



Work Experience

Embedded Software Developer | Waterlooop

September 2017 – Current

- ▶ **Increased the efficiency of the Arduino architecture** 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

 Python
 C++
 Unity3D
 Blender
 Git
 JavaScript
 Android Studio
 Java

University of Waterloo
Bachelor of Software Engineering

September 2017 – June 2022

Rowing (Crew)
Personal Training
Basketball
Project Design
Computer Hardware
Graphic Design