Curriculum Vitae

Sarang Ravi Chouguley
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GitHub: github.com/SarangChougs
LinkedIn: linkedin.com/sarang-chouguley
Born: 1998 (India)

Profile

Aspiring PhD researcher with a strong foundation in software engineering, Machine Learning and applied research. Experienced in developing software systems and evaluating AI integrated systems.

Research Interests

Neural-Symbolic Learning Systems, Responsible AI, Explainable AI

Technical Skills

- Programming Languages: Python, Javascript, Java
- Software tools: Git, Docker, FastAPI, AWS, Azure
- Libraries/Frameworks: Pytorch, Huggingface
- Specialisation: Code reasoning with LLMs, backend systems, LLM integration

Skills

- Empirical research in AI, implementation and analysis of machine learning models, deep learning and generative AI models, software system development.
- Experienced in writing research papers (Co-authored paper accepted in Pre-ICIS SIGDSA Symposium 2024)

Education

M.Sc. in Applied Research in Computer Science
Hochschule Hof (University of Applied Sciences), Germany | Oct 2023 - May 2025
Grade: 2.0 GPA

B.E. in Computer Engineering
St. Vincent Pallotti College of Engineering and Technology (affiliated to RTM Nagpur University), India | Aug 2017 - Jun 2021
Grade: 8.17 CGPA (out of 10)

Research Experience

Student Research Assistant
IISYS, Hochschule Hof, Germany | Apr 2024 - Nov 2024

- Contributed to the research project "Using LLMs to Improve Reproducibility of Literature Reviews" under Prof. Dr. René Peinl. Designed and conducted experiments with various LLMs to evaluate reproducibility in literature review. Co-authored paper accepted at the 2024 Pre-ICIS SIGDSA Symposium.

Work Experience

AI Engineer (Part-Time)
Resident.tax, Remote | Dec 2024 - May 2025

- Integrated LLMs into production-level backend systems using FastAPI and AWS. Focused on generating reliable outputs, integrating prompt optimisation, and designing pipelines for interpreting natural language queries.

Software Engineer (Full-Time)
Persistent Systems, India | Jul 2021 - Nov 2022

- Developed and maintained Salesforce Service Cloud applications. Collaborated with Lead Engineers on system design, achieving a 30% reduction in project issues.

Application Engineer Intern
Bucolic Kailash Agritech, India | Jun 2020 - Jun 2021

- Developed an IoT-enabled cross-platform mobile application using React Native.

Publications

Peinl, René; Baernthaler, Jonathan; Haberl, Armin; Chouguley, Sarang Ravi; and Thalmann, Stefan. "Using LLMs to Improve Reproducibility of Literature Reviews." *Proceedings of the 2024 Pre-ICIS SIGDSA Symposium*.

Research Projects

Fine-Grained Evaluation of Language Models | Oct 2023 - Feb 2024

- Evaluated 10 open-source LLaMa-based models for text generation and open-ended QA using custom criteria inspired by the FLASK framework. Demonstrated strong correlation between fine-grained and standard evaluation metrics.

Fine-Grained Evaluation of Vision Language Models (VLMs) | Mar 2024 - Jul 2024

- Investigated LLM-as-a-Judge for evaluating VLMs on image identification tasks, achieving high alignment with human judgments. Designed a scoring rubric tailored to bird taxonomy.

Master Thesis: Comprehension of Technical Illustrations by VLMs | Sept 2024 - April 2025

- Developed a custom dataset and evaluation framework to assess Vision-Language Models (VLMs) on technical diagram understanding from product manuals. Built a fully automated evaluation pipeline using Python for analysing structured data, focusing on reproducibility and performance. This involved significant software engineering in dataset preprocessing, logic design, and visualisation, skills transferable to static/dynamic program analysis.

Notable Projects

Affordable virtual classroom using android OS and Google cardboard | 2021

- Designed and built an android application for conducting lectures in virtual reality. The project was inspired by COVID-19 lockdown forcing educational institutes across the world to conduct lectures in online mode. The application, developed as proof-of-concept, allowed educators to conduct classes in VR, providing more immersive learning experience. Used Unity to build the UI, Photon engine as backend, and Google cardboard sdk for deploying the application in android.

Autonomous Surveillance Drone System | 2021

- Designed a drone system for flood-affected area surveillance using GPS, webcam, and Jetson Nano. Integrated CNN-based person detection deployed on edge hardware. Project selected for finals of national innovation challenge hosted by IIT Bombay.

Face Detection and Person Tracking | 2020

- Implemented MTCNN for face detection and person tracking algorithm using MobileNetSSD.

Awards

Top 7 Finalist – e-Yantra Robotics Competition, IIT-Bombay, India | 2021

- Recognised for completing the challenge: developing an autonomous bot using ROS.