Jie Sen Huang

Software Engineer

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Technical Skills

Languages	Python, JavaScript, Typescript, HTML/CSS, Java
Technologies	Git/Github, React, Firebase, Vue, NextJS, Docker, Vercel, AWS EC2/S3/IoT Core, SQL, NoSQL (MongoDB)

Education/Certificates

Bachelors (BS) in Computer Science w/ Minor in Mathematics — Aug 2019 - Dec 2024

Washington State University Vancouver (WSUV) — *Vancouver, WA*

Experience

Software Engineer (Capstone) — Aug 2023 - May 2024

Hewlett-Packard (HP) — *Vancouver, WA*

- Developed a full-stack cloud-based IoT service that enabled real-time tracking of key performance indicators (KPIs) for printers using Java Spring, Vue, JavaScript/TypeScript, NodeJs, and Docker.
- Designed and implemented modular Vue components with organized HTML and CSS, enhancing development efficiency and ensuring consistency in design language.
- Implemented multiple RESTful API endpoints in a Java Spring backend associated with KPI processing and retrieval while adhering to predefined XML schema specifications.
- Automated deployment workflows to AWS EC2 using GitHub Actions and Docker, streamlining CI/CD processes reducing deployment time by over 30%.
- Coordinated tasks and deliverables in an AGILE/Scrum based environment, meeting project milestones and expected functionality in alignment with the predefined timeline.
- Integrated an ETL middleware service to handle data extraction, transformation, and loading from AWS IoT Core to MongoDB database.
- Maintained robust unit and integration tests with JUnit to ensure high code quality, optimize functionality, and achieve comprehensive test coverage.

Projects

Real-Time Guitar Note Training Web Application — Aug 2022 - May 2023

Washington State University — *Vancouver, WA*

- Led development efforts as a part of a cross-functional, six-member team for a web app to train guitarists on note accuracy and intensity using the FERN (Firebase, Express, React, Node.js) framework.
- Engineered a custom client side JavaScript based advanced fourier transform algorithm to detect note accuracy, timing, and intensity through live audio feed utilizing embedded microphones with 99.6% accuracy.
- Authored comprehensive documentation detailing service response expectations, data flow diagrams, and component interface guidelines to ensure technical alignment across teammates.

AI-Powered Spaced Repetition Language Learning Platform — May 2024 - Dec 2024

Washington State University — *Vancouver, WA*

- Built an AI based language learning web app using Facebook's Llama LLM Models using Python, Flask, React, Javascript/Typescript, and Node.js to help language enthusiasts practice and expand their vocab using spaced repetition learning.
- Implemented robust security protocols such as cryptographic hashing for passwords, and session-based authentication (JWT).
- Developed multistage AI response validation flow to ensure generated responses from LLMs adhere to expected app behavior.
- Architected user performance tracking and data management system to monitor learning progression and enhance engagement by dynamically tailoring challenges based on user proficiency.