Michael Marsland

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Education

Bachelor of Engineering,
Computer Systems (Robotics),
With High Distinction,
Cooperative Education,

Carleton University, Ottawa, ON

- 11.8/12 (A+) GPA, (3.92/4)
- Deans List Student
- University Medal Recipient
- Graduated - April 2022

Professional Summary

I am a Computer Systems Engineering graduate who has a **desire to learn and adapt to new problems** and challenges. I strive to better myself through both professional and personal projects and I am **always looking for a new challenge.**

I am focusing on immersing myself in the field of **robotics innovation** in order to gain new technical skills and experiences. I am currently looking for a **full-time position** to start my career path in robotics.

Work Experience

Co-op Engineer – UAV Gas Monitor

Aerometrix Services | May 2021 – Aug. 2021

- Programmed **Python** and **Android** applications to interface with to a **UAV** (Drone) for data collection and processing
- Assisted in the **integration** of a OPLS sensor for the collection of environmental data while the UAV was in flight

Software Developer – Telecom

Ericsson | Sept 2019 – Aug 2020

- Worked with an **agile** team of Developers on **5G prototypes and proof of concepts** mainly in **Java**
- Developed for a proprietary Telecom Database in **Java** with Could-Based management tools such as **Kubernetes**, **Docker,** and **Helm**

Software Developer – Robotics

Ross Video Ltd | Sept 2018 – Dec 2018

- Developed **robotics user interfaces** for live studio productions such as newsrooms and sports coverage in **C#** and **C++**
- Modified **robotics firmware** in **C++** to allow for movements to include via points allowing the **Furio robotic system** to perform moves with intermittent steps and be controlled by the UI accordingly

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Technical Skills

- Programmed **AgentSpeak BDI Agents** to full various roles in a **Robocup** soccer team tournament
- Designed, modeled, and programmed an **autonomous snowplow** in the **CoppeliaSim** robotics simulator
- Implemented basic **Neural Networks** and **Q-Learning** functions in **JavaScript** with **Node** to create multiple AI puzzle solvers
- Worked with **Android Studio** and **Firebase** to develop simple **Android** applications
- Utilized various **Analytical and Numerical methods** to determine the Kinematics and complex **workspace** of a 6 DoF **manipulator**
- Collaborated with the **product verification** team to build a regulated process for resolving bugs to ensure the quality of **robotics programs**
- Created multiple personal projects with **HTML**, **CSS**, **Javascript** and **NodeJS** in order to develop skills in web-development and entertain friends
- Always eager to perform **independent research** and personal growth in order to learn new skills required to complete a given task, **solve a problem**, or simply to improve my own skill set

Projects (github.com/MMarsland)

Augmented Reality Surgery Trainer

Leading Developer | Sept 2021 – May 2022

- Sourced parts and constructed a standalone **Laparoscopic Surgery Training Apparatus** as the request of surgeons from **CHEO** and SickKids
- **Instrumented** the apparatus with **sensors** and added live **Augmented Reality Feedback** to guide the trainee through various training modules

Save-Or-Shave(Movember Fundraiser)

Sole Developer | Nov 2022 – Present

- **Fundraised** a total of $306 for the Movember campaign by creating a **NodeJS** website using **JSDOM** to **scrape donations data** and allow donators to vote on a date on which my moustache would be shaved

Extracurricular Experience

Carleton University Rocket Team

Test Stand Dev. | Sept 2021 – May 2022

- Designed models in **OnShape** CAD for a test stand for the propulsion team's new hybrid rocket engine
- **Constructed** the test stand electronics linking **pressure sensors**, **solenoids**, and **force sensors** to an Arduino Mega and subsequently to a **Python control program** over a **Serial** interface