

SKILLS

LANGUAGES: C#, C/C++, Java, C#, Python, JavaScript, HTML/CSS

SOFTWARE: Unity, Android, OpenCV, Firebase, Arduino, Raspberry Pi, NodeJS, ReactJS

EXPERIENCE

SPATIAL · Virtual Reality / Augmented Reality 3D Developer
New York City

May 2017 to Aug 2017

- Developed a 3D collaborative browsing environment for all major **AR/VR** devices in Unity/C# with a team of five.
- Independently designed and architected a unique video surfing experience in a 3D environment.
- Implemented multiple media data adapters to create a centralized personal information feed.
- Adapted several devices, including the **iPhone/ARKit** and Oculus to function under the initial **Hololens** framework.

MASH · Technologies Director
Waterloo

Nov 2014 to Jun 2016

- Co-founded to provide Math and Science help to every student for free through a peer to peer volunteer network.
- Wrote code modules to encrypt and store user login data and tutor profiles with **Firebase**.

PROJECTS

SIGN BOT

- Built a tool that translates voice to sign language, displayed using a set of prosthetic arms.
- Engineered mechanical arms with full hand functionality, along with semi-spherical arm movement.
- Wrote a database implementation to handle the transition from keywords to servo position sets.

LEGO BUILDER

- Designed an automated machine that builds Lego structures from a scattered pile with 98% recognition accuracy.
- Detected Lego pieces with **OpenCV** in **C++**, isolating similarly colored blocks with shape and color detection.
- Implemented a control system for the robotic arm in **C** using inverse kinematics.
- Mechanical build created from 3D printed parts with **Solid Edge**.

SANDWICH-O-MATIC

 · EC Hacks - Featured on Hackaday, Best Hardware Hack, Finalist

- Engineered an IOT robot that creates a sandwich from raw ingredients.
- Automated custom orders with **NFC tap** and voice commands, sending information with **NodeJS** and **Arduino**.
- Created data storage and transfer system with **Amazon Web Services**.

AWARDS

DECA

 · First Place Worldwide

- Invited to compete internationally, after netting a 33.8% portfolio growth in 3 months.
- Awarded **first place** in the finals for excellent presentation, winning from a pool of four thousand.
- Won several medals in the regional and provincial level.

SOFTWARE ENGINEERING ENTRANCE SCHOLARSHIP

- Awarded on the basis of academic performance (**97%**) and extracurricular involvement.

EDUCATION

University of Waterloo
Bachelor's Software Engineering 2021