

Ayush Hrishikesh Mishra

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Experience

Volkswagen Group Technology Solutions India | Pune, Maharashtra

AI/ML Intern | 01/2024 - 06/2024

- **Extracted and preprocessed data** from 200 PDFs, preparing high-quality and relevant datasets for training and evaluation of LLM models and retrieval systems.
- **Developed and refined Retrieval Augmented Generation (RAG)** techniques using advanced methodologies to enhance information retrieval accuracy and efficiency.
- **Established a centralized user feedback database**, enabling efficient collection, analysis, and utilization of user input for chatbot optimization.
- **Created an interactive chatbot interface** that streamlines user feedback acquisition, allowing for continuous improvement of the bot's performance which led to a 90% improvement in user engagement.

Skills

Large Language Models, Natural Language Processing, Machine Learning, Deep Learning, Python, Java, ReactJS

Education

Vellore Institute of Technology | Amaravati, AP

Computer Science and Engineering | 09/2024

Projects

HoloDrive: AR Dashboard for Enhanced Navigation | 10/2023 - 11/2023

- Designed and developed an innovative **Augmented Reality (AR) car dashboard application**.
- Leveraged AR to overlay real-time data (points of interest, businesses, vehicle information) onto the driver's field of vision, improving situational awareness and minimizing distractions.
- Enabled continuous monitoring of critical vehicle parameters (speed, fuel level, engine temperature) upon connection to the vehicle monitoring system, promoting driver control and safety.

Cognitive Assistance For Dementia Patients | 09/2023 – 11/2023

- **Enabled real-time object detection for locating misplaced items** by leveraging a pre-trained YOLO v8 model capable of detecting **80 object classes** from the COCO dataset.
- **Implemented FastAPI and a custom NLP scene classifier** (91% accuracy) for scene recognition, facilitating efficient item location within the user's environment.
- **Integrated Dialogflow chatbot with Telegram**, enabling users to locate personal belongings via real-time video feed; achieved an average response time of under 1 second, enhancing user experience and efficiency.

Publications

Cognitive Assistance for Dementia Patients,

2024 ASU International Conference in Emerging Technologies for Sustainability and Intelligent Systems (ICETSIS), Manama, Bahrain, 2024, pp. 1-5, doi: [10.1109/ICETSIS61505.2024.10459484.] (<https://ieeexplore.ieee.org/document/10459484>)

Awards and Achievements

Innovation Award

- Volkswagen Group Technology Solutions India, June 2024
- In recognition of exhibiting 'Out of the Box' thinking and creativity in line with business and VWITS goals.

Secured 3rd place in National level hackathon i.mobilothon

- Volkswagen Group Technology Solutions India, November 2023