

**Dr. Yashvardhan Sharma**  
**Project/Thesis/Dissertation/SAT Problems offered for Second Semester 2024-25**

❖ **Question Answering System (QAS)**

1. Developing a Visual Dialogue System (Visual Chatbot) by identifying the Intent in the question, Image, and dialogue history.
2. Developing a Visual Question Answering System (VQA) that can answer a natural language question by extracting the visual features from the given Image. Improving the accuracy of the Multi-lingual VQA system for the Indian languages.
3. Development of FAQ-based Question Answering System, which recommends a list of similar questions to the user.

❖ **Fake News Detection in Social Media (FND)**

1. Cross-Lingual Fake News Detection using the Fact-checked given by the high-resource languages to be used in the Low-resource languages.
2. Fake News Detection by leveraging the latest Few shot and Zero shot learning methods for the Multilingual using the Low-resource languages such as Indian Languages: Hindi, Bengali etc.

❖ **Machine Translation**

1. Using Large Language Models to improve Machine Translation for Indic languages

❖ **Human Action Recognition**

1. Visual feature determination and system development for Alzheimer's.
2. Visual feature determination and system development for dementia.
3. Visual cues determination and system development Post Stroke.

❖ **Designing Optimal and Targeted Advertisement Campaign Strategy for Online E-Commerce Platforms using AI and Machine Learning**

1. Analyzing and predicting factors affecting the overall profitability of an advertisement campaign.
2. Identifying and explaining the impact of changing input variables [Bid, Budget] on the output metrics [ %impression share, ROAS - return on adspend] across such campaigns.

❖ **Conversational AI to understand customer behavior :**

- Improving Conversational System of Unscripted, Unplanned Responses using Machine Learning to get Accurate Responses.
- Developing a Multi-Lingual Embodied Conversational Question-Answering agents.

- Implementing a Neural Conversational Model for Multilingual Question-Answering System.

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### **For Students**

Please fill in your academic details by 5th November 2024 for the SOP/ LOP /Research Practice/Thesis

Please fill your interest <https://forms.gle/V6Y44VBo1jhdh4Tp6>