Matthew Hao

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Education

University of Waterloo   *Sept 2020 – May 2025*
B.A.Sc in Computer Computer Engineering   *GPA: 3.7/4.0*
- **Coursework:** Algorithms, Data Structures, Concurrency, Operating Systems, Networks, Databases

Experience

PointClickCare   Sept. 2024 – Current
Software Engineer Intern   *Toronto, ON*
- Building a practitioner-facing application for patient management focusing on data security and platform stability

Immigr8   Jan. 2024 – Apr. 2024
Fullstack Engineer Intern   *Toronto, ON*
- Led small team in development and **drove design decisions** to build a modern SaaS U.S. Visa Application platform using **TypeScript, React.js, Next.js, Java, Spring Boot, PostgreSQL, and AWS**
- Designed, implemented, and tested over **15 features** end-to-end to improve visa application success rate, reduce application process time by **40%**, and streamline collaboration between applicants, employers, and attorneys

PointClickCare   Jan. 2023 – Apr. 2023
Software Engineer Intern   *Toronto, ON*
- Designed and implemented a dry run API endpoint for reingestion of a list of patient resources using **Kotlin and MS SQL Server**, leading to an over **80% reduction** in ingestion time of individual patients
- Reworked SQL queries to fetch provenance data from MS SQL Server and created provenance resources using Kotlin including test cases, for over **10 resources**, to comply with FHIR standards
- Optimized various Maven dependency versioning while maintaining application functionality and performance to resolve over **15 critical, 30 high and 20 moderate** security vulnerabilities

Zynga   May. 2022 – Aug. 2022
Software Engineer Intern   *Toronto, ON*
- Prototyped and implemented a **code coverage report framework** for Storage service using PHP as part of service rewrite, identified unnecessary code and improved code quality of rewritten service
- Implemented **integration test suite** for storage service using Golang to validate functionality of rewritten service and increased code coverage by **40%**
- Incorporated MinIo into Dockerized application to **emulate AWS S3 buckets** and tested archive restoration functionality using **AWS Golang SDK**

OpenText   Sept. 2021 – Dec. 2021
Software Engineer Intern   *Waterloo, ON*
- Architected, designed, and implemented global dropdown list following **Microservices** and MVC design patterns using RESTful APIs in Java with Spring Boot and PostgreSQL, and **tested APIs** using Postman
- Resolved over a **dozen user stories** across frontend and backend case management applications using TypeScript, Java, Spring Boot

Projects

Mindful Journaling App
- Collaborated with team to design and develop an Android journaling application focused on promoting user mindfulness and daily self-reflection using **Kotlin and SQLite**
- Implemented calendar view, notifications, biometric/password lock, and multimedia entries

Realtime Operating System
- Designed and implemented a **multi-tasking kernel** with built-in memory allocation, inter-task communication, and console I/O for ARM processors in **C**, using a highest-priority scheduling algorithm supporting pre-emption and blocking

Technologies

Languages: Java, Python, C++, C, JavaScript, TypeScript, HTML, CSS, Kotlin, Golang, PHP, SQL

Tools and Technologies: AWS, Git, Docker, Spring Boot, React.js, Next.js, Firebase, Jenkins, PostgreSQL, MySQL, Microsoft SQL Server