized clean implementation, documentation, and knowledge transfer, allowing me to gain hands-on experience with industry-relevant tools and workflows while collaborating closely with engineers and leadership.

Academic courses relevant to the project : NA

PS-II Station : XPT Consultancy and Software Services Pvt Ltd, Bengaluru

Faculty

Name: Neha Vinayak .

Student

Name: ARCHITA AGARWAL(2022A7PS0135P)

Student Write-up

PS-II Project Title: Learning and Application of SAP Analytic Cloud

Short Summary of work done during PS-II : During my PS-II, I worked on real-time SAP Analytics Cloud (SAC) projects focused on data analytics and business intelligence. My responsibilities included data modeling, handling large datasets, creating calculated measures, and building interactive dashboards aligned with business requirements. I worked on both creating and replicating dashboards, resolving backend data issues, and migrating dashboards to newer versions of SAC while maintaining accuracy and consistency. A key part of my work involved enhancing dashboard interactivity using input controls, radio buttons, containers, and scripting. I implemented dynamic table and chart behavior, optimized complex logic, and simplified multi-table designs into efficient single-table solutions. I also created and exported model-level tables and assisted in applying calculations based on client-specific instructions. Throughout the internship, I collaborated with team members and seniors, attended client calls, and worked on refining deliverables based on feedback. This experience strengthened my

technical skills in SAC, SQL, and data visualization, while also improving my problem-solving, adaptability, and understanding of professional analytics workflows.

Tool used (Development tools - H/w, S/w) : SAP Analytics Cloud (SAC), SQL, Microsoft Excel

Objectives of the project : Learning about and use of SAC, Applying the Learning to actual projects

Major Learning Outcomes : SAP Analytics Cloud, data modeling, large dataset handling, interactive dashboards, SAC scripting, problem-solving, client-based BI workflows.

Details of Papers/patents : Not Applicable

Brief Description of working environment, expectations from the company : The working environment during my PS-II was professional, collaborative, and learning-oriented. The team encouraged open communication, regular discussions, and knowledge sharing, which made it easier to understand project requirements and clarify doubts. I was given exposure to real-time business analytics projects using SAP Analytics Cloud, allowing me to work on live data and client-driven dashboards. Seniors and mentors were approachable and supportive, providing timely guidance, feedback, and constructive suggestions throughout the work.
The company's expectations focused on developing a strong understanding of tools and concepts, delivering accurate and well-structured analytics solutions, and adapting to changing requirements. Emphasis was placed on attention to detail, data accuracy, and creating clear, user-friendly dashboards aligned with client needs. I was also expected to take ownership of tasks, meet deadlines, and continuously improve my technical and problem-solving skills. Overall, the environment promoted responsibility, continuous learning, and professional growth, helping me gain valuable industry exposure and practical experience.

Academic courses relevant to the project : Data Analytics, Business Intelligence, Database Management Systems (DBMS), SQL, Artificial Intelligence

PS-II Station : Yugabyte Software Pvt. Ltd., , Bengaluru

Faculty

Name: Raja Vadhana Prabhakar .

Student

Name: VANKA VINAY NAIDU(2021B3A71026H)

Student Write-up

PS-II Project Title: ENHANCING THE CLOUD ADMIN MAINTENANCE PAGE AND SUPPORTING NEW REGIONS

Short Summary of work done during PS-II : The work involved enhancing the Cloud Admin maintenance page by implementing multiple filter options to efficiently manage scheduled upgrades and increasing the page's efficiency. In addition, backend and configuration changes were carried out to support new AWS and GCP regions, including instance type and storage support, while ensuring backward compatibility.

Tool used (Development tools - H/w, S/w) : Swagger, Datadog, VScode

Objectives of the project : To improve the Cloud Admin maintenance page by adding filters for managing upgrade schedules and by enhancing overall system efficiency. To enable new AWS and GCP regions, improving overall platform availability.

Major Learning Outcomes : Learned how cloud regions work, including machine types, storage, zones, and region setup, and how backend, SRE, and platform teams coordinate end-to-end. Gained experience in enhancing backend APIs, improving system efficiency, and maintaining backward c

Details of Papers/patents : None

Brief Description of working environment, expectations from the company : The working environment at the company was very friendly and supportive, with seniors and team members always approachable for guidance and discussions. There was a strong culture of collaboration, which made it easy to clarify doubts and learn from experienced engineers. The expectations set by the company were clear and reasonable, allowing steady learning while contributing meaningfully to the project.

Academic courses relevant to the project : DSA, DBMS, OOPS

Name: SHOBHIT OM KUMAR(2021B3A72155G)

Student Write-up

PS-II Project Title: Enhancing Active Session History tool & Tablet Metadata view

Short Summary of work done during PS-II : During PS-II, I worked on enhancing YugabyteDB's observability tools to simplify debugging and latency analysis. I first extended Active Session History (ASH) by adding databaseID and userID fields, enabling faster correlation between workload patterns and specific databases or users. I then enhanced the tablet metadata view by introducing two additional columns—start_range and end_range—which expose the range boundaries of each tablet for range-partitioned tables. A significant part of my work involved upgrading RPCZ endpoints by adding new fields such as process PID, leader PID, and PSS memory bytes, allowing detailed introspection of all active processes. I also added new wait events for transactional queries to make ASH more expressive. Currently, I am working on a feature that computes the tablet ID for any row of a range-partitioned table. This involves converting row inputs into a YBCTID and comparing it against tablet boundaries, or alternatively using extended metadata views. This functionality does not exist today and will greatly help support engineers identify data placement and routing issues. I completed full regression testing, code reviews, documentation, and knowledge-transfer sessions throughout the internship.

Tool used (Development tools - H/w, S/w) : Software: C++, PostgreSQL codebase, YugabyteDB codebase, Git/GitHub, Phorge, Jira, GitHub Actions CI, Kubernetes test clusters Hardware: Multi-node YugabyteDB clusters (local & cloud) Other Tools: GDB, logging frameworks, YB-Admin, YB-TServer/Master UI,

Objectives of the project : Enhance YugabyteDB observability by improving ASH (Active Session History) metadata. Extend tablet metadata visibility by exposing tablet range boundaries. Improve system-level introspection through enriched RPCZ endpoint outputs. Develop a YSQL-level function to determine the tablet ID for a given table row. Strengthen debugging workflows for support and performance teams.

Major Learning Outcomes : Deep understanding of distributed database internals, especially YSQL execution and DocDB storage.
Hands-on experience with C++ systems programming, PostgreSQL code paths, and metadata pipelines.
Ability to design end-to-end features: spec → architectur

Details of Papers/patents : No research papers or patents were generated as part of this project. The work consists of engineering enhancements to YugabyteDB's observability layer.

Brief Description of working environment, expectations from the company : The working environment at YugabyteDB was collaborative, fast-paced, and engineering-driven. As part of the Observability and Performance team, I worked closely with senior engineers, attending weekly stand-ups, design discussions, and review cycles. The company expected interns to contribute production-quality code, follow strict coding standards, write migration scripts, update documentation, and ensure backward compatibility.
The team culture emphasized ownership—each feature was driven independently from design to final PR submission. Despite working remotely with globally distributed engineers, communication was smooth through Slack, Jira, and structured review processes. I received continuous feedback from my mentors, which helped refine my code and improve my understanding of system-level design.
YugabyteDB also encouraged interns to explore the broader architecture, including Raft, DocDB, query layer internals, and tablet lifecycle operations. The environment rewarded curiosity,

attention to detail, and willingness to troubleshoot complex multi-node issues. Overall, the company provided a highly supportive and technically enriching atmosphere aligned with real-world distributed systems development.

Academic courses relevant to the project : Database Systems
Operating Systems
Advanced Data Structures & Algorithms
Computer Networks
Compiler Construction

Name: SATVIK NARULA(2021B3A72482G)

Student Write-up

PS-II Project Title: Improvement of support bundle and cdc

Short Summary of work done during PS-II : made improvements to existing tools and expanded their functionality.Updated object and query mappings to correctly fetch CDC information using the new structure. Added a new linking relationship to enable retrieving CDC data per-universe in a clean and maintainable way. Implemented logic to process command output and extract the specific CDC fields needed for lag and status.

Tool used (Development tools - H/w, S/w) : swagger,phorge, github,git,

Objectives of the project : make improvements to and expand existing tools

Major Learning Outcomes : how to work with legacy codebase,collaborate with a dynamic team environment, cloud infrastructure concepts, ORM and database concepts

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : collaborative.

Academic courses relevant to the project : DBMS,OOP,DSA,OS

PS-II Station : ZIPPEE, Gurgaon

Faculty

Name: Neha Vinayak .

Student

Name: MOKSH HANDA(2022A7PS0334G)

Student Write-up

PS-II Project Title: Product Manager

Short Summary of work done during PS-II : During my PS-II, I worked in a Product Management role focusing on improving operational workflows in a logistics and last-mile delivery ecosystem. My responsibilities included understanding on-ground operational challenges, identifying gaps in existing product flows, and converting them into well-defined product requirements. I worked extensively on features related to delivery completion accuracy, geofencing enforcement, OTP-based validations, and shipment status workflows. This involved collaborating with operations teams to understand real-world constraints, engineering teams to assess feasibility, and stakeholders to align on business priorities. I authored PRDs, defined user journeys, identified edge cases, and helped prioritize features based on impact and effort. I also participated in sprint planning, reviewed feature rollouts, and tracked post-launch metrics to evaluate effectiveness. Through this experience, I gained hands-on exposure to balancing user

experience, technical constraints, and business objectives in a fast-paced production environment.

Tool used (Development tools - H/w, S/w) : Jira (ticketing, sprint tracking) Confluence (documentation, PRDs) Figma / Wireframing tools (low-fi workflows) SQL / Analytics dashboards (for metrics & analysis) Excel / Google Sheets Slack / Microsoft Teams

Objectives of the project : To support the product team at Zippee in designing and improving internal tools and client-facing workflows for darkstore and last-mile operations, with a focus on reliability, scalability, and usability for operations and business teams. To define clear product requirements for new features (such as unified login, geofencing, impact analysis, and dashboards) and collaborate with engineering, data and operations to ship them to production. To use data-driven decision making (through SQL and product analytics) to identify bottlenecks, measure impact, and prioritize the product roadmap.

Major Learning Outcomes : Practical experience in end-to-end product lifecycle: problem discovery, PRD writing, solution design, coordination with engineering, QA and launch.
Hands-on exposure to logistics operations, darkstore processes, and how product decisions affect SLAs, e

Details of Papers/patents : N/A

Brief Description of working environment, expectations from the company : The working environment at Zippee was that of a fast-paced, early-stage product organization where ownership and bias for action were strongly encouraged. The mentor and leadership team expected interns to understand the logistics domain quickly, ask the right questions, and break down ambiguous problem statements into well-defined, documentable product requirements. There was a strong emphasis on impact over output: each feature or change was expected to link back to clear metrics, such as operational efficiency, error reduction, or customer experience. The culture supported learning through regular feedback, open discussions with product, engineering, and operations stakeholders, and opportunities to observe how decisions are made in a real production environment. At the same time, expectations on meeting deadlines, communicating risks early, and maintaining high-quality documentation were explicit and consistent.

Academic courses relevant to the project : DBMS, Human Computer Interaction, Principle of Management and also it's important to be street smart for this role :D

PS-II Station : Zomato - Generative AI technologies., Gurgaon

Faculty

Name: Chetana Anoop Gavankar .

Student

Name: MAYANK KASHYAP(2022A2PS1083P)

Student Write-up

PS-II Project Title: Implemetation and Development of AI Agents in Nugget Dashboard

Short Summary of work done during PS-II : During my Period of Study-II at Nugget by Eternal, I worked as a GenAI intern contributing to both bot development and platform-level enhancements. I spent the first two months of my internship building end-to-end conversational bots for clients like Fi-Money and Housing in the Nugget Dashboard. The Fi-Money bot went live as expected, whereas the Housing project was halted due to regulatory requirements from the RBI. I also contributed to the development of additional bots for clients like 1mg and Culture Circle. In the next two months, I was primarily engaged in bug-fixing, performance tuning, and developing new features. Specifically, I fixed bugs in Fi-Money and Culture Circle bots. I also performed various benchmarks on accuracy and run-time performance across different models including GPT OSS 120B and GPT-4.0 Mini to identify the best possible models for underground use. I built a copilot demo bot for Redbus, and developed a POC chatbot for MPokket. As part of Firefly services, my contribution also included improving the service by providing knowledge base (KB) support to the generator and classifier agents via YAML and Golang, working with both front-end

and back-end teams. This included testing the service for version cloning and journey cloning across different platforms including Instagram, WhatsApp, and Email.

Tool used (Development tools - H/w, S/w) : Golang (backend services, agent logic), YAML (pipeline configs, KB definitions), Git & GitHub

Objectives of the project : To gain hands-on experience in Generative AI, LLMs, RAG, and agent-based architectures, along with dashboard-driven bot development workflows.

Major Learning Outcomes : Gained practical experience in GenAI chatbot development, debugging, and AI agent workflows while working with YAML, Golang, and cross-functional teams. Strengthened problem-solving, adaptability, and real-world product delivery skills through multiple li

Details of Papers/patents : -

Brief Description of working environment, expectations from the company : Working at Nugget by Eternal is fast-paced and active, as teams work together to deliver solutions quickly. The people are friendly and approachable, which is plus point regarding company's working atmosphere. However, the company currently does not have organized or straight-to-the-point training sessions for new joiners. This means that new joiners might be uncomfortable with the tech stack used across projects at first. A structured onboarding or training program would help new joiners to get comfortable quicker and would help prevent the unfamiliarity with the tech stack from becoming a bottleneck.

Academic courses relevant to the project : Machine Learning, Foundations of Data Science, Deep Learning, Artificial Intelligence, Computer Programming

PS-II Station : ZS - Tech Innovation Lab, Bengaluru

Faculty

Name: Febin A Vahab .

Student

Name: ANIMESH JAWLA(2021B1A30816G)

Student Write-up

PS-II Project Title: Mergers and Acquisitions

Short Summary of work done during PS-II : Extraction unstructured data and making it structured

Tool used (Development tools - H/w, S/w) : Ai

Objectives of the project : Evaluating companies on the basis of required services for Aquisition and Merger

Major Learning Outcomes : Agentic Workflow

Details of Papers/patents : NA

Brief Description of working environment, expectations from the company : Confidential

Academic courses relevant to the project : CS

Name: ENOSH RAJU DEVISETTI .(2022A8PS0808H)

Student Write-up

PS-II Project Title: 1) CCPM (Claude Code Project Management) 2) SQL

Short Summary of work done during PS-II : During PS-II, I explored multiple tools and concepts related to modern AI-driven and data-centric development workflows. One key area was CCPM (Claude Code Project Management), which is built on top of Claude Code. By providing structured product requirement documents (PRDs), the system can generate code, perform automated testing, and manage end-to-end workflows, including pushing code changes to GitHub. This helped me understand how AI-assisted development can streamline the software lifecycle when requirements are clearly defined. I also gained exposure to Databricks, particularly in the context of data handling, data science agent workflows, and SQL-based code lifecycle management. This included understanding how enterprise data is queried, managed, and maintained using scalable data platforms, along with version-controlled SQL logic and collaborative development practices. Additionally, I explored agentic RAG (Retrieval-Augmented Generation) at a conceptual level to understand how AI agents retrieve information from structured data sources and ground responses using enterprise data. Although the exposure was introductory, it provided valuable insight into the architecture and practical relevance of agent-based AI systems. Overall, the work provided meaningful exposure to enterprise tools, data workflows, and emerging AI concepts, helping me understand how real-world corporate projects are designed and executed.

Tool used (Development tools - H/w, S/w) : Data-bricks Agent, Bitbucket, Claude Code, ChromaDBB

Objectives of the project : To benchmark CCPM (Claude Code Project Management) and evaluate the accuracy and reliability of AI-generated code as product requirements increase in complexity. • To explore Databricks-based data science agent workflows by enabling controlled agent access to Bitbucket, allowing repository-level SQL changes through user prompts using custom-defined functions and tools. • To gain a foundational understanding of agentic RAG architectures and their role in grounding AI responses using enterprise data sources. • To understand how AI agents can be integrated into real-world development workflows while maintaining version control, testing, and governance practices.

Major Learning Outcomes : Understood how Agentic AI systems are designed and evaluated in enterprise environments.

• Gained exposure to AI-assisted development using CCPM and Claude Code, including benchmarking code quality against increasing product complexity.

• Learned how data

Details of Papers/patents : DataBricks DS Agent SQL code Lifecycle Management.(ZS Internal Research POC)

Brief Description of working environment, expectations from the company : The working environment during PS-II was fast-paced and demanding, with high expectations around ownership, deadlines, and quality of work. The company encouraged a professional approach where interns were treated as integral team members and entrusted with meaningful responsibilities.

Although the workload was heavy at times, it created a strong learning curve within a short span. Regular interactions with mentors and team members helped clarify expectations and improve both technical and professional skills. The environment emphasized accountability, collaboration, and continuous improvement, which closely reflected real corporate work culture.

Overall, the challenging environment pushed me to adapt quickly, manage time effectively, and deliver under pressure, making the experience highly valuable from a learning and career-readiness perspective.

Academic courses relevant to the project : ML, SDLC, Research

PS-II Station : Zyduslife - Fundamental Analyst, Mumbai (Worli)

Faculty

Name: Uma Nagarajan .

Student

Name: VYBHAV BADRINARAYANAN(2021B3AA2145G)

Student Write-up

PS-II Project Title: Fundamental analyst

Short Summary of work done during PS-II : -

Tool used (Development tools - H/w, S/w) : Bloomberg, excel,

Objectives of the project : Equity researcg

Major Learning Outcomes : Equity research

Details of Papers/patents :
None

Brief Description of working environment, expectations from the company : Not a good ps company

Academic courses relevant to the project : Offshoot