William **Qin**

University of Waterloo | Software Engineering 2024

william.qin@uwaterloo.ca
http://williamqin.com
github.com/williamlqin
linkedin.com/in/williamqin
devpost.com/williamqin

Hello! I'm a student and a creator with a passion for building solutions by programming and working with technology!
I love to learn, take opportunities to grow, and tackle difficult problems whenever possible.

Skills

Programming	C#, C/C++, Java, Python 3, JavaScript
Tools	Unity, Git, Android Studio, Visual Studio, Eclipse
Web	HTML, CSS, Markdown, Bootstrap, jQuery, Jekyll (Ruby), Amazon Web Services (S3, Route 53)
Tech/APIs	Firebase, Arduino, Raspberry Pi, OpenCV, Virtual Reality

Experience

Team 4308: Absolute Robotics | Captain | Mississauga, Ontario, Canada | Sep. 2017 – Jun. 2019

- Managed a FIRST Robotics Competition team of **100+** members to raise **$35 000+** and build an industrial-sized robot
- Established a strategy team to build a **Firebase web app** and collect data for making key team decisions
- Led a software team to program essential robot controls and **autonomous** driving mode in **Java**
- Effective robot design and strategy led to team success as **world championship divisional semi-finalists**

D&R Electronics | Intern | Bolton, Ontario, Canada | Jul. – Aug. 2017

- Developed a Windows application in **C#** to automate message creation for road lightboard signs, saving up to an hour of worker time per message created
- Assembled parts for manufacturing vehicle electronic equipment
- Tested equipment for mechanical and electrical defects

Projects

Vision Motion | Android Application

- Leveraged **real-time computer vision** with **OpenCV** on a phone camera to track the motion of an object and produce a line graph of its position, velocity and acceleration
- Implemented **Firebase** to allow users to save and upload their data to the **cloud** for use across multiple devices
- Launched the app on Google Play Store with over **1750** total installs and **400** active users, supplementing high school education and university research around the world

Project BRETT | Drone Application

- Built and implemented the NXP Hovergames drone to **autonomously map heat sources** in an area
- Synergized with a **team of five** to complete the multi-stage project within **two weeks**
- Developed heat data collection program in **C/C++** to work seamlessly with heat map creation and drone flight

Awards & Achievements

2018 Finalist | Hack the 6ix, built Disco Alarm
2018 28th in the World | Sir Isaac Newton Physics Exam
2017 Top 6 | Electric City Hacks 2, created Think Tank
2016 1st Place Provincial Winner | DECA Ontario Business Services Operations Research