SUMEDHA UMESH KULKARNI

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EDUCATION

University of Southern California   Los Angeles
Master of Science in Computer Science   August 2024-Present
- Relevant Coursework: Analysis of Algorithms, Web Technologies

KLS Gogte Institute of technology   Belgaum
Bachelor of Technology in Computer Science and Engineering   July 2019-August 2023

TECHNICAL SKILLS

- Programming Languages: Python | C++ | SQL| HTML | CSS | Java
- Databases: MySQL | PostgreSQL
- Operating system: Windows | Linux
- Other: Django | Flask | NumPy | Sci-kit | Pandas | Tensorflow | keras |OpenCV |Git | Docker| Angular | node.js |javascript | SwiftUI

PROFESSIONAL EXPERIENCE

Mercedes Benz Research and Development India   Bengaluru, Karnataka
Graduate Engineer Trainee (software developer)   August 2023-May 2024
- Developed an end-to-end feature that enhanced user experience using C++, including API interface design, feasibility assessment, and architecture planning. This feature retrieved data from the RMUI component and BlueGo, processed it, and efficiently displayed the results on the UI. Additionally, extended the Python test app to reduce dependency on other components, streamlining the testing process.
- Analyzed and fixed Bluetooth and DeviceManager related bugs using GDB and DLT-Viewer, addressing core dump issues and leading to a 20% reduction in overall bug incidence.
- Utilized Gtest to automate testing, streamline the debugging process, and improve code coverage, ultimately enhancing the quality and stability of the component.
- Gained knowledge of hardware bring-up and flashing activities to effectively test and validate development tasks, ensuring seamless integration and functionality of the software with hardware components using the ETframework and Monaco tools.
- Tools and Technologies: C++| Python | Git | Linux | Docker | Gtest | GDB Debugging | Cmake | QEMU | Valgrind

Mercedes Benz Research and Development India   Bengaluru, Karnataka
Intern   February 2023-July 2023
- Gained extensive experience with various layers of embedded systems, majorly focusing on Hardware abstraction layer. Deep understanding on Yocto build systems
- Implemented a Python test app, removed the dependency of hardware and other components, and reduced manual testing time by 70%
- Collaborated with team members to document the Device Manager component, concentrating on design documentation and API interfaces covering 40% of codebase streamlining the development process

ACHIEVEMENTS

- Won a national level security hackathon called "Manthan" in the year 2021 and the problem statement was Analysis of Hinglish Data (blend of Hindi and English)
- College topper for the second year of degree

ACADEMIC PROJECTS

Diabetic Retinopathy Detection
- Devised a deep learning algorithm with 92% accuracy to classify retinal images as normal or abnormal. The process included image preprocessing, splitting data into training, validation, and test sets, and model development, with deployment via a user-friendly HTML and CSS interface for seamless predictions.

Student data management system, Academic
- Developed an application with Python, Django, and PostgreSQL to streamline student data management, reducing processing time by 80%, and automated notifications for low attendance and academic scores.

Analysis of Hinglish Data   Hackathon
- Developed a Hinglish-to-English translation and sentiment analysis solution with 89% accuracy using Python, Flask, and NLP. The project included preprocessing text, building a model for translation, and performing sentiment analysis. Deployed via a Flask API for real-time Hinglish input and sentiment prediction.