William **Qin**

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Skills

Languages	Java, Go, TypeScript, JavaScript, C#, C/C++, Python, Scala, HTML, CSS
Tech/APIs	OpenCV, ARCore/ARKit, VR (Oculus Quest, Cardboard), Arduino, Raspberry Pi
Web	React/React Native, AWS, Kubernetes, Terraform, MongoDB, Firebase, Bootstrap, jQuery, Jekyll, Node.js
Tools	Git, Bash, Unix, Unity, Android Studio, Ansible, Docker, Xcode, Visual Studio, VSCode, IntelliJ, Eclipse

Experience

Full Stack Developer | **Spatial** | San Francisco, CA (Remote)   Jan. 2021 – Apr. 2021
- Developed backend endpoints in **Go** with **MongoDB** to support new pro features, driving the **growth of paying users**
- Streamlined sharing and onboarding process in **TypeScript React** webapp to **decrease user drop-off rate**
  - Implemented custom **JSON Web Token** authentication on the backend to allow users without accounts to participate in meetings, significantly **reducing the cost of adoption** among new groups of users
- Deployed **Fluentd** logging service to **AWS EC2** servers to reduce **time to repair** backend by **90%**
- Migrated web services to **Kubernetes** using **Terraform** and **Docker** for a declarative and more reliable infrastructure

Mobile Augmented Reality Developer | **Spatial** | San Francisco, CA (Remote)   Apr. 2020 – Aug. 2020
- Ported the entire Spatial holographic meetings app to a **mobile iOS/Android AR app** to significantly expand meeting accessibility to users without AR/VR headsets, shipping to beta (now released, making up **20%** of all active users)
  - Integrated the **C# Unity** base app into a **TypeScript React Native** project to **eliminate UI iteration times**, building a modular and native UI layer on top of the **Redux**-style state system in Unity
  - Utilized Microsoft's **Mixed Reality Toolkit** to design and develop an intuitive mobile AR interaction system
- Led weekly bug testing sessions with a design doc to gather feedback and identify key priorities

Lead Programmer | **Team 4308: Absolute Robotics** | Mississauga, Ontario, Canada   Sep. 2017 – Jun. 2019
- Developed manual and **autonomous** driving modes in **Java** on a **CAN-Bus** networked robot, which were critical to team success as **world championship semi-finalists** in the 2018 FIRST Robotics Competition
- Built and refined a multi-version **web app** with **Firebase hosting and database**, **Bootstrap**, and **jQuery** to collect, display, and analyze data, informing match strategy and alliance selection

Projects

Vision Motion | Android Application   Oct. 2017 – Jan. 2020
- Launched a **motion tracking app** on the Google Play Store with **2270+** total installs and **400+** peak active users, facilitating lessons and experiments in physics for university researchers and high school teachers and students
- Leveraged **real-time computer vision** with **OpenCV** on a phone to track and graph the motion of an object
- Integrated **Firebase database and authentication** to allow users to save and upload their data for use across devices

Disco Alarm | IoT Application | Hack the 6ix – **Finalist**   Aug. 2018
- Created a silent LED **sunrise alarm clock** with customizable patterns/colours using a **Raspberry Pi** programmed in **Python**
- Implemented **voice control** with Amazon Alexa by using **Node.js** in an **AWS Lambda** function connected to **AWS IoT**

Education

Bachelor of Software Engineering   2019 – 2024
University of Waterloo
- 98% Average, Term Dean's Honours List

Interests & Activities

Sports - Taekwondo, snowboarding, volleyball
Games - Video game design and development
Manufacturing - 3D CAD, metalworking, and machining