Jim Wang

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Education

University of California, Santa Barbara **September 2022 – May 2026**
Bachelor of Science in Computer Engineering *Santa Barbara, CA*
GPA: 3.8 (Dean's List Engineering)

Relevant Coursework

- Data Structures
- Algorithms
- Distributed Systems
- Embedded Systems
- Computer Architecture
- Machine Learning
- Operating Systems
- Computer Networks

Experience

Software Engineering Intern | Correkt *Santa Barbara, CA | September 2024 – Present*

- Worked on a multimodal social media search engine that aggregates and analyzes diverse user-generated content across platforms to deliver comprehensive insights on trending topics and public opinion
- Built a modular Next.js frontend with dynamic component loading based on API calls to our FastAPI backend, and optimized application performance through code splitting and lazy loading
- Helped implemented a robust search system with filtering through a fine-tuned Cerebras AI large language model to enhance result relevance.
- Helped engineer a heatmap-based recommendation system for real-time article suggestions, leveraging Pinecone for vector embeddings, Redis to cache user heatmaps, and MongoDB for backup storage real-time article suggestions
- Integrated RESTful APIs using React Query for efficient data fetching, caching, and state management, significantly improving application responsiveness
- Implemented comprehensive automated testing suite using Jest and React Testing Library

Full-Stack Software Developer | NSF BioPacific MIP *Santa Barbara, CA | June 2023 – April 2024*

- Led the development of a full-stack Next.js web application that helps researchers design experiments and control Chemspeed robotic chemistry equipment, used by 30+ researchers.
- Designed and optimized a PostgreSQL database schema to efficiently store and retrieve large volumes of experimental data.
- Implemented a distributed task queue system using Redis to manage concurrent experiment requests across multiple Chemspeed robots.
- Set up automated testing with Jest and React Testing Library, reaching 90% code coverage and halving bugs
- Integrated the application with the official Biopacific MIP user portal using Django for seamless user authentication.

Technical Skills

Languages: Python, Java, C++, SQL (Postgres), JavaScript, HTML/CSS, R
Web Frameworks: React, Node.js, Next.js, FastAPI, Django
Developer Tools: Git, Docker, Redis, MongoDB, Google Cloud, Jest, VS Code
Deep Learning Frameworks: Pytorch, Keras, Tensorflow
Libraries: Scikit-learn, Numpy, Pandas, Librosa, Matplotlib

Projects

RateMyResume | *Next.js, React, Javascript, HTML, CSS, FastAPI* **January 2024**

- Designed and developed a web application for anonymous resume feedback, leveraging Next.js, FastAPI, and MongoDB
- Integrated Amazon Comprehend to automatically anonymize uploaded resumes, ensuring unbiased feedback and protecting user privacy
- Engineered a robust backend using FastAPI, creating RESTful endpoints for efficient data processing and real-time communication with the frontend

Speech Emotion Recognition App | *Python, Google Cloud Compute Engine, Django, Git, Jupyter Notebook* **April 2023**

- Uses speech emotion recognition to generate color-captioned subtitles from an mp4 file.
- Extracted key features from audio files using python libraries such as librosa and soundfile.
- Trained a neural network to classify emotions from extracted audio features using scikit-learn's MLPclassifier.
- Deployed website at using Google Cloud Compute Engine.