

Zhehai Zhang

☎ (+1) 226-280-8525 | ✉ z2252zha@uwaterloo.ca | 🏠 zhehaizhang.com | 🐙 github.com/fairnightzz | 🔗 linkedin.com/in/zhehai

Education

University of Waterloo (4th Year)

Computer Science Coop - AI and Digital Hardware Specialization

- 3.7/4 GPA (90.13%) • René Descartes National Math Scholarship (\$25,000 to less than 10 students)

Waterloo, Ontario

Sep 2020 - Apr 2025

Work Experience

LinkedIn

Software Engineer Intern

- Building LinkedIn's **Seeker Coach AI** features to enhance job matching, provide role insights, optimize profiles, and prepare users for interviews

Sunnyvale, California

May 2024 - Present

University of Waterloo and Vector Institute

Undergraduate Research Assistant under Professor Poupart

- Leveraged **DQN** reinforcement learning algorithms to simulate contextual bandits with **Python** and **Gym**
- Built a Deepset transformer model in **PyTorch**, solving the cold start problem and outperforming current RL models by **30%**
- Developed **UCB and Thompson Sampling** baselines to evaluate the model's performance across various RL datasets

Toronto, Ontario

Jan 2024 - Present

LinkedIn

Software Engineer Intern

- Developed custom **LinkedIn Recruiter** tooling which replaced **90%** of customer facing legacy metric and insight charts
- Simplified chart creation process by **80%** for **100+** engineers by creating reusable components in **JavaScript**
- Implemented chart tooling to enforce universal accessibility and i18n guidelines for **200,000+** customers

Sunnyvale, California

May 2023 - Sep 2023

BitGo

Software Engineer Intern

- Built core features in Bitgo's Web3 Wallet over Android, iOS using **React Native** and **TypeScript**
- Deployed checklist and watchlist features to production which directly resulted in **10K daily active mobile users**
- Identified and fixed dashboard logic issues on Bitgo's **main product**, unblocking many of Bitgo's important clients

Palo Alto, California

Jan 2023 - May 2023

Splunk

Software Engineer IoT Intern

- Developed an IoT device with embedded firmware in Python and deployed a status light ring feature for device control
- Fixed **Flask** backend vulnerabilities. Improved user interface latency by **20%** from multithreaded calls and code refactoring

Toronto, Ontario

May 2022 - Aug 2022

D2L Corporation

Software Developer Intern

- Refactored workflow engine using **Lambda** functions and owned scheduling workflow actions using **Node.js**
- Wrote tools in **JS** to replicate AWS services such as **SQS** and **DynamoDB TTL** locally which reduced development time

Toronto, Ontario

Sep 2021 - Dec 2021

Projects

Real-Time Operating System for Train Control

C, ARM, Raspberry Pi

- Designed and implemented a threaded real-time kernel for train control, using low-level services and assembly language
- Engineered interfaces in C to enable message passing, context switching, dynamic memory allocation and scheduling
- Completed a project that manipulates multiple trains using cooperative pathfinding and collision avoidance

Jan 2024

VRIoT - Virtual Reality Manager for IoT Devices

MicroPython, C#, Rust

- Built VR application in **Unity** to interface with ESP32 running MicroPython in real time, winning **two category prizes**
- Implemented **Rust** backend to proxy **bidirectional traffic** between IoT devices and VR headsets

MIT Reality Hacks Winner

Jan 2023

InDaBin - Smart Disposal Tracker

Go, Rust, Flutter, Raspberry Pi, PostgreSQL, Docker

- Engineered a hardware garbage sorter with image detection using **OpenCV** and **Go** Backend, which won **First Place**

Ignition Hacks 2022 Winner

Aug 2022

Skills

Languages Python, C++, C#, C, JavaScript/TypeScript, Go, Java/Kotlin, HTML/CSS, SQL, Bash, Rust, Swift

Tools Tensorflow, NumPy, Pandas, GCP/AWS/Azure, Node, GraphQL, React, Flask, Docker, Linux Administration

Courses ML(Python), AI and RL (Python), Computer Networks (Python), Real Time (C), Digital Hardware Systems (Verilog), OS (C++)