Amogh Mahesh

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EDUCATION

North Carolina State University, Raleigh, NC **Aug. 2023 – Dec. 2024**
Master of Computer Science

JSS Science and Technology University, Mysore, India **Aug. 2016 – Sep. 2020**
Bachelor of Engineering in Computer Science and Engineering *GPA: 9.30/10*

TECHNICAL SKILLS

- **Programming** : C, C++, Python, Javascript, Ruby on Rails
- **Full Stack** : React.js, Node.js, Express, Django, SQL(MySQL, PostgreSQL), NoSQL(MongoDB)
- **DS/ML** : NumPy, Pandas, Matplotlib, Scikit-learn, Keras, TensorFlow, OpenCV
- **Technologies** : Git, GitHub, Pytest, Jira, Windows, Linux
- **Certifications** : Machine Learning by Stanford University, Neural Networks and Deep Learning

EXPERIENCE

Software Engineer - Hewlett Packard Enterprise (Bangalore, India) **Nov. 2020 – Aug. 2023**

- A key contributor to a network telemetry tool **"Traffic Insights"** by involving in design discussions, creating proof of concept, and subsequent **development** using **C language** in the following areas.
- Built end-to-end **CLI framework** that provides users with feature configuration commands and insightful analytics.
- Developed **cache threshold** mechanism to manage incoming flows, optimizing database by timely clearing and writing cached data upon reaching predefined limits.
- Implemented the logic to **parse TCP/IP packets** and retrieve various header fields for targeted flow monitoring.
- Handled incoming change requests (CRs) to **reduce defects**. **Lowered the CR count by 25% every week.**
- Performed **Integration Testing** for Traffic Insights and IPFIX flow exporter, identified critical bugs and swiftly resolved them to ensure a timely release of the product.
- **Automated Feature Testing** by developing Library APIs and scripting 30+ tests in **Python** to identify regression.
- Collaborated in a two-member team to **scale** this feature for managing **elevated traffic** within Data-center switches.
- **Mentored and lead** an intern project to measure **Multicast Latency** on Campus Network switches.

R&D Intern - Hewlett Packard Enterprise (Bangalore, India) **Jan. 2020 – Nov. 2020**

- Contributed to the web application development of Aruba Lab Reservation Tool using **MongoDB, Express, React.js, and Node.js**. Features include Inventory Control, Utilization Analytics, remote authentication using LDAP, etc.
- Enhanced the Triage Reporting tool built using **Django** framework and reduced the manual effort of the triage team in generating weekly reports improving productivity.
- Optimized Layer 2 **Neighbor Discovery Protocols**, reducing customer defect's debugging effort.

PROJECTS

E-Voting System using Blockchain | *Ethereum, Solidity, Javascript* **April 2020**

- Developed a decentralized voting application that uses Blockchain technology on the Ethereum platform. Uses append-only distributed ledgers across all nodes to record each vote as a transaction after verification through the Proof of Work consensus mechanism.

Hand Gesture Controlled Media Player | *Python, Keras, OpenCV* **March 2019**

- Implemented a Convolutional Neural Network based system that recognizes different hand gestures and performs various actions in a media player that is predefined for each gesture.

Drowsiness Detector | *Python, OpenCV, dlib* **Oct. 2018**

- Built a system to alert drivers who tend to fall asleep by continuously tracking facial features from a live video feed.

Yelp Website Clone | *Node.js, Express, MongoDB, HTML, CSS* **June 2018**

- A clone of the famous yelp website built using HTML, CSS, and Bootstrap for frontend and Node.js, Express and MongoDB in the backend. A full-stack JavaScript project.

PUBLICATIONS

- U.S. Patent No.11665099 - **Supervised Quality Of Service Change Deduction** - Method to monitor traffic flow and maintain a stable level of connectivity and network experience using a Machine Learning model.
- **Malicious Activity Detection and Alerting in IoT devices** - Presented a paper at HPE Security Summit 2021 and demonstrated an on-device solution to prevent DOS/DDOS by detecting IP Address scans and Port scans.