JIM WANG

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Education

University of California, Santa Barbara

Bachelor of Science in Computer Engineering

GPA: 3.76 (Dean's List Engineering)

Sep. 2022 - May 2026

Santa Barbara, CA

Relevant Coursework

• Data Structures

• Digital Logic

• Vector Calculus

• Object Oriented Program

• Digital Design Principles

• Linear Algebra

• Differential Equations

• Probability and Statistics

Experience

NSF BioPacific MIP

June 2023 - January 2024

Software Engineer Intern

Santa Barbara, CA

- Developed a full-stack web application focused on database management and experiment design for users automating their synthesis on the Chemspeed robotic chemistry platform.
- Established a robust PostgreSQL database that stores and organizes user profiles, experiment details, and associated data.
- Utilized Next.js to make the web application robust and scalable. Implemented server-side rendering for improved performance and SEO. Integrated with a RESTful API for dynamic data handling. Utilized React hooks for state management and created reusable components for efficient development.
- Integrated the application with a secure user portal using Django for seamless user authentication.

UCSB SIMS

August 2022 - September 2022

Data Science Research Intern

Santa Barbara, CA

- Conducted research on groundwater systems with other SIMS interns and presented our findings in an academic setting.
- Plotted and analyzed groundwater temperature data using R and the Pandas Python library.
- Developed knowledge in research procedures, data cleaning, and programming.
- Contributed to the development and implementation of data cleaning protocols, ensuring the accuracy and reliability of the data used in our research.

Projects

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.

Chrome Extension for AI-Enhanced Web Interactions | OpenAI API, HTML, CSS, JavaScript, NodeJS March 2023

- Developed a Chrome extension that uses Javascript and DOM manipulation to dynamically update the content of web pages in response to user interactions.
- Made calls to the OpenAI API to provide additional functionality to users.
- Built and maintained a NodeJS server hosted on Railway to handle API calls and data processing.
- Used HTML and CSS to create a seamless user interface.

Technical Skills

Languages: Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, R

Web Frameworks: React, Node.js, Next.js, Django Deep Learning Frameworks:Pytorch, Tensorflow

Developer Tools: Git, Docker, Google Cloud/Google Compute Engine, VS Code, Visual Studio

Libraries: Scikit-learn, Numpy, Pandas, Librosa, Matplotlib

Extracurriculars

Data Science Club

Sept. 2022 - Present

Member

• Competed in Data Science Club competition with project "SentimentSub" which used speech emotion recognition to generate color-captioned subtitles from an mp4 file.