

Alex Wu

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Technical Skills

Languages: Python, JavaScript/Typescript, Java, C/C++, Go, HTML/CSS, R

Tools & Frameworks: GCP, AWS, React, Next.js, Node.js, MongoDB, PostgreSQL, Jenkins, Jest, Docker, Git, GraphQL

Experience

Software Engineer Intern

May 2024 – Dec 2024

Meta 🌐

Remote

- Worked at Meta as a contingent worker in the Silicon Validation team through HCL Technologies
- Created testing frameworks using **Python/C++** to automate silicon validation for Meta's inference accelerator chips
- Integrated CI/CD pipelines for compiling, testing, and deploying firmware packages using the **HAVOC** framework, resulting in a **33%** decrease in release times
- Utilized **REST APIs** and **Hack** functions for integration of the pipeline within our web services, leading to an automated testing workflow and enhanced efficiency
- Developed a Tableau-like analytics page using **Python** to visualize test coverage statistics collected from **Protium/Palladium** ASIC emulators leading to a decrease in analysis time

Software Engineer Intern

Jan 2024 – Apr 2024

SupportingLines 🌐

Vancouver, BC

- Worked alongside the Tech Lead to develop a client dashboard and automated report system, analyzing employee work culture data and delivering insights for **200+** clients
- Reduced annual costs by **30%** by modifying the report database replacing **AWS** with **Google Cloud Platform** due to sustained use discounts, per-second billing, and coldline storage
- Engineered an interactive and secure dashboard using WebSockets in **NextJS**, providing an alternative to the existing method of creating **100+** PDFs for every filter combination
- Automated the report creation process, accelerating generation by **90%** and significantly reducing human error using **Python**, **Pandas**, **Qualtrics API**, and **Google Cloud Functions**
- Created **50+** unit/integration tests using **Jest** and **Cypress** to integrate into a CI/CD Pipeline using **Jenkins**

Software Engineering Research Assistant

Sep 2023 – Dec 2023

Pacific Laboratory for Artificial Intelligence (PLAI) 🌐

Vancouver, BC

- Assisted a team of graduate students with developing a custom minecraft server using **Java** and **AWS** to collect over **1000+** hours of recorded gameplay used to train a denoising diffusion probabilistic model
- Reduced data processing latency by **50%** by enhancing a minecraft mod using **AWS Lambda** functions to parse player coordinates and storing them into a **AWS DynamoDB**
- Automated test server deployment with a **Python** script, reducing load time from **5 minutes to 30 seconds**

Projects

TypeTalk 🌐 | Claude AI, AWS Bedrock, AWS Lambda, Next.js, Flask

- Created a web application using **AWS Bedrock** that allows users to interact with 16 MBTI-based AI personalities
- Implemented concurrent executions using **AWS Lambda**, achieving a **50%** reduction in average response latency

Medifi 🌐 | Mappedin SDK, React, Node.js, Typescript

- Created a dashboard utilizing **Mappedin's SDK** for patient tracking and optimal pathing for hospital workers
- Optimized a **React** app with **15+** components, reducing prop-drilling by **80%** leading to enhanced performance

NBA Fantasy Draft Simulator 🌐 | Java, Java Swing, JUnit 5

- Accelerated development by following one-week sprints to implement both a terminal and GUI based application
- Integrated audiovisual components, data loading and saving, and Object-Oriented Design principles

Education

University of British Columbia

Expected Graduation: May 2026

Combined Major in Computer Science and Business, Co-op

Vancouver, BC

- **Key Courses:** Algorithm Design & Analysis, Computer Hardware and Operating Systems, Relational Databases
- **Extracurricular:** Software Developer for UBC BizChina 🌐 and Enactus UBC 🌐, MIS Teaching Assistant (**R and Excel**)