Graham Power

Engineering Student, Mechatronics

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Education

Bachelor of Engineering, Co-op

-McMaster University,
Engineering Level 2

-Mechatronics Engineering

High School Diploma

-Huron Heights SS

Skills

Robotics

Python

Circuit Design

Arduino C

Java

Work Experience

Undergraduate Research Assistant

2019-06 Present

- University of Waterloo
- Implemented **control algorithms** written in **Python** and **C++** to drive scaled autonomous vehicles
- Created a **robust framework** capable of meeting the needs of multiple different groups

Personal Projects

Fire-Fighting Robot

2018-09 2018-12

- Used Arduino C (similar to C++) to create a **fully autonomous** robot which when placed in a maze was able to locate and extinguish fires before returning to its starting position
- Utilized effective **problem solving skills** to locate and fix issues such as broken IR distance sensors
- Worked collaboratively with a partner to **delegate tasks** in order to complete the robot within a 4 month span

Micro Scan

2020-01

- **Cloud based** imaging analysis tool to compute physical properties of microstructures written in **Python**.
- Uses **Selenium** to collect and process microstructure images from the internet.
- **3rd place winner** of the Materials Science challenge at Delta-Hacks.

Time-lapse Camera

2019-04 Present

- Small form, lightweight, cameras capable of taking continuous 0.3 Megapixel digital photography in remote locations for multiple months
- Will be **fully developed** to accurately match contractor specifications and provide an easy to deploy final product
- Provided at a **significantly reduced cost** compared to available market options

Vortex Engine

2017-05 Present

- Real-time 3D graphics engine coded in Java capable of rendering high detail objects **using current industry techniques**
- Utilizes multiple **interacting real-time algorithms** to display high end graphics while optimizing system resources.