Jay Esquivel Jr.

Software Engineer

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+1-778-991-1371

TECHNICAL SKILLS

Programming Languages

- **Python**
- **Java**
- **C/C++**
- Kotlin
- HTML/CSS
- JavaScript
- SQL/T-SQL
- R
- Racket
- LaTeX
- Bash & Scripting

Frameworks and Engines

- Next.JS
- React.JS
- Node.JS
- Android
- Flask
- Docker

Database

- Firebase
- Supabase
- Pinecone
- PostgreSQL
- Redis
- Microsoft SQL Server

Cloud

- Google Cloud Platform (GCP)
- Amazon Web Services (AWS)
- Cloud Functions
- Load Balancers
- API Gateways
- Virtual Machines
- Storage Services
- Content Delivery Networks

Test

- GoogleTest & GoogleMock
- Libfuzzer
- PIT
- Stryker
- Hypothesis
- Junit
- PyTest
- ACTS

Artificial Intelligence

- Langchain & HuggingFace
- AI Agents & Fine Tuning
- Transformer Models (LLMs)
- Neural Networks
- Computer Vision
- Vector Embeddings
- Retrieval Augmented Generation
- Prompt Engineering

EDUCATION

Simon Fraser University
SEP 2022 - PRESENT

Bachelor of Applied Science, Computer Science - Software Systems

The University of British Columbia
SEP 2020 - AUG 2022

Bachelor of Science, Computer Science and Mathematics

EXPERIENCES

SOFTWARE ENGINEER
JUN 2024 - PRESENT

OffroadExpert | Python, Bash, Docker, HTML, CSS, JavaScript, Google Cloud Platform

- Automated vendor product data entry and processing using a pipe and filter software architecture scaling product capacity 300x and eliminating manual intervention.
- Dockerized tools with Web UI's to make product processing configuration accessible to non-technical staff
- Designed, proposed, and implemented an AI filter layer in the product processing pipeline using LLMs and prompt engineering, optimizing SEO, and minimizing API costs via batch processing.
- Designed and deployed back-end infrastructure, including networking, VM management, and VPN setup, ensuring internal system reliability and security.
- Designed and deployed private cloud server infrastructure with Google Cloud fallback (GCP), reducing long-term operational costs
- Implemented Shopify for front-end, streamlining independent management of business operations and sales for non-technical staff
- Actively developing/optimizing the front-end's UX for navigatability and business requirements.

CONTRACT SOFTWARE DEVELOPER
SEP 2020 - PRESENT

Jaysqvl Solutions

- Web/software consultations and development for small businesses, including 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.

NOTABLE PROJECTS

AI-Powered Spending and Financial Management App
SEP 2024 - PRESENT

ExpensAI | Kotlin, Python, Google Cloud Platform, Firebase, Android

- Developed AI-powered back-end API's and middleware for image ingestion and user insights.
- Created a dynamic UI, integrating the real-time local syncing of user data to cloud databases, and LLM-generated user analytics
- Implemented co-routines and threading in critical thread safe areas to optimize performance
- Designed and deployed the Google Cloud infrastructure of the app's services (IAMs, functions, etc) optimizing for cost
- Authored an on-device base64 image processing strategy to circumvent cloud storage costs in the API pipeline

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KNOWLEDGE

- Algorithms & Data-Structures
- Distributed Systems & Parallel Processing
- Networking
- Mobile App Development
- Web-Development
- Databases
- Shell & Scripting
- Software Architecture
- Cloud
- AI Tooling
- Computer Architecture

AWARDS

SustainHacks - 2nd Place
March 2023

Top Senior Athlete Scholarship
June 2020

Philippines Basketball Nationals (U21) 8th Place, Team Canada
May 2019

BC Ultimate Frisbee Senior Provincials 2nd Place & All-Star
April 2019

BC Volleyball Junior Provincial 8th Place & All-Star
November 2018

EXTRA-CURRICULARS

SFU Open Source (OS) Development Club
September 2023 - PRESENT

SFU Google Developer Student Club (GDSC)
September 2023 - PRESENT

UBC CVC Social Club Executive Team Member
March 2020 - 2024

FREEGEEK Tech Recyling Center Hardware Tester
Sep 2017 - Oct 2022

VikingsDev Coding Club Executive/Mentor
2017 - 2020

NOTABLE PROJECTS (cont.)

Personal Portfolio! (WIP)   JAN 2020 - PRESENT

Jaysqvl.com | *HTML, TailwindCSS, JavaScript, React.JS, Next.JS, ShadCN/UI*

- V1 UI/UX created using HTML, CSS, and JavaScript and deployed on GitHub Pages with CI/CD handled via custom GitHub Actions
- V2 (WIP) created with Javascript, TailwindCSS, React.JS and Next.JS
- Dynamic components created using React.JS and the Next.JS framework

Automatic Fitness and Cardio Tracking App   SEP 2024 - PRESENT

Cardiolo | *Kotlin, Weka, Google Cloud Platform*

- Trained and integrated a WEKA Classification background service to automatically identify various cardiovascular activities through phone movements
- Deployed a custom map with the Google Maps API from Google Cloud for an activity route tracking feature
- Fully developed a dynamic UI with co-routines, threading, and request/API pre-fetching to increase performance and responsiveness
- Incorporated room databases for secure user data with CSV export to allow users easy access to their exercise statistics

Web LLM Text File ChatBot (Pre-ChatGPT File Ingest Capability)   MAY 2023 - AUG 2023

Impersonator | *Python, Streamlit, Langchain, HuggingFace, OpenAI, Llama, Pinecone*

- Polimorphically structured back-end to flexibly support various LLM's (localized, fine-tuned, cloud) as well as vector database and embedding model providers
- Streamlined development environment setup time and eliminated dependency incompatibility errors through dockerization
- Created the front-end using novel Google "Streamlit" UI component library to reduce development time and learn a new skill

Full-Stack UBC Peer Student Advising Alt-Platform   JAN 2023 - AUG 2023

PeerAdvice | *HTML, CSS, JavaScript, PostgreSQL*

- Integrated a PostgreSQL User Database to store all registered client information
- Developed a Python flask-based back-end featuring GET and POST endpoints to efficiently handle low-level API requests (e.g. to the PostgreSQL Database)
- Leveraged the Calendly booking web-service to handle advisor availability and reduce the complexity of the system
- Integrated Google Auth into our user management system leveraging the Firebase API

Chrome Extension to Analyze Retail Product Sustainability   JAN 2022 - FEB 2022

Decode | *HTML, CSS, JavaScript, Python*

- Created the API which scrapes the users product page, calculates scores, and returns the URL to a unique web page on the insights of the analyzed clothing
- Helped implement and develop the UI/UX of the website

Android App to Gamify Your Workouts   JAN 2022 - FEB 2022

Hercules | *Java*

- Implemented the entire front-end view/controller package
- Facilitated key back-end data structure design changes within the team thus reducing run-time memory usage by over 200% to ≤ 1 GiB