

Edwin Zhang

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Technologies

C / C++

Python

JavaScript / React / Node

Go

Java

HTML / CSS

AWS

TensorFlow / Keras

MATLAB / Octave

SQL

MongoDB

Interests

Underwater Hockey

Music

Machine Learning

Computer Graphics

Cryptocurrency

Hackathons

Experience

[Waterloop](#)

Waterloo, ON

Back End Software Co-Lead

Sept 2017 – Present

- Migrated **Node.js** hyperloop pod communication server to **Go** and tested network speeds extensively
- Implemented **QUIC network protocol** to reduce data packet transmission latency by **95%**

Projects

[PolyTerrain](#)

Personal

github.com/edwinzhng/polyterrain

Dec 2017

- **Procedurally generated** low-poly environments built with **C++** and **Unreal Engine 4** using noise generating algorithms

[Automatic Cannon](#)

Personal

github.com/edwinzhng/automatic-cannon

Nov 2017

- **Self-aiming cannon** that launches projectiles towards targets
- Engineered automatic servo movement and calculated projectile trajectories using **Python** and **Go**

[Aya](#)

Finalist and AWS Award - Hack the North

devpost.com/software/aya

Sept 2017

- **Robotic head** with jaw movement powered by a Raspberry Pi
- Built **Python** backend, worked on label selection algorithm, and integrated **Amazon Web Services** for text-to-speech output, image recognition and facial detection

[Messenger LaTeX](#)

First Place - MHacks Nano

devpost.com/software/messenger-latex

Jun 2017

- **Chrome extension** built with **JavaScript** and **MathJax** to render LaTeX in Facebook Messenger with **over 300 users**
- Developed live preview, clicking to copy equations, and PNG rendering

[Study Space Executive](#)

Tutoring Club

studyspacewchs.com

Nov 2016 - May 2017

- Designed website using **HTML**, **CSS** and **JavaScript** to host study packets in maths and sciences for high school students
- Organized and led weekly executive meetings and tutoring sessions for **over 150 students**

Education

[University of Waterloo](#)

Waterloo, ON

Bachelor of Software Engineering

2017 - 2022

- Dean's Honor List (1 term)