



EDUCATION

University of Waterloo
BASc in Electrical Engineering
2016 - 2021

Relevant courses:

- Algorithms and Data Structures
- Cooperative and Adaptive Algorithms
- Fundamentals of Computational Intelligence
- Discrete Mathematics

SKILLS

Languages

- JavaScript
- Python
- MATLAB
- SQL
- C++
- HTML
- GLSL
- CSS

Tools

- Node.js
- OpenGL
- Postman
- MQTT
- CI/CD
- Git
- Mongo DB
- Docker
- Express.js
- Angular.js
- Vue.js
- Unity3D

PROJECTS

Senior Design Winner
Waterloo Engineering Competition
2019

- Built & designed winning solution to a robotics challenge using Arduino and raw materials in only 6 hours
- Awarded \$800 and advanced to provincial-level competition

Developer/Creator
Saber

- Android/PC application used to replace mouse functionality with phone accelerometer

Developer
Miscellaneous Projects

- Wrote script to intelligently place over 400 students into workshops for local non-profit
- Created simulations of algorithms found in nature and games (ex. A* pathing, Boid's algorithm, fire, cellular automata, bacteria growth)
- Developed high-speed, real-time Mandelbrot set viewer using C++ and OpenGL
- Designed satirical "fake news" testing website for EngHacks

WORK EXPERIENCE

Software Developer
National Research Council (NRC-HAA)
Sept 2020 - Present

- Built scalable monitoring systems for interferometers on Square Kilometer Array (SKA) project - the future world's largest radio telescope
- Corresponded with international teams to develop better internal software for GUI design

Undergraduate Research Assistant
Center for Intelligent Antenna and Radio Systems
May 2020 - Aug 2020

- Configured radar imaging system to process and transmit data in real-time for use in autonomous vehicles
- Used processor SDK built on top of RTOS to transmit and process data efficiently with MATLAB post-processing

Full-Stack Developer
Nanoleaf
Sept 2019 - Dec 2019

- Created stress-testing application to evaluate scalability of MQTT communication - yielded 50% increase in load capacity
- Led multiple projects for smart home integration and held weekly meetings with Google Smart Home development team
- Experimented with implementing "clapper" functionality to smart light panels in C++

Software Developer
Ground News
Jan 2019 - Apr 2019

- Full-stack development used MySQL, Elasticsearch, Node.js, and Vue.js on a day-to-day basis to reduce bias in the news
- Key contributions: Discovering "Trending News", automated image search scripts, multi-device handling support

QA Analyst
FleetCarma (Geotab)
May 2018 - Aug 2018

- Played a critical role in developing algorithm for pairing electric vehicles to charging stations
- Daily usage of MySQL and running automated tests using Selenium, Terraform, and Runscope

QA Specialist
RouteThis
Sept 2017 - Dec 2017

- Gave numerous ideas to further develop the QA position's duties at this start-up
- Commended for strong understanding of product and providing effective solutions for improved UX

Systems Integrator
Manulife Financial
Jan 2017 - Apr 2017

- Operated with multiple Unix servers & gained a strong understanding of DevOps
- Presented innovative "health and wealth" lifestyle app idea to over 40 Manulife executives