Bob Wei

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SKILLS SUMMARY

- Python
- C/C++
- Java
- Unity3D
- Blender
- Git
- Android Studio
- Node.JS

Work Experience

Embedded Software Developer | Waterloop
September 2017 – Current

- Increased the efficiency of the Hyper-loop pod's Arduino architecture by 30%, specifically designing and writing the C++ code library responsible for string manipulation and memory management
- Participated in critical design/architecture decisions relating to the embedded systems and data transfer protocols to be implemented in the Hyper-loop pod, taking into consideration various software failure scenarios and software compatibility
- Deployed Python code for parsing the raw data coming from various temperature, pressure, and proximity sensors located throughout the pod. Such data is used for monitoring and diagnosing the overall state of the Hyper-loop pod

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 precision of experimental results by 50% through frequency optimization algorithms (Fast Fourier Transforms)
- Research conclusions provided a novel experimental approach to studying energy transformation in particle systems. Presented research at the 2017 Canada Wide Science Fair receiving Bronze Medal honors and scholarship recognition from Western University and the University of Ottawa

Projects

Infini-Runner: Unity3D Game |

- An in-progress 3D platformer game for both Android and iOS platforms.
- Implemented procedural path generation, object oriented programming, and built-in Perlin Noise randomization algorithms to provide unique continuous gameplay

Raspberry Pi Coding Assistant |

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

miniML: Sign Language App |

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

ACHIEVEMENTS

Canada Wide Science Fair
Bronze Medal

Canadian Secondary School Rowing Championships
Silver Medal

Governor General Academic Medal

Professional Engineer's of Ontario
Engineering Award

Academic Related

| 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 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

HOBBIES

Rowing
Personal Training
Basketball
Computer Hardware
Graphic Design