Jay Esquivel Jr.

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https://jaysqvl.com

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Education

Simon Fraser University Sep 2022 – Present
Bachelor of Applied Science, Computer Science - Software Systems *Burnaby, BC*

- Relevant Coursework: Algorithms II, Computer Architecture & Security, Operating Systems, Computer Networks, Software Engineering, Cloud Computing, Test, Intelligent Systems, Database, UI Design, Mobile App Development

University of British Columbia Sep 2020 – Aug 2022
Bachelor of Science, Computer Science & Mathematics *Vancouver, BC*

- Relevant Coursework: Data Structures & Algorithms, Test, Artificial Intelligence, Machine Learning, Deep Learning and Neural Nets, Data-Science, Computer Security, Discrete Mathematics, Linear Algebra and Calculus

Experience

Software Engineer Intern Jun 2024 – Present
OffRoadExpert — Python, TypeScript, JavaScript, Bash, Docker, GCP *Vancouver, BC*

- Automated vendor product ingestion from vendor CSVs and hosting servers, scaling in-store product listings 300x
- Developed a Dockerized React and Tailwind front-end UI for cron scheduling endpoints, viewing logs, and managing configuration, enabling non-technical staff to interact with back-end services.
- Integrated four new REST API endpoints into the company's existing product ingest and processing pipeline.
- Added LLM layer into product ingest pipeline standardizing web product display metadata for SEO/consistency.
- Facilitated migration to private cloud assisting design hardware and deploy software infra, reducing OPEX 50%.
- Developed custom react components in TypeScript with team for the company's upcoming front-end overhaul.

Contract Software Developer Sep 2020 – Present
Jaysqvl Solutions — Python, Java, JavaScript *Vancouver, BC / Remote*

- Software consultations and development for local businesses including AI integrations, web, cloud, networking, virtualization, containerization, security systems, and IT infrastructure
- Developed REST APIs, full-stack web applications, and audited course content (debugging and testing) for various courses on Udemy and private platforms, contributing to teaching 3000+ students with a 4.5 star average rating
- Provided private tutoring in Mathematics, Computer Science, and Data Science for university students.

Technical Skills & Exposure

Languages: Python, Java, JavaScript, TypeScript, Kotlin, C++, C, HTML, CSS, SQL, R, Racket, LaTeX, Bash
AI Knowledge and Applications: Langchain & HuggingFace, AI Agents, Fine-Tuning, Transformer Models, Neural Nets, Computer Vision, Vector Embeddings & Retrieval Augmented Generation (RAG), Prompt Engineering
Frameworks and Engines: React.js, Node.js, Express.js, Langchain, HuggingFace, Flask, Android, Hugo
Database: Firebase, Supabase, Pinecone, PostgreSQL, MongoDB, Redis, Microsoft SQL Server, SQLite, MariaDB
Development/Deployment: Git, Docker, Vercel, GitHub Pages, GitHub Actions
Test: GoogleTest, GoogleMock, Libfuzzer, PIT, Stryker, Hypothesis, JUnit, PyTest, ACTS
Cloud: Google Cloud Platform (GCP), Amazon Web Services (AWS), Cloud Functions, Load Balancers & API Gateways, Virtual Machines, Dockerized Deployments, Storage Services

Projects

ExpensAI | *An AI-Powered Spending and Financial Management App* | Kotlin, Python, Google Cloud (GCP), Firebase

- Deployed a secure image API on GCP Cloud Functions that takes base64 encoded images, validates them, relays to OpenAI's Vision API for classification, and then returns a response
- Deployed a text API that takes unidentifiable transaction history and creates various forms of personalized insights
- Created dynamic components that synchronize in real-time with both local and cloud persistence layers
- Implemented co-routines and threading in critical areas to optimize performance without compromising stability
- Designed and implemented our Google Cloud infrastructure's services (IAMs, functions, etc) to optimize cost
- Authored an on-device base64 image processing strategy to circumvent cloud storage costs in the API pipeline

See more about me and the rest of my collection of active projects and their demos on github.com/jaysqvl