

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

- Lead mobile development of a new 2FA-secured driving feature on both **iOS** and **Android** platforms using **Kotlin** and **Swift**
- Implemented cloud push notifications via **APNS** and **Firestore Messaging** with a backup Bluetooth path through byte format or **Protobuf** for enabling 2FA-secured drive remote commands across all Rivian vehicles
- Developed a time-based one-time passcode enabling 2FA-secured driving with a local using **HMAC encryption** for paired phone keys and cloud fetched through **GraphQL** for non-paired phone keys, covering all edge cases where push notifications fail
- 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 available for over **900+** App Center users in Swift

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%**
- 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

- 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 pre-process 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

- 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

Command-line Document Handler | Java

- 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

Expected Graduation May 2027

Burnaby, BC

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

TECHNICAL SKILLS

Languages: Swift, Kotlin, Java, 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, Linux, MSSQL, PostgreSQL, NGINX, Postman