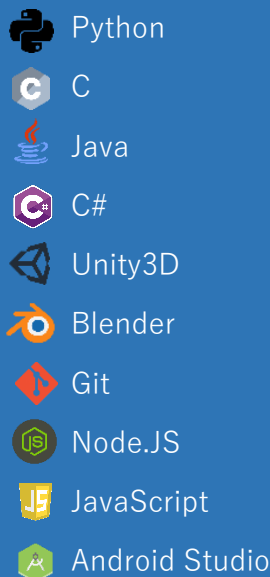


## Software Development Experience



### SKILLS SUMMARY



### EDUCATION

**University of Waterloo**  
Bachelor of Software Engineering

September 2017 – June 2022

### AWARDS

**Silver Medal** | Canadian Secondary School Rowing Championships 2017

**Bronze Medal** | Canada Wide Science Fair 2017

**Governor General's Academic Medal**

### 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

- ▶ 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
- ▶ Increased functionality of Texas Instruments Nspire graphing calculators through the Lua programming language

## 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