



## Work Experience

### Embedded Software Developer | Waterloo

September 2017 – Current

- ▶ Increased the efficiency of the Arduino architecture implemented in the hyper-loop pod, specifically designing and writing the C++ library code responsible for string manipulation and memory management
- ▶ Worked together with others from the embedded systems, communications, and hardware teams to discuss and decide on system infrastructure, software compatibility, and specific hardware specifications
- ▶ Improved the data transfer process between the hyper-loop pod and the final user interface through the use of Python for parsing/preparing the raw data coming from the various temperature, pressure, and proximity sensors

### Physics Research Assistant | Brock University

June 2016 – June 2017

- ▶ Developed Python programs for material physics research conducted at Brock University
- ▶ Automated data collection involving oscilloscopes, piezoelectric sensors, and accelerometers, significantly improving the efficiency of such experiments. Increased accuracy of experimental results through frequency optimization algorithms
- ▶ Presented research conclusions and implications at the Canada Wide Science Fair, receiving Bronze Medal honors and scholarship recognition from Western University and UOttawa



## Projects & Other

### Unity3D Game |

2016 – 2017

- ▶ Developed a 3D platformer game for both Android and iOS platforms.
- ▶ Features endless dynamic gameplay through procedural path generation, object oriented programming, and randomization algorithms (Perlin Noise)

### Raspberry Pi Coding Assistant |

2017

- ▶ A voice assistant developed specifically for the needs of those learning C programming and basic programming concepts
- ▶ Includes functionality for pulling code excerpts and concepts off the internet and for editing/compiling C files

### miniML Sign Language App |

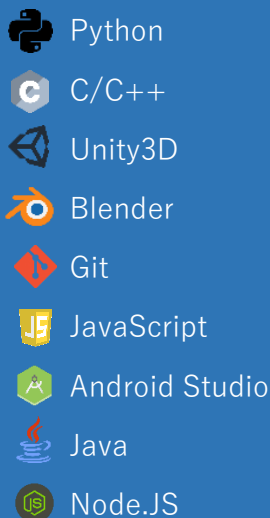
2017

- ▶ Developed a proof of concept for an American Sign Language recognition mobile app, specifically using the Darknet Neural Network, written in C. for training data
- ▶ Submitted as a group project for Hack the North 2017

### Academic-related Experience |

2015 - 2017

- ▶ Competed in the 2017 Canadian Computing Competition using Python, achieving the highest score in the District School Board of Niagara
- ▶ Implemented a Java 2D graphing software in order to help students in high school level advanced functions and calculus courses
- ▶ Studied C in the CS137 course as well as Python and Java throughout my high school computer science courses



### University of Waterloo Bachelor of Software Engineering

September 2017 –  
June 2022

Rowing  
Personal Training  
Basketball  
Project Design  
Computer Hardware  
Graphic Design