

EDUCATION

University of Waterloo

Candidate for Bachelor of Applied Science - Computer Engineering; GPA: 88.30

Waterloo, Ontario

Sep 2019 – Present

Achievements: *President's Scholarship, Top Quartile Student, Dean's Honours List (2022)*

Courses: *Data Structures and Algorithms, Systems Programming and Concurrency, Real-Time Operating Systems, Compilers, Embedded Microprocessor Systems, Digital Hardware Systems, Computer Architecture, Computer Networks, Embedded Software*

SKILLS SUMMARY

Languages: C, C++, Verilog, Java, Javascript, Typescript, Python, MATLAB, SQL, HTML/CSS

Frameworks: Spring, Django, Express, Vue, React, MongoDB, GCP/AWS, Tableau, TensorFlow, Pandas

Hardware: RTL/FPGA/PCB Design, RISC-V, Intel Quartus, Proteus, Agilent Oscilloscopes and Waveform Generators

EXPERIENCE

Autonomic

Software Engineering Intern

Toronto, Ontario

Jan 2023 – Apr 2023

- **Back-End Development:** Developed and maintained back-end IoT microservices using Spring Boot with Kotlin and Java. Performed security upgrades to eliminate 20+ CVEs across 4 services.
- **Infrastructure:** Investigated service bottlenecks, producing a 10x performance improvement in a major service. Managed and debugged deployments using Concourse, ArgoCD, and Kubernetes.
- **Observability:** Developed Prometheus metrics and Grafana dashboards to increase observability into production code performance and to improve diagnosis capabilities.

Ford Pro

Software Engineering Intern

Oakville, Ontario

Jan 2022 – Apr 2022

- **Full-Stack Development:** Developed Glovebox, a vehicle fleet management application, with Vue and Spring, using the Model-View-Controller pattern. Used JUnit, Mockito, and SonarQube to achieve 100% coverage.
- **REST APIs:** Designed APIs to comply with OpenAPI standards. Used 42Crunch to ensure secure API design. Began introduction of acceptance testing with Cucumber.

Ricoh

Software Engineering Intern

Kitchener, Ontario

May 2021 – Aug 2021

- **Network Software:** Pioneered the design of and implemented a network device locator by consulting RFCs and using Java, SNMP, and REST APIs. Created test cases and documented its specifications, limitations, and use.

Seismic LiveSocial

Software Engineering Intern

Toronto, Ontario

Sep 2020 – Dec 2020

- **Full-Stack Development:** Delivered client-requested features to production for LiveSocial, a white-label enterprise sales engagement product, using React, Angular, Express, Node, and MongoDB.
- **Security:** Assessed the viability of using Apache Cordova and BlackBerry Dynamics to build secured enterprise mobile applications for clients.

Independent Electricity System Operator

Operations and Power Systems Analyst Intern

Mississauga, Ontario

Jan 2020 – Apr 2020

- **Data Analysis:** Built queries and developed metrics dashboards using SQL, Tableau Prep, and Tableau.
- **Automation:** Automated manual reports using SQL, Excel, and VBA, decreasing report preparation time by 90%.

PROJECTS

RISC-V Processor: Digital Hardware Design, Verilog, Xilinx Vivado, Pipelining

Real-Time Operating System: Memory Management, Task Scheduling, Inter-Process Communication, C, ARM Kiel

Sentiment Classifier: Natural Language Processing, Python, Scikit, NumPy, Pandas, Matplotlib, Flask

Home Security System: PCB/Circuit Design, Embedded Development, C, Proteus, STM32 Microcontrollers

Multi-Threaded Web-Crawler: Threads, Semaphores, Mutexes, C, cURL, libxml2, HTTP