

Alex Wu

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Technical Skills

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

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

Experience

Software Engineer Intern

Jan 2024 – Present

SupportingLines 🌐

Vancouver, BC

- SupportingLines is a fast-expanding company diversifying into industries like Healthcare, Sports, and Construction. Using surveys and coaching, they address work culture issues and enhance work experience
- Reduced annual costs by **30%** by modifying the report database replacing **AWS** with **Google Cloud Platform** due to high outbound network bandwidth demands
- 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 **100+** unit/integration tests using **Jest** and **Cypress** to debug and validate new features and functionalities
- Decreased database queries by **40%** for frequently accessed data by implementing **Redis**-based caching reducing database load and operational costs

Software Engineering Research Assistant

Nov 2023 – Present

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 minecraft-based AI
- 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**

Software Developer

Apr 2023 – Present

Enactus UBC 🌐

Vancouver, BC

- Increased site traffic by **175%** through relentless SEO-optimized web development and consistent updates
- Developed a Slack bot with **JavaScript, Slack API, GSpread, OpenAI** to automate hours-tracking via Slack
- Reduced work time from **9 hours to 15 minutes** by developing **Python** algorithm optimizing workshop scheduling

Projects

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

- Awarded 2nd Place out of 24 teams (144 participants) at the 2024 UBC CIC Hackathon
- 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

Medify 🌐 | *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

Job Board Clone 🌐 | *React, Node.js, Express, Oracle*

- Successfully replicated a job portal using **React** and **Node.js** to simulate job postings, profiles, and user connections
- Implemented **RESTful API** endpoints to manage job postings and used **Oracle** for persistent data storage

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 2025

Combined Major in Computer Science and Business, Co-op

Vancouver, BC

- Key Courses:** Data Structures and Algorithms, Operating Systems, Relational Databases
- Extracurricular:** Teaching Assistant for Management Information Systems (**MySQL, R, Tableau, and Excel**)