Bob Wei

q25wei@edu.uwaterloo.ca
(647) - 570 - 8079
github.com/bobqywei
www.bobwei.ml

SKILLS SUMMARY

- Python
- C++
- Unity3D
- Blender
- Git
- JavaScript
- Android Studio
- Java

Work Experience

Embedded Software Developer | Waterloop

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

EDUCATION

University of Waterloo
Bachelor of Software Engineering

September 2017 – June 2022

INTERESTS

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