Howard Wei

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EDUCATION

San Jose State University — San Jose, CA
GPA: 3.70, B.S. in Computer Science — *May 2027*
Relevant Coursework: Data Structures and Algorithms, Linear Algebra, Differential Equations, Operating Systems

EXPERIENCE

Cytokinetics — South San Francisco, CA
Informatics Intern — *May 2025 – Aug 2025*
- Pioneered a visualization platform that processes user requests for **1M+** research data points by integrating LLM agentic workflows with **AWS** (Bedrock, Lambda) and **Python** for real-time database integration.
- Developed AI-powered data solutions that automated data processing tasks from **PostgreSQL**, resulting in a 70% reduction in visualization creation time.
- Developed real-time data dashboard generation by implementing **Spotfire** IronPython-JavaScript API systems, reducing visualization load times by 65% and enabling seamless server-to-client data transfer.
- Engineered persistent **MQTT WebSocket** channels for longer user and AI conversations, reducing connection failures by 64% and boosting user satisfaction scores by 42%.
- Collaborated with users to deploy **Vue** natural language interfaces on **AWS S3**, enabling 100+ scientists to create dashboards without query knowledge, increasing analysis frequency by 85%.

Google Developer Group — Merced, CA
Lead Machine Learning Engineer — *Sept 2024 – Dec 2024*
- Built and deployed a paper trading platform for analyzing trading habits and providing retail investors with insights through **AWS** (EC2, RDS, Lambda).
- Recruited and led the Machine Learning Team of 25 student developers from 5 universities, using **Agile** methodologies (Kanban), **GitHub Pro**, and **Jira** to ensure collaboration and task management.
- Improved platform responsiveness by 35% and scaled to support growing user demand by building a **Django RESTful** API with Alpaca Markets, integrating real-time and historical data into **MySQL**.
- Utilized the applications of **OpenAI GPT-4o** and **Groq** APIs on 7 different metrics of financial advice.

Machine Learning at SJSU — San Jose, CA
Full Stack Developer — *Sept 2024 – Present*
- Developed 5 API endpoints to save and fetch user posts and readings in a **PostgreSQL** cloud database.
- Designed and implemented frontend user interface with **React** and **Tailwind CSS**, fetching data from API endpoints using **SWR**.
- Collaborated with the development team using **Git** workflows and **GitHub** for project management, implementing best practices for code reviews and feature branching.

PROJECTS

EmotionAI — April 2024
- Led a team of 5 student engineers across 4 universities nationwide in developing a human emotion detection neural network model, using **Python**, **PyTorch**, and **OpenCV** to process **over 35,000** images of facial expressions.
- Achieved 60%+ accuracy for 7 unique facial expressions through webcam deployment on **Streamlit**.

ByTech — August 2023
- Developed a full-stack online classroom platform for programming teachers, utilizing **Next.js, React, and Tailwind CSS** for the frontend, and **Firebase** for data management.
- Utilized **Pyodide** to compile **Python** into **WASM**, reducing browser latency by 24%.
- Leveraged **Agile** methodology (Scrums), ensuring iterative improvements and regular feedback integration.

TECHNICAL SKILLS

Languages: Python, Typescript, Javascript, Java, C/C++, MATLAB, SAS, SQL, HTML/CSS, WASM
Frameworks: LangChain, PyTorch, Django, Django REST, Next.js, React, Nuxt.js, Vue.js, Tailwind CSS
Developer Tools: AWS, GCP, Azure, Git, Jira, Agile, PostgreSQL, MySQL, Docker, Firebase, Streamlit, Vercel
Libraries: OpenCV, Keras, Matplotlib, Seaborn, NumPy, Pandas, Scikit, Pyodide, SWR