Jeff Hwang

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Education

University of California, Riverside — Riverside, CA
Bachelor of Science in Data Science — *Expected: June 2025*

- GPA: 3.5/4.0
- Relevant Coursework: C++ Programming, Data Structures and Algorithms, Intro to Software Engineering, Intro to Artificial Intelligence, Software Construction, Discrete Mathematics, Data Analysis Methods

Technical Skills

Languages: C, C++, Python, Java, JavaScript, Typescript, SQL, R, HTML, CSS
Web Development: React, Next.js, TailwindCSS, Node.js, Express
Tools/Technology: Git, Prisma, Axios, MongoDB, LaTeX, npm, pandas, Numpy, Matplotlib, scikit-learn, seaborn

Experience

Engineering Intern — July 2020 – Feb. 2021
Traffic Control Engineering — *Brea, CA*

- Coordinated with the internal engineering team members to develop and deliver a variety of design plans
- Optimized team productivity by preparing detour designs and performing plan checking of traffic signals and signing/striping plans
- Utilized AutoCAD and Google Earth to build precise traffic engineering designs and plans, ensuring accuracy and alignment with project requirements.
- Facilitated reviews of the product or drawing submittals during the construction phase while proactively updating and maintaining databases and logs

Projects

RateMyItinerary | *JavaScript* | *HTML/CSS* | *Node.js* | *Express.js* | *MongoDB*

- Developed a full-stack web application that allows people to create and share itineraries
- Implemented a forum allowing users to post custom itineraries, search by keyword, and sort by location
- Facilitated the front-end skeleton using **HTML, CSS,** and **JavaScript** while using **Express** as the back-end web application framework
- Utilized **MongoDB** to allow each user to store their own unique itinerary

Aerosol Concentration Predictor | *Python* | *pandas* | *NumPy* | *Matplotlib* | *scikit-learn* | *seaborn*

- Built a machine learning model to analyze the relationship between weather conditions and atmospheric aerosol concentrations in the Los Angeles, California region
- Conducted KNN regression and used cross-validation to test KNN regression model with **.98** accuracy and **.002** MSE for predicting NOx levels
- Applied data cleaning and exploratory data analysis on a **2000+** observations dataset using tools such as **pandas, seaborn,** and **scikit-learn**

OrganicDB | *C++*

- Co-led a team of six to build a document data store from scratch for managing and processing large volumes of data for developers to use
- Accomplished execution of CRUD operations, advanced filtering, querying, and additional user-defined functions to enhance data management and retrieval capabilities.
- Implemented and executed comprehensive unit tests using **GoogleTest**, ensuring the accuracy and reliability of code functionality
- Leveraged the **rapidJSON** library to parse and generate JSON data in C++

MediaMate | *C++*

- Led a team of four to build a dynamic library database system that allows users to effortlessly add, edit, remove, and track their progress in movies and shows
- Demonstrated adherence to SOLID principles by employing proper software design patterns and ensuring code modularity and architecture
- Utilized **GoogleTest** for comprehensive unit testing and **Valgrind** for identifying and resolving potential memory leaks