

ANDREW LIU

✉ andrew.liu2@uwaterloo.ca ·  andrewliu00 ·  andrewliu00 ·  andriu.me

SKILLS

Languages: JavaScript, TypeScript, C++, C, Python, HTML5, CSS

Tools/Technologies: React.js, MongoDB, Git, L^AT_EX, Excel, VSCode

Design: Figma, Photoshop, Lightroom

EXPERIENCE

Software Developer

Waterloo Hyperloop Team

Waterloo, ON

Dec 2019 - Present

- Built responsive and engaging page components using **React.js** and **TypeScript** for Waterloo's client facing website
- Redesigned and wire framed new website pages using **Figma**
- Worked on the embedded team to implement new motor control system in **C++** for Linear Induction Motors by outputting a PWN signal to achieve maximum efficiency
- Displayed the data received from sensors on the pod dashboard by connecting to serial ports

Assistant Software Engineer

Crystal Claire Cosmetics Inc

Toronto, ON

May 2020 - Aug 2020

- Designed and developed robotic solutions with vision systems using **PC/PLC** control
- Lead the programming of robotic arms to reduce operational costs and increase manufacturing output
- Involved in full development life cycle to build applications used for robotics and mapping
- Worked with the engineering & maintenance teams to physically install, setup, and troubleshoot automatic equipment

Front-End Developer

Markham Getting Together

Markham, ON

Oct 2017 - Jun 2018

- Developed the landing page for the website of a youth council focused on social justice
- Designed and programmed a modern UI using **HTML**, **CSS**, and **JavaScript**

PROJECTS

Re:Action | React.js, Python, MongoDB

 Re:Action

- Developed a web app at Hack the Valley that allows users to query keywords and visualize any relevant tweets according to their geographical locations around the world
- Used **React.js**, **TypeScript**, and a custom library to create a seamless and intuitive front-end
- Used the Tweepy **Python** library to access **Twitter API** and scrape for relevant tweets
- Stored relevant tweets using **MongoDB Atlas** to be used later in data visualization

MuseFlare | C++

 MuseFlare

- Developed a reactive LED lamp that uses a sound sensor connected to an Arduino to monitor the sound level in the surrounding environment
- Used FastLED library to detect and analyze analog signals which then manipulated RGB values and calculated how many lights were to be activated

AWARDS

Hack the North 2019 Bloomberg Challenge

Bloomberg L.P. | Sep 2019

This award was given to the first team to successfully complete a series of cryptography challenges involving strong code breaking, logic, and computation skills.

WatPD Engineering Scholarship

University of Waterloo | Sep 2018

This scholarship was awarded to students who demonstrated academic excellence and potential to thrive in a professional skill environment as assessed through the Admission Information Form.

EDUCATION

University of Waterloo

B.ASc in Computer Engineering, Expected Graduation 2024

Waterloo, ON

Sep 2018 - Present