Mukund Mauji

✉ mauji.mukund@yahoo.ca | 📞 (416) 735-8790 | 🔗 maujim.github.io

EXPERIENCE

Firmware Developer | Mosaic Manufacturing   Toronto, Canada | **Sept 2021 - Present**

- Wrote firmware using C++14 and mbedOS for Cortex M4 microcontrollers
- Implemented cryptographic authentication of hardware accessories using the Microchip ATSHA204A
- Optimized build scripts, reducing firmware compilation times by 80%
- Supported containerized backend services (JavaScript, Docker) running on Raspberry Pi

Slicer Software Developer | Mosaic Manufacturing   Toronto, Canada | **Sept 2020 - Mar 2021**

- Implemented seam hiding to increase print quality of all multi-material models by 50%
- Optimized infill density algorithm to allow more granular control, expanding the range of options by 3x
- Maintained 3D slicer (C++11) that powers Canvas (canvas3d.io), the world's first multi-material slicer

Hardware Engineering Intern | Cisco Meraki   San Francisco, USA | **May 2019 - Sept 2019**

- Led the research and validation stages of a new product for the MV smart camera line
- Completed hardware debugging to solve motor issues in exisiting products
- Performed field testing and wrote a report to illustrate competitive advantages of product in various situations
- Compiled all necessary information to write a Parts Requirement Document (PRD) to kick off the project

Business Technology Analyst Intern | Deloitte   Toronto, Canada | **May 2018 - Sept 2018**

- Implemented facial recognition technology on a Raspberry Pi to save facial data to a database
- Developed modular application (Python, OpenCV) for real-time classification and model retraining
- Established databases using AWS DynamoDB to upload model data for higher-characteristic trait analysis
- Designed application development under ongoing client needs and collected user requirements

SKILLS

Languages: Hindi, French, Spanish
Programming: C++, JavaScript, Python, Bash, Git, Docker

EDUCATION

B.A.Sc. Mathematics and Engineering   Queen's University | **2020**

- Specialization in Systems and Robotics
- Awards: 125th Anniversary Engineering Excellence Award, Excellence Scholarship, Science '68 Scholarship

PROJECTS

Pneumonia Detection in Chest X-rays   **Oct 2019 - Dec 2020**

- Built a CNN (TensorFlow) to detect pneumonia in chest x-rays
- Created a data input pipeline with built-in preprocessing using the TFRecord module
- Implemented a custom Spatial Pyramid Pooling layer to allow for images varying sizes

LEADERSHIP EXPERIENCE

Co-Chair | QHacks   Kingston, Canada | **Apr 2019 - Feb 2020**

- Spearheaded the planning and execution of Queen's fifth annual hackathon (qhacks.io)
- Fostered relationships with strategic and community partners, raising a budget of over $80,000
- Hired and managed 25-person execugtive and 40 volunteers to ensure the event ran smoothly for 250+ delegates