Bob Wei

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https://github.com/bobqywei

SKILLS SUMMARY

- Python
- C
- Java
- C#
- Unity3D
- Blender
- Git
- Node.JS
- JavaScript
- Android Studio

EDUCATION

University of Waterloo
Bachelor of Software Engineering

September 2017 – June 2022

Software Development Experience

Scientific Data Analysis — June 2016 – February 2017

- Developed Python programs for research and experiments conducted at Brock University, using specific packages such as NumPy, SciPy, and Matplotlib
- 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
- Results concluded from the software received Bronze Medal honors at the Canada Wide Science Fair and recognition from the University of British Columbia

Open Source Contributions — July 2017 – Current

- Developed a proof-of-concept for an American Sign Language recognition software capable of running entirely on smartphone hardware using the Darknet Neural Network framework; Submitted as a group project at Hack the North 2017
- Improved modulus function edge-case functionality in the SymPy computer algebra system source code as well as other case-specific bugs
- Contributed towards the documentation of the Scikit-Learn (Python) machine learning package

Unity3D Game Engine — June 2016 – March 2017

- Developed a 3D platformer game for both the Android and iOS platforms
- Introduced dynamic gameplay through the implementation of procedural generation, object oriented programming, and Perlin Noise algorithms
- Increased game functionality through the control of various smartphone technologies including accelerometers/gyroscopes and multi-touch

Other Experiences — September 2015 – June 2017

- Currently working on the embedded systems team for Team Waterloop (University of Waterloo's Hyperloop Team competing in SpaceX's competition)
- 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

Work Experience

Physics Research Assistant | Brock University — June 2016 – June 2017

- Conducted experiments in the Brock University Physics Department under the supervision of Dr. Thad Harroun, studying the wave nature of mechanical energy transformations in various macroscopic, granular materials
- Improved upon existing and established new experimental and data analysis procedures through various software and hardware solutions
- Presented research conclusions and implications at the Canada Wide Science Fair, the Brock University Symposium, and the Niagara Regional Science and Engineering Fair

Guest Flow Associate | Digital Attractions Inc. — March 2015 – October 2015

- Took on a variety of roles including crowd management, product sales, and photography/Photoshop

INTERESTS

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