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 – Bachelor's in Computer Science (B.S) **GPA: 3.91** **May 2024**

- **Data Structures and Algorithms**
- **Computer Organization and Architecture**
- **Operating Systems**

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 using pandas
- Performed data filtering, data balancing, and PCA analysis using scikit-learn and SMOTE to remove **27%** of bias
- Proposed marketing plan to increase customer loyalty based on model prediction

Root Translation January 2022 — Present

Full Stack Engineer

- 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

University of Texas at Austin January 2022 — Present

Robotics Researcher

- Programmed a **Keras facial recognition** system with ROS to allow the robot to identify individuals
- Developed **monocular depth estimation** model using TensorFlow, OpenCV, and Pandas
- Invented **navigation algorithm** to ensure robot successfully leads individual from source to destination
- Improved **conflict-based search** algorithm to succeed with constrained environments, social forces, and physics

Acmetek Global Solutions June 2020 — August 2021

Artificial Intelligence (AI) Intern

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

University of Texas at Dallas September 2019 — September 2021

Artificial Intelligence (AI) Researcher

- Created **original reinforcement learning algorithms** in Python and Java
- Programmed **bots** to play games such as chess, tic-tac-toe, Stormbound, etc. with only **2%** loss rate
- Researched **deep neural networks** and various implementations for future projects

Projects

Robot Learning & Research Januray 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

Chat-Bot & Sales Analyzer June 2020 — December 2020

- Assembled a **chatbot** as an AI intern for Acmetek using Python, HTML, JavaScript, and SQL.
- Built from **scratch** and used to help customers with company products.
- Implemented **predictive analysis** algorithm to analyze trends and propose a marketing plan

Stormbound & AI Research September 2019 — September 2021

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