RAJATH RAMEGOWDA

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EDUCATION

UNIVERSITY OF SOUTHERN CALIFORNIA Los Angeles, CA
Master of Science in Electrical and Computer Engineering May 2023
Current Coursework: Web Technologies, Applied Cloud Computing, Computer Architecture, Machine Learning – Supervised Methods, Introduction to Deep Learning, Linear Algebra, and Probability

MALNAD COLLEGE OF ENGINEERING Hassan, India
Bachelor of Engineering in Electronics and Communication Engineering Jun 2016

PROFESSIONAL EXPERIENCE

VOIAGE Inc., Software Development Intern May 2022–Jul 2022

- Created a "Deep Space Interface" 3D standalone application to control and supervise robot tasks and operations. The application was developed in Unity 3D and involved integration between various subsystems and SQL Database.
- Decreased sensor feed latency by **10x** by accomplishing Google Remote Procedure Call (gRPC)-based communication between submodules to stream real-time sensor feed from robot and other control protocols.
- Implemented a user-friendly interface to program the robot to perform basic actions of Pick, Place, Move, Wait and drop. These basic actions could be sequenced and executed as a task. The interface provided options to save, edit or delete tasks. Also, robotic arm could be guided through the Interface. **[Link]**

BHARAT ELECTRONICS LTD., Deputy Engineer Sep 2016–Jan 2021

- Built a Full-stack web application to manage electronic component testing and customer feedback lifecycle. Tech stack: MongoDB, Express JS, Vue JS, Node JS.
- Coordinated with a team of 5 in optimizing FPGA code to improve performance by **3 times** for the development of Super Heterodyne Receiver for real-time Radio Freq. generation.
- Established python-based tools for Xilinx code generation and created ETL scripts to automate manufacturing process bringing down end-to-end process from **8 Hours** to **3 minutes**.
- Acquired experience in large-scale projects and was responsible for requirement elicitation from clients for such projects.

ACADEMIC PROJECTS

Business Search Web Application, USC Fall 2022

- Built a **full-stack** web application using Yelp API to search for a local business. The application gives results based on keywords, distance, and location. It also displays the business details, and geo-location using Google Maps where users can reserve and cancel the reservation.
- Tech Stack: Angular, HTML, CSS, JavaScript, Node, Express, and Bootstrap. [**Link]**

Trojan Map, USC Spring 2022

- Simulated route planning using robust algorithms for finding shortest paths, auto-corrections, and path recommendations. **[Link]**
- Optimized code leveraging backtracking and 2-Opt methods and contemplated execution runtime between different algorithms.

American Sign Language Reader using Deep Learning Algorithms, USC Spring 2022

- Trained models using feature selection through Principal Component Analysis (PCA) and Sequential Feature Selection (SFS) on dataset by tuning hyperparameters.
- Compared results with different supervised learning classifiers and achieved 71.66% deploying Random Forest classifier, 39% more accurate than the baseline model.

Algerian Forest Fire Prediction – Time Series Forecasting, USC Spring 2022

- Trained model using Convolution Neural Network (CNN) in PyTorch on Kaggle American Sign Language (ASL) and correlated results with a state-of-art predefined model such as ResNET50 and Resnet18.
- Hyperparameter tuning is done by varying Loss Functions, Optimizers, and activation functions. Attained 89.99% accuracy with 3 Layer CNN model with a kernel size of 5.

SKILLS

Programming Languages: C++, Python, JavaScript, MATLAB
Software & Libraries: Jupyter Notebook, VS Code, Docker, JavaFX, MATLAB, NumPy, PyTorch, SciPy, Scikit, Seaborn, Git, SQL
Framework: Flask, Angular, Express

CERTIFICATIONS

- NodeJS Certification – Udemy. Version Control System (Git & GitHub) – Udemy Mar 2021
- Professional course and certification in Data Science from Indian Institute of Science, Bengaluru Dec 2020
- Management Professional certification for GEN Y Executives from MDI Gurgaon Aug 2019

LEADERSHIP AND INVOLVEMENT

- Event Director & Student Body President of Science Association (team of 50). MCE Hassan. Fall 2015
- Young Achievers for Executives, Military Radars, BEL Bengaluru Apr 2018