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#### **Education**

University of Waterloo • Bachelor of Computer Science Honors

Sept 2019 - April 2024

- Specialization in Artificial Intelligence, Minor in combinatorics and Optimization
- 96% Major Average, 90% Cumulative Average

# **Experience**

### Huawei Technologies • Software Engineer

Sept 2021 - Dec 2021

- Supported the development of an **LLVM** based Bisheng **C++ compiler** and the **SYCL** framework.
- Improved loop vectorization on SYCL host devices for AArch64 by hoisting and sinking atomic memory operations to increase performance by 5%.

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

Jan 2021 - April 2021

- Created a utility using C#, .Net, and SQL Server to automatically verify data within factsheets, reports, and the database enabling the automation of client report delivery.
- Automated creation of reports and charts to reduce the workload and error rate for certain business teams by 50%.
- Implemented a search utility using Angular, Typescript, and ASP.NET to filter reports and issues by meta-data and content to allow business teams to easily retrieve desired information.

## **Dragonsoft Digital** • Software Engineer

May 2020 - Aug 2020

- Prototyped an Atlassian application using React, developed authenticated API routes using NodeJS and ExpressJS, and updated server logic to improve performance and handle hundreds of requests per second.
- Setup continuous deployment pipelines from a Bitbucket repository to an AWS EC2 instance increasing deployment velocity by 200%.

### **SET Foundation** • Software Developer

Jan 2018 - Jan 2019

- Created, and maintained the SetHacks & website using **React** which regularly had 100+ views per day at its peak.
- Developed a basic electrical grid simulator using **Python** to evaluate the solutions for a design challenge

# **Projects**

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

• Created a fully decentralised Mahjong application with betting using the Ethereum network and leverages peer to peer networks for in game communication.

**OpenVtuber** • Python, Typescript, Dlib, Pytorch, Three.js

- Designed and developed a full body tracking module for an open-source interactive virtual presence tool.
- Optimized back-end logic to improve performance and usability several fold for slower machines.

# Lisp++ Interpreter • Rust 🔗

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

#### Skills

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

#### **Awards**

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