

Sheldon Liang

(+1) 778-896-9983 | lquanzhao@gmail.com | github.com/quanzhaoliang | sheldonliang.com | Richmond, BC

TECHNICAL SKILLS

Programming Languages: Java, Python, C/C++, Kotlin, JavaScript/TypeScript, HTML/CSS
Frameworks & Libraries: React, Next.js, Node.js, Tailwind CSS, Flask, PyTorch, Prisma ORM
Tools & Technologies: Git, AWS, Google Cloud, PostgreSQL, MySQL, MongoDB, Docker
Development Methodologies: Agile Development, Test-Driven Development, Version Control

EXPERIENCE

Contract Software Developer Jan. 2024 – Apr. 2024

Bridgers Trading Ltd.

Remote

- Developed and deployed a production-grade inventory management system using Next.js, React, and TypeScript, accelerating order processing by 30% and decreasing stockouts by 20% through real-time tracking and automated inventory reconciliation.
- Engineered scalable PostgreSQL schema hosted on AWS RDS, optimized for query performance across 200+ product with concurrent read/write access.
- Designed and integrated dynamic data visualization dashboards using Chart.js and D3.js to monitor sales trends, supplier performance, and demand forecasting, contributing to a 5% reduction in procurement costs.
- Automated CI/CD pipeline deployment via AWS Amplify with GitHub integration, ensuring rapid feature rollout, rollback support, and maintaining 99.9% uptime.

PROJECTS

Ratingbnb | *Next.js, TypeScript, Prisma, PostgreSQL, AWS S3, NextAuth.js* Jun. 2025 – Present

- Architected a modular full-stack review platform tailored for Airbnb guests, incorporating relational data modeling and scalable backend API layers with RESTful endpoints.
- Engineered secure and efficient AWS S3 image storage workflow via presigned URLs, achieving 98% upload reliability across varying network conditions.
- Built a general-purpose web scraper using Puppeteer to extract official ratings, prices, and high-quality property images from listing pages, reducing manual input by 60%.

Embedded Retro Gaming System | *C, Linux, BeagleY-AI, GPIO, Cross-compiling* Jan. 2025 – Apr. 2025

- Designed and built a complete embedded game console from the ground up, leveraging compiler-like parsing logic for game command sequences and optimizing memory access in a constrained environment.
- Cross-compiled C programs for ARM architecture with Linux system calls for real-time LED matrix rendering and direct GPIO control, maintaining a refresh rate of approximately 100 Hz.
- Integrated PS4 controller input and piezoelectric drum sensors using GPIO with a custom state machine and debouncing logic, ensuring accurate hit detection and sub-50ms response latency during gameplay.

Baby Cry Translator | *Kotlin, CNN, Deep Learning, FastAPI, AWS* Jan. 2025 – Apr. 2025

- Built a Kotlin mobile application that records and classifies baby cries into emotional states (e.g., hungry, sleepy, uncomfortable) using a CNN trained on MFCC features, achieved 70% accuracy on a validation dataset.
- Deployed the trained model as a FastAPI web service on AWS App Runner, enabling scalable, low-latency inference for real-time emotion classification within 2 seconds.
- Leveraged Generative AI to provide context-aware parenting suggestions and actionable guidance based on the interpreted cry emotion, enhancing user experience and app value.

Activity Tracking App | *Kotlin, Google Maps API, Room Database, Machine Learning* Sep. 2023 – Dec. 2023

- Engineered a Kotlin mobile application to track and visualize user activity using GPS and Google Maps API, delivering real-time route insights and behavioral summaries.
- Enabled reliable offline tracking by implementing MVVM architecture with lifecycle-aware components, Room Database, and a SQLite backend.
- Achieved over 90% accuracy in distinguishing walking, biking, and driving by integrating a machine learning classifier leveraging accelerometer and gyroscope inputs.

EDUCATION

Simon Fraser University

Bachelor of Science in Computer Science

Burnaby, BC

Sep. 2022 – Dec. 2026