Rishab Mudliar

rishabmudliar@gmail.com | lazycodes7.github.io | linkedin.com/in/rishab-mudliar-8022171b1

github.com/lazycodes7

Experience

Software Engineer, Oracle – Hyderabad, TG January 2023 – September 2025

Developed applications at Nor1 that enhance guest experience at hotels by generating **high-conversion** upgrade offers on rooms, meals and beverages using Machine Learning.

- Implemented a GenAI prototype that automates the process of writing descriptions on upgrade offers using **few-shot learning** and **prompt-engineering** techniques on **Command-R** LLMs from Cohere.
- Rewrote Control Panel - Control Panel is an application at Nor1 that lets users configure prices, design and medium for offer generation. Migrated the frontend from **Angular.js** to ODE](A **React.js** extension used within **Oracle**) and performed backend upgrade from **CakePHP** v3 to v4.
- Rewrote Checkin Merchandiser - Checkin Merchandiser is Nor1's **flagship** application that allows hotels to keep the best offers for their customers based on room availability, FnB etc using Nor1's **PRIME ML model**. I was involved in rewriting the entire application by implementing new screens based on the UI designed by the UX team using Oracle's React.js based ODE framework.
- Integrated OPERA with Nor1 - As a Software Engineering Intern, **added** a feature that allows users from **OPERA** (a hotel property management system) to pull in credentials and loyalty settings in the Control Panel application.

Contributor and Mentor, Red Hen Labs – Remote, IN May 2022 – May 2023

- Made contributions to Red Hen Labs as a part of **Google Summer of Code** and curated the **1st** dataset on Christian Art by collecting fresco and oil-style paintings from art museums.
- Created a Computer Vision pipeline that uses a **Vision Transformer** and **GPT-2** to attend to images and prompts given by art historians to query information about Christian Art paintings from the Renaissance era.
- Mentored a contributor in creating a pipeline for recognizing hand gestures in Christian Art paintings using **YOLOv8** pose detection model and a Pose classification model to identify common poses such as praying and blessing.

Machine Learning Intern, Polymerize – Singapore, Remote January 2022 – April 2022

- Collaborated with Machine Learning Engineers at Polymerize on a white paper on **Explainable AI** (XAI) in **Material Informatics**. The paper explores using **LIME** and **SHAP** to clarify model predictions, aiding in the prediction of optimal polymer formulations and reducing experimental trials.
- Experimented with **Feed-Forward Neural Networks** and **Graph Convolutional Networks** for predicting formulation properties during material synthesis.

Education

University of Tübingen, MSc in Machine Learning October 2025 – Present

- **Coursework:** Mathematics for Machine Learning, Self Driving Cars, Deep Learning.

Amrita School Of Engineering, B.Tech in Computer Science July 2019 – August 2023

- GPA: 8.74/10.0
- **Coursework:** Computer Architecture, Artificial Intelligence, Design and Analysis of Algorithms, Computer Networks, Operating Systems and Database Management.

Projects

Video calling application with support for American Sign Language linguistic

- Developed a video-calling application using **WebRTC** and Flask that enables deaf people to communicate on video calls using an ASL-based text-to-speech translator.
- The ASL Translator uses a hand key point detection model from mediapipe and processes the key points using a

SVM model to predict the sign and converts text to speech using Google's TTS.

Python library for explanation of image classification models blacbox

- Created a python library based on PyTorch that uses xAI techniques like **Saliency Maps, Guided Backpropagation and GradCAM variations** to highlight regions considered while making predictions which helps understand the black box nature of Neural Networks.

Style Transfer StyleTransfer

- Implemented a Computer Vision pipeline for style transfer between images using a **gram matrix**. The objective function minimizes the difference between the gram matrices of the target and style images to achieve the style transfer.

Achievements And Awards

1st prize, MLH Hackathon Built a Computer Vision VLC add-on that allows users to play and pause videos based on user's attention.

Education Track Prize, UC Berkeley Built Signlingo, a gamified way to teach American Sign Language that achieved 1st position in the education track at UC Berkeley's hackathon.

Third Prize, MLH Hackathon Awarded 3rd prize for creating a mask-detection app using Computer Vision.

Top-12 Prize, Vizathon at Harvard Achieved a Top-12 position for developing a Dash-based visualization platform analyzing police violence. The platform highlights incidents by age group and race, and shows causes of death from 2000 to 2020.

Skills

Languages: Python, JavaScript, TypeScript

Deep Learning Libraries: PyTorch, PyTorch-Lightning, Langchain, Neptune, diffusers, peft

Classical ML Libraries: NumPy, Scikit-Learn

Visualization libraries: Seaborn, Matplotlib, Plotly

Frameworks: Flask, React.js, Bottle