Martin Wong

Vancouver, BC | martinwong303@gmail.com | Mighty303 | martin-wong303 | martinwong.me

Work Experience

Electronic Arts — May 2025 - Aug 2025
Software Engineer Intern — *Vancouver, BC*

- Prototyped and deployed an AI-powered Slack bot with **RAG pipeline** using **Python**, cutting onboarding time and helping 30+ engineers quickly resolve codebase and documentation questions
- Built a scalable embedding pipeline indexing 2 production codebases **(1M+ lines, 8,000 files)** and **300+ pages of docs** using recursive code and token-based chunking strategies, Amazon Titan V2, and **PostgreSQL/pgvector**
- Designed a custom **MCP service** with a scoring system to dynamically rank and retrieve from docs, code, chat history, and user feedback, boosting positive user feedback from **29%** to **85%**
- Deployed RAG system with pgvector on **AWS Aurora**, and **FastAPI** on **AWS EKS**, powered by **AWS Bedrock**, improving query performance while reducing infrastructure spend by 35%

Rivian — Sep 2024 - Apr 2025
Software Engineer Intern — *Vancouver, BC*

- Led mobile development of a 2FA-secured driving feature on iOS and Android using **Swift** and **Kotlin**, enabling secure remote commands across all Rivian vehicles with **6,000+ users** within weeks of launch
- Implemented secure command delivery via **APNS** and **Firebase Messaging** with Bluetooth byte/Protobuf fallback, and built time-based one-time passcodes using **HMAC encryption** and **GraphQL** for all notification failure scenarios
- Prototyped and deployed a native iOS screen recorder to **900+ App Center users** for automated bug reporting, capturing pixel buffer screenshots at 30-second intervals

Avena Tech Corporation — Jul 2023 - Sep 2024
Software Developer (Part-Time) — *Vancouver, BC*

- Redesigned and deployed full-stack websites for digital marketing clients using TypeScript, **React**, Tailwind CSS, and Figma, reducing load times from **4 seconds to <1** second to improve SEO
- Streamlined deployment by utilizing BASH, Github Actions, and **Docker** to create a **CI/CD** pipeline for testing, building, and deploying containers, reducing development time by 50%
- Developed a new blogging platform with containerized REST API endpoints using **Express.js**, **AWS S3**, and PostgreSQL, migrating 60+ WordPress blogs to a new efficient system

Simon Fraser University iXLab — Apr 2023 - Sep 2023
Undergraduate Research Assistant — *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

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 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

Custom 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 away from Wordpress
- Implemented robust client and server-side form validation using Zod and react-hook-form with email notifications to validate if an email was sent, validating every step of blog creation

Kanban Planner | *MongoDB, Express.js, React, Node.js*

- Developed a full-stack Kanban Planner app which allows users to manage their tasks in an organized and efficient way
- Implemented robust client and server-side form validation using AJV, a JSON schema validator library, to ensure data integrity

Education

Simon Fraser University — Expected Graduation May 2027
Bachelor of Science, Computer Science — *Burnaby, BC*
Courses: Data Structures and Algorithms, Database Systems, Software Engineering, Computer Systems, Web Development

Technical Skills

Languages: Swift, Kotlin, Java, Python, JavaScript, TypeScript C, C++, HTML, CSS, SQL, BASH
Frameworks/Libraries: React, SwiftUI, Jetpack Compose, Next.js, Express.js, Node.js, Mongoose, GraphQL, Tailwind CSS, Jest
Developer Tools: Git, Docker, Postman, AWS, NGINX, Linux, PostgreSQL, MongoDB, Kubernetes