









#### Education

## University of Waterloo • Bachelor of Computer Science Honours

Sept 2019 - April 2024

- Minor in Combinatorics and Optimization
- 94% Major Average, 90% Cumulative Average
- Relevant Courses: Algorithms, Operating Systems, Data Structures, Machine Learning, Compilers, Computer Networks

# **Experience**

### Outschool • Software Engineer Intern

Sept 2023 - Dec 2023

- Improved search autocomplete performance by 20x through caching and eliminating redundant calls.
- Tagged disability friendly courses by parsing course description and titles for keywords using Typescript.

### Amazon - AWS • Software Engineer Intern

May 2023 - Aug 2023

- Prototyped user throttling for DocDB Elastic Clusters using Java to prevent system overload and improve overall reliability.
- Reduced overall **pipeline failures for the team by 80%** by adding a set of basic tests that run during code review.

### **Replit** • Software Engineer Intern

May 2022 - Aug 2022

- Created services to dynamically edit TOML and Nix files, enabling the creation of visual interfaces and additional integrations, by leveraging **CST parsers** in **Rust** and **Golang**.
- Updated Github imports to use **Nix** Repls and optimized the import flow to **outperform competitors by 50%**.

# Huawei Technologies • Software Engineer Intern

Sept 2021 - Dec 2021

• Improved the performance of an internal **LLVM based C++ compiler by 5%** on certain workloads by hoisting and sinking atomic memory operations when vectorizing loops on **SYCL** host devices.

#### **Orbis Investments** • Software Developer Intern

Jan 2021 - April 2021

Automated the delivery of certain client reports, reducing human error by 50%, through the creation of a utility
using C#, .Net, Angular, and SQL Server to verify data within factsheets and reports.

# Dragonsoft Digital - DragonAgile • Software Engineer Intern

May 2020 - Aug 2020

Prototyped an Atlassian application with authenticated API routes using ExpressJS, React, and NodeJS, and
optimized server performance to handle hundreds of requests per second.

# **Projects**

OpenVtuber • Python, PyTorch, OpenCV, Typescript, Dlib, Pytorch, Three.js

Optimized back-end logic to improve performance and usability several fold for slower machines.

Decentralised Mahjong • Typescript, Ethereum, Solidity, Zustand, ThreadDB, 3ID

• Created decentralised Mahjong with betting using the Ethereum network and peer to peer networks.

# Lisp++ Interpreter • Rust 🔗

- Designed and implemented an interpreter for a Lisp like shell scripting language.
- Supported many standard features including variables, loops, lists, conditionals, functions, modules, and an stdlib.

### **Skills**

- Languages: Python, Java, Javascript, Rust, Go, C++, Haskell, C#
- Tools/Technologies: SQL, MongoDB, AWS, React, ExpressJS, Netty, LLVM, PyTorch

#### **Awards**

- 2nd Place: Don Mills Programming Gala Gold Level: Local
- Tournament Champions: Vex Robotics Competition Terrebonne