Zhehai Zhang

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

Skills

Languages	Python, C++, Java/Kotlin, C#, JavaScript/TypeScript, Go, SQL, Bash, Rust, Swift
Tools	Tensorflow, NumPy, Pandas, JAX, 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++)

Work Experience

Meta
Menlo Park, California
Software Engineer Intern on **Profile Systems Infra** - PHP (Hack), JavaScript — *Sept 2024 - Present*
- Engineered internal tool to understand the hierarchy and adminship model of **235 million** Facebook Business Profiles
- Fixed **3** SEVs using my internal tool and patched a code component that impacts **1000+** files for **3 billion MAUs**
- Refactored 14 year old infrastructure on FB Pages, ridding of **20+** deprecated functions and optimizing logic by **31%**

LinkedIn
Sunnyvale, California
Software Engineer Intern on **Seeker Agent** - Python, Java, gRPC — *May 2024 - Aug 2024*
- Deployed a Retrieval Augmented Generation (RAG) service to standardize search filters for LinkedIn's Seeker Agent, achieving up to an **89.05%** improvement in accuracy for people search and **81.75%** for job search
- Led the development and optimization of ML tools, coordinating with cross-functional teams. Managed the migration of tools (**5000 lines**) from Java to Python, improving system efficiency of Seeker AI features
- Worked with the team on a huge backend release, introducing several new features and fixing bugs. Successfully resolved a critical issue in production for on-call, reducing error rate by **92.86%**

University of Waterloo
Toronto, Ontario
Undergraduate ML Researcher with **Professor Pascal Poupart** - Jax, PyTorch, Gym — *Jan 2024 - Present*
- Leveraged **DQN** reinforcement and machine learning algorithms to simulate contextual bandits
- Built a Deepset transformer model, 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 ML datasets

LinkedIn
Sunnyvale, California
Software Engineer Intern on **Recruiter Reporting** - JavaScript, Python — *May 2023 - Sep 2023*
- 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
- Implemented chart tooling to enforce universal accessibility and i18n guidelines for **200,000+** customers

BitGo
Remote in Canada
Software Engineer Intern on **Defi Wallet** - TypeScript, React Native, Next.js — *Jan 2023 - May 2023*
- Built core features in Bitgo's Web3 Wallet over Android, iOS
- 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

Splunk
Toronto, Ontario
Software Engineer IoT Intern on **Edge Hub** - Python, Flask, Swift — *May 2022 - Aug 2022*
- Developed an IoT device with embedded firmware and deployed a status light ring feature for device control
- Fixed backend vulnerabilities. Improved user interface latency by **20%** from multithreaded calls and code refactoring

D2L Corporation
Toronto, Ontario
Software Developer Intern on **D2L Labs** - JavaScript, Node.js, AWS — *Sep 2021 - Dec 2021*
- Refactored workflow engine using **Lambda** functions and owned scheduling workflow actions
- Wrote tools in to replicate AWS services such as **SQS** and **DynamoDB TTL** locally which reduced development time

Projects

Real-Time Operating System for Train Control
C, ARM, Raspberry Pi — *Jan 2024*
- 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

Education

University of Waterloo
Waterloo, Ontario
Computer Science Coop - AI and Digital Hardware Specialization — *Sep 2020 - Apr 2025*
- 3.9/4 GPA (90.13%) • René Descartes National Math Scholarship ($25,000 to less than 10 students)