

MARTIN WONG

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WORK EXPERIENCE

Electronic Arts

Incoming Software Engineer Intern

May 2025 - Aug 2025

Vancouver, BC

Rivian

Software Engineer Intern

Sep 2024 - Apr 2025

Vancouver, BC

- Developed 2FA and car key migration features on the Rivian mobile app on **iOS** and **Android** using **Kotlin** and **Swift**
- Implemented **Bluetooth** and cloud remote commands for 2FA features through byte format or **Protobuf** for all Rivian vehicles
- Prototyped a native iOS screen recorder that records using screenshots and a pixel buffer when app in foreground in 30 second intervals, utilizing Swift to automate bug reporting and testing for over **900+** App Center users in Swift
- Implemented push notifications via **APNS** and **Firebase Messaging**, enabling **2FA-secured** driving with a locally and cloud-generated time-based passcode using **HMAC encryption**, ensuring secure access across all Rivian vehicles

Avena Tech Corporation

Web Developer

Jul 2023 - Present

Vancouver, BC

- Redesigned, developed and deployed full-stack websites utilizing Figma, **React**, and Tailwind optimizing load times by **75%**
- Overhauled Avena cloud architecture to reduce monthly VPS costs by over 50%, utilizing open-sourced tools such as **Docker**, Traefik, and Coolify to streamline deployments
- Streamlined deployment by utilizing BASH, Github actions, and Docker Compose to create a **CI/CD** pipeline for testing, building, and deploying Docker containers, reducing development time by 50%
- Developed and deployed a new blogging platform with containerized REST API endpoints using **Express.js**, **AWS S3**, and **PostgreSQL**, migrating over 60 WordPress blogs to a new, efficient platform for future blogs

Simon Fraser University iXLab

Undergraduate Research Assistant

Apr 2023 - Sep 2023

Vancouver, BC

- Enabled machine learning model validation by developing IMU sensor data simulations utilizing Python
- Collected XYZ and rotational data generated from training data generated by the T2M-GPT model in order for researchers to identify joints of motion to increase accuracy to real human motion
- Collaborated with graduate students from SFU and Dartmouth College under the supervision of Dr. Xing-Dong Yang

PROJECTS

Personalized AI Discord Bot | Python, Node.js, FastAPI, AWS EC2

May 2024

- Fine-tuned Meta's Llama2 LLM on **120,000** Discord messages to create a personalized chatbot to respond in the style of the user
- Trained and deployed the fine-tuned model on Replicate accessed by a FastAPI endpoint, containerized on **Docker** and hosted on an **AWS EC2 instance**, and deployed on via PM2 on a personal home Ubuntu server for continuous uptime
- Wrote Python scripts to convert and preprocess Discord message data from JSON to JSONL, filtering sensitive information from **3,000** messages and ensuring seamless integration to Llama2 model and user privacy

BWS Blog Editor | React, Express.js, Node.js, PostgreSQL, Typescript

May 2024

- Developed a full-stack blog editor which allows users to create, update, and delete blogs to migrate Wordpress blogs
- Implemented robust client and server-sided form validation using Zod and react-hook-form with email notifications to validate if an email was sent, validating every step of blog creation
- Deployed on DigitalOcean using Nginx for basic authentication and a reverse proxy to serve 4 docker containers running under the same domain, to ensure security for internal blog creation

Command-line Document Handler | Java

Apr 2022

- Developed a document handler GUI simulated in a command-line interface using Java, featuring document creation, opening, closing, resizing, reading, and writing
- Designed a UML diagram showcasing 6 key classes, abstract classes, inheritance, and polymorphism reducing development time with reduced complexity

EDUCATION

Simon Fraser University

Bachelor of Science, Computer Science

May 2022 - May 2026

Burnaby, BC

Courses: Data Structures and Algorithms, Database Systems, Software Engineering, Computer Systems, Web Development

TECHNICAL SKILLS

Languages: Java, Swift, Kotlin, JavaScript, TypeScript, C, C++, Python, Go, x86, HTML, CSS, SQL, BASH

Frameworks/Libraries: React, SwiftUI, Jetpack Compose, Next.js, Express.js, Node.js, Mongoose, GraphQL, Tailwind, Jest

Developer Tools/Technologies: Git, Docker, AWS (S3, EC2, ECS, ECR), Linux, MSSQL, PostgreSQL, NGINX, Postman