

Jason Hon

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EDUCATION

University of Waterloo

Bachelor of Computer Science, Artificial Intelligence Specialization

Waterloo, ON

Sep 2023 - Present

- **GPA: 3.95/4.0** (CAV: 91.5%, Candidate for Deans Honors List)
- Courses: Algorithms, Data Structures, Object Oriented Programming, Compilers, Computer Architecture
- Awards: CS Intl. Upper Year Scholarship, Presidential Scholarship of Distinction (Totaled CAD \$8000)

EXPERIENCE

Compiler Engineer Intern

Huawei

Jan 2025 - Apr 2025

Markham, ON

- Designed and implemented an **MLIR** compiler pass in **C++** to annotate computation graphs with sharding metadata, improving parallel computing performance on GPU and NPUs significantly
- Diagnosed and resolved a critical issue in **mesh** dialect with matrix sharding along the second dimension, optimizing sharding across the device mesh and reducing parallel computation time by **50%**

Software Developer

University of Waterloo, Computer Science Club

Sep 2024 - Present

Waterloo, ON

- Developed and maintained CodeyBot, a multi-functional Discord bot, utilizing **TypeScript**, **Docker**, **SQLite**, **Discord.js**, and **Sapphire**, to deliver features such as coffee chat matching, and mock interview scheduling
- Collaborated with a **team of 11** to review code and brainstorm innovative features, successfully deploying CodeyBot to a server with **over 4,500 members**, implementing various minigames and auto-mod features

Software Developer

Bonumcare

Jun 2023 - Aug 2023

Remote, Freelance

- Engineered and deployed a GPT-3.5 based “Conversation Buddy” designed for the elderly on **AWS EC2**, enabling seamless daily interactions by engineering scalable **RESTful APIs** on an **Express** server
- Redesigned the chatbot user interface using **React**, **HTML**, and **CSS**, resulting in a **90% satisfaction rate** from elderly users, and enhancing usability and accessibility by streamlining interactive design principles

PROJECTS

UWCompass - Course Planner 🧭

Aug 2024 - Present

- Developed a **React** web application to parse student transcripts to identify required courses for degree completion, easing the course planning process for Waterloo students
- Leveraged **BeautifulSoup** to scrape and store **over 5000** courses and programs into JSON files, allowing it to be efficiently managed and scaled

Chess Engine 🏁

Jun 2024 - Aug 2024

- Built a Chess engine in **C++** featuring various levels of **AI opponents** with an algorithm that evaluate moves based on piece weights and other factors for decision-making
- Strictly adhered to **Object-Oriented Design** principles and design patterns (MVC, Observer, Factory) to create a structured and maintainable codebase, ensuring high cohesion and low coupling

SLMod - Minecraft Mod 🎮

May 2021 - Dec 2023

- Maintained and developed a portable **Java** game modification used by **over 40** daily users at peak, implementing features and enhancements accordingly based on user feedback, resulting in **100%** user satisfaction
- Led a team of 5 to design and deploy a user-tracking system on a **Flask** server hosted on **AWS EC2**, integrating **MongoDB** for data storage, successfully visualizing and managing over **6,800** user log-ins on an online dashboard

TECHNICAL SKILLS

Languages: C/C++, Java, JavaScript/TypeScript, Python, SQL, LLVM/MLIR, HTML/CSS, Scala, Racket, Assembly

Frameworks: React, NodeJS, Angular, NextJS, Flask, Express, Tailwind, GraphQL, Sapphire

Technologies: Git, Docker, AWS, MongoDB, MySQL, Unix/Linux, Bash, Valgrind

Extracurriculars: Hack The North, CSA Marketing Executive, Gaming YouTube channel (20k+ subs), PC Building