

LUCAS HELME

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Summary

Driven student with strong ability to work independently, high attention to detail, technical interest, and a desire to learn. With experience in software development and teaching computer science, I can contribute to a team with a strong critical eye to solve technical problems.

Education

University of Toronto | BS; Computer Science
St. Francis Xavier Secondary School | OSSD, IB Diploma

Expected 2028
2024

Work Experience

Freelance Web Development

2019-Present

- Worked with frontend and design teams to meet deliverables and develop websites for non-profits and small businesses using React (NextJS) and VueJS
- Created internal tools and dashboards in Rust, Go and Python (Django, Flask)
- Implemented custom CRM solutions in NodeJS, HTML and CSS
- Deployed services with Terraform to AWS based on NixOS build images
- Developed and deployed CI / CD pipelines with Github Actions

IT Lead, Canadians Sharing Locally & Globally (Volunteer)

January 2022 - February 2024

- Led a strong team of 6+ members to develop and maintain critical web infrastructure for an international non-profit organisation
- Worked to profile and improve performance, leading to a 91% decrease in load times
- Introduced custom tooling for site versioning, sandboxing and distribution to Wordpress instances written in Go
- Performed site migrations to AWS and Terraform for infrastructure management

Coding Instructor, CodeItHacks Toronto (Part-Time)

March 2020 - August 2022

- Taught beginner to intermediate computer science fundamentals using Lua, C++, and Python to children ages 8-16
- Presented workshop and lesson content for a diverse spectrum of audiences
- Worked with an experienced team to develop learning plans for students and to create a cross-classroom working environment

Personal Projects

Quark | <https://github.com/blobcode/quark>

- Developed interactive webpage to generate QR-code based encrypted offline messages in Javascript / HTML
- Gained experience with QR encoding schemes and browser features
- Learnt about LZMA text compression to more efficiently encode text

Cobalt | <https://github.com/blobcode/cobalt>

- Developed a multithreaded protocol-level reverse proxy in Rust capable of >10,000 requests per second
- Learnt about the inner workings of TCP and HTTP
- Implemented online config reloading and load balancing

Technical Experience

- React (NextJS), Svelte, HTML / CSS
- Python, C/C++, Javascript, Golang
- Virtualization - KVM and Docker / Linux
- Git VCS, CI & CD
- PostgreSQL

Extracurricular Activities

- Backend Developer - UTAT Rocketry Software Team (C/C++, MQTT, Control Systems) (2024-Present)
- Lead Organizer - St. Francis Xavier Coding Club (2021-2024)