

# Jason Hon

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## EDUCATION

### University of Waterloo

4.0/4.0 GPA

Bachelor of Computer Science, Artificial Intelligence Specialization

Sep 2023 - Expected

- **Courses:** Algorithms, Data Structures, Object Oriented Programming, Compilers, Operating Systems
- **Awards:** CS Intl. Upper Year Scholarship, Presidential Scholarship of Distinction (Totalled CAD \$8000)
- **Extracurriculars:** Hack The North, Computer Science Club, UWCSA, YouTube Channel (20k+ subscribers)

## EXPERIENCE

### Undergraduate Research Assistant

May 2025 - Aug 2025

University of Waterloo

Waterloo, ON

- Researched and integrated **various techniques** to the **Scala** compiler to ensure the safe initialization of global objects

### Software Engineer Intern

Jan 2025 - Apr 2025

Huawei Canada

Markham, ON

- Optimized attention-layer parallelization by implementing a **C++** ILP solver, achieving a **15x speedup** in solve time
- **Improved inference throughput** by automating insertions of sharding and CCL collective in **MLIR** graphs, **increasing tokens per second by 8%**
- Created optimizations to guide parallelization plan generation, achieving up to **3.5x speedup** over other solutions
- Engineered and integrated **partitioning strategies** templates for transformer **feedforward layers**, achieving **11% higher tokens-per-second** while **shrinking search space 40%**.

### Software Developer

Sep 2024 - Aug 2025

University of Waterloo, Computer Science Club

Waterloo, ON

- Developed and maintained CodeyBot, a feature-rich Discord bot, leveraging **Docker**, **SQL**, and **Sapphire**, successfully deploying to a server with **over 4,500 members**
- Spearheaded development of a wordle-like geography guessing game in **TypeScript**, played by over **500** users
- Collaborated with a team of 11, conducting code reviews and weekly Scrum meetings to drive innovative features

### Undergraduate Teaching Assistant

Sep 2024 - Dec 2024

University of Waterloo, School of Statistics and Actuarial Science

Waterloo, ON

- Evaluated assignments for a probability course with **150 students**, delivering accurate and timely feedback

### Software Developer

Jun 2023 - Aug 2023

Bonumcare

Remote, Freelance

- Engineered and deployed a **GPT-3.5** based "Conversation Buddy" chatbot designed for lonely 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

- Built a **React** web application that simplifies the course and degree requirements planning, used by over **100** users
- Scraped and organized data for **5,000+** courses and programs using **BeautifulSoup**

### Chess Engine 🏁

Jun 2024 - Aug 2024

- Developed a Chess engine in **C++** with **AI** opponents of varying difficulty using an advanced evaluation algorithm
- Strictly adhered to **Object-Oriented Design** principles and design patterns (MVC, Observer, Factory)

### SLMod - Minecraft Mod 🎮

May 2021 - Dec 2023

- Maintained and developed a portable **Java** game modification used by over **40 daily users**
- Deployed a **Flask** user-tracking system with **MongoDB**, visualizing over **6,800 user log-ins** on a dashboard

## ABOUT

**Languages:** C/C++, Java, JavaScript/TypeScript, Python, SQL, HTML/CSS, Scala, CUDA, Racket

**Frameworks:** React, Angular, NextJS, NodeJS, Flask, Express, Tailwind, LLVM/MLIR, GraphQL, Django

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