

ASIAN SMART CITIES RESEARCH AND INNOVATION NETWORK (ASCRIN)

EXPRESSION OF INTEREST FOR JOINT PHD SCHOLARSHIP

DESCRIPTION

The Asian Smart Cities Research and Innovation Network (ASCRIN) has been initiated by La Trobe University, Melbourne Australia, in partnership with premier research institutions in India.

Ten PhD positions are currently available with scholarship funding for students enrolled in a Joint PhD program at the Birla Institute of Technology and Science (BITS), Pilani, and La Trobe University. Candidates will be based at BITS Pilani throughout his/her candidature and will have the opportunity to visit La Trobe University in Melbourne, Australia for typically one year during the research project.

Please check the admission requirements to undertake a PhD at [BITS Pilani](#) and [La Trobe University](#). Note that a candidate may apply by meeting only the BITS Pilani entry requirements, but in order to be confirmed into the Joint PhD program at La Trobe University and BITS, they will need to meet any additional La Trobe University requirements within 12 months of commencement of their PhD at BITS Pilani.

The Expression of Interest (EOI) form is the first stage in considering whether you might be suitable for selection to undertake a PhD within the ASCRIN network.



BENEFITS OF THE SCHOLARSHIP

For candidates enrolled in a Joint PhD between La Trobe University and BITS Pilani:

- BITS Pilani PhD fellowship: INR 31,000 – 33,000 pm.
- A stipend of AUD \$28,597 p.a. (2021 rate) for up to one year during residency at a La Trobe University campus
- A La Trobe University Full-Fee Research Scholarship, covering tuition fee relief for up to four years at La Trobe University
- Return economy airfare between Delhi and Melbourne

ASCRIN PROJECT DETAILS

Project title:

Building Multi-source knowledge base for AI-driven public health explainable chatbots

Project Team:

LA TROBE PRINCIPAL SUPERVISOR: Dr Kok-Leong Ong, Centre for Data Analytics and Cognition, La Trobe University

BITS PILANI PRINCIPAL SUPERVISOR: Dr Manik Gupta, Department of Computer Science and Information Systems, BITS Pilani Hyderabad Campus

Abstract:

A common problem in public health is to answer health related questions at scale. One solution is to use ML/AI to learn the questions and answers so a machine can provide this service 24x7 to a large number of people.

The need for a PhD to look at this problem can be explained by an example. Consider a health forum on feeding infants. One could post a question about when to introduce solids and many forum participants will provide answers, some of which are based on medical advice and others based on myths or outdated practices. If a machine was to learn from this data source, there is a chance that the answer provided is not medically sound. Thus, learning the question from one source and selecting a suitable answer from a restricted data source (e.g., curated by medical experts) is what health applications require. These multi-source knowledge bases can be employed to improve chatbots in a range of public health scenarios. Further, the project will also research additional improvements so that these chatbots can provide quality explanation-based recommendations that can influence behavioural change.

With current techniques lacking the above capabilities, existing chatbots proved to have limited health applications. Hence, this PhD will research new algorithms to overcome the above issues with the research outcomes expected to have immediate impact, as both Supervisors Dr. Ong and Dr. Gupta have current research that requires such solutions to be deployed in the real-world and to be tested by a large number of users.

Essential Qualifications :

- M.E./M.Tech. in Computer Science (CS)/Data Science/Artificial Intelligence (AI) or relevant equivalent degree with 70% marks or CGPA 7.0 for BITS Pilani and Requirements from La Trobe University (<https://www.latrobe.edu.au/study/apply/research/doctor>). First class in B.E/B.Tech in CS or allied disciplines and First class or equivalent in M.E/M.Tech. with GATE Qualification.
- Prior experience in Natural Language Processing (NLP) related projects
- Knowledge of Machine learning concepts

Desirable Qualifications:

- Sound fundamentals in Maths and Statistics
- Knowledge of Data Science and related fields
- Strong Programming experience
- Publications is an added advantage

Please fill the details below and send this EOI to us as instructed at the end of the document.

TO BE FILLED BY THE CANDIDATE:
PERSONAL DETAILS

Title		Given Name(s)	
Gender		Family Name	
Date of birth (dd/mm/yyyy)			
Contact address			
Email address			

Mobile number including country code	
Country of Citizenship	
Country of Dual Citizenship (if applicable)	
Country of Permanent Residency	
Country of birth	

RESEARCH INTERESTS

Please provide up-to 10 keywords that best describe your technical research interests (discipline specific interests e.g. AI/ML in Computer Science discipline, or Radio frequency design for Electrical Engineering)

EDUCATIONAL BACKGROUND

Highest Level of Education

Name of qualification/degree	Year completed	University/College	Completion Status (completed/ ongoing)	Final Grade (GPA or equivalent) if available

CURRICULUM VITAE

Attach a CV (maximum 2 pages in length) highlighting any relevant prior project / research / professional work experience including relevant publications in PDF format.

STATEMENT OF PURPOSE (MAXIMUM 500 WORDS)

Please provide a personal statement of no more than 500 words. The statement should describe your personal motivation to undertake further study and can include details of your personal circumstances as well as your life and work experiences. It should emphasise any aspect of your personal history that may enhance your application, for example prior project or research and development experience, publications, extracurricular activity, community involvement, relevant personal characteristics and any outstanding academic or professional achievements.



CHECK LIST

- I have attached my CV (max 2 pages) in PDF format
- I confirm that I have reviewed eligibility requirements of BITS Pilani and La Trobe University
- Publications (if any) in PDF format
- Research thesis resulting from undertaking research training in your undergraduate degree (if any) in PDF format

How to SUBMIT

Email the completed EOI form as a **single PDF with all attachments** to manik@hyderabad.bits-pilani.ac.in The **subject of the email must be: ASCRIN: PhD EOI** to be considered. The last date of application is **30th September, 2021 @ 5:00 pm**

Important Dates:

1. Last date for application: 30th September 2021
2. Intimation to shortlisted candidates to be called for online interview: 4th October 2021
3. Date of online interview: To be Announced.

Please note that only qualified and suitable candidates will be called for the online interview. If you are selected through the interview process then you will be required to register for the Ph.D. programme of BITS Pilani, subject to the fulfillment of the requirements of the BITS Pilani and La Trobe University.

*ASCRIN Founder La Trobe University: CRICOS Provider 00115M
CRICOS Course Code: 0100696 - Doctor of Philosophy (High Cost)
CRICOS Course Code: 0100697 - Doctor of Philosophy (Low Cost)*