Rahul Maligi

maligirahul@gmail.com | 972-292-0973 | github.com/maligir | linkedin.com/in/rahul-maligi | Full-Stack Developer

Education

University of Texas at Austin | Austin, TX **GPA: 3.91**

- Bachelor of Science, Computer Science December 2023
- Certificate/Minor, Applied Statistical Modeling December 2023
- Master of Science, Computer Science May 2025

Skills & Qualifications

- **Java** (6 years), **C++** (5 years), **Python** (4 years), **SQL** (3 years), **JavaScript** (3 years), **HTML** (3 years), **C#** (1 Year)
- Windows, macOS, ChromeOS, Unix, and Linux Operating Systems
- Visual Studio, Eclipse, MS SQL Server, Git, Git Bash, GitHub, Jira, Confluence, BitBucket, Atlassian
- MEAN/MERN Stack, Flutter, Firebase, Flask, Django, MySQL, Blazor, Microsoft .NET, Microsoft Azure
- TensorFlow, Keras, PyTorch, scikit-learn, OpenCV, ROS, pandas

Work Experience

Nelnet May 2022 — Present

Data Science Intern

- Engineered a machine learning model to **predict the churn rate** of the company Allo with a **92%** accuracy rate
- Implemented **logistic regression, decision tree, and random forest** models to create a marketing plan
- Performed data filtering, data balancing, and PCA analysis using scikit-learn and SMOTE to remove **27%** of bias

Root Translation January 2022 — Present

Full Stack Engineer Lead

- Integrated text to speech for **61 languages** by connecting to **Microsoft Azure Cognitive Services API**
- Separated languages into dialects to account for **121** different regions using C#
- **Improved accuracy** of translations for medical terms by **20%** to prevent misinterpretation of medical procedure
- Designed front-end of translation app with **Blazor framework** increasing traffic by **37%**

University of Texas at Austin January 2022 — Present

Robotics Researcher

- Developed **monocular depth estimation** and **facial recognition** model using TensorFlow, OpenCV, and ROS
- Invented **navigation algorithm** to ensure robot successfully leads individual from source to destination
- Enhanced **conflict-based search (CBS)** algorithm to succeed with constrained environments

Acmetek Global Solutions June 2020 — August 2021

Artificial Intelligence (AI) Intern

- Programmed **chat-bots** using chatter-bot and Python to improve company-customer interaction by **33%**
- Engineered **predictive analysis algorithms** using scikit-learn to estimate sales and costs with less than **5%** error
- Deployed **full-stack applications** to Azure after connecting front-end and databases with Flask and MySQL

Projects

Multi-Agent Pathfinding and Social Navigation January 2022 — Present

- Innovated auction-based **CBS** improving runtime by **113%** with no collisions
- Simulated environments with obstacles, social behavior, and multiple velocities with over **50** agents
- Published papers in **journals** and **conferences** for review and acceptance

Facial Tracking & Robot Navigation January 2022 — May 2022

- Trained facial detection model using **MTCNN** and facial identification embeddings using **resnet50** model
- Implemented depth perception using **RGB** masks with **U-Net** model**, triplet loss**, and 3D point visualization
- Combined facial recognition and depth perception with **ROS** for robot to utilize simple **navigation** algorithms

Stormbound & AI Research September 2019 — September 2021

- Recreated popular game, **Stormbound**, with UT Dallas Professor, Dr. Nicholas Ruozzi using Python
- Researched **reinforcement learning** to develop original deep learning algorithms and neural networks
- Programmed **original AI bots** for games using Python, TensorFlow, Keras, ROCm, and other tools