

# David Liu

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## Education

### University of California San Diego

**M.S.** in Computer Science GPA: 3.75/4.0

Sep. 2022 - Jun. 2024

**B.S.** in Computer Science GPA: 3.76/4.0

Sep. 2018 - Jun. 2022

## Technical Skills

**Programming Languages:** HTML, CSS, JavaScript/TypeScript, Python

**Frameworks & Libraries:** React(Next.js), Vue.js, jQuery, Node.js, Express.js

**Cloud Service:** AWS, Firebase, Supabase

**Database:** MongoDB, PostgreSQL, Prisma

## Individual Project

**UUSphere** | React(Next.js), Typescript, Python, SQL

Mar. 2023 - Jun. 2023

- Architected a full-stack web app, designed to streamline the class selection process for 35,000+ UCSD students.
- Developed features including classmates searching, and instant messaging that enhanced user engagement.
- Scraped class data from UCSD's official website with python, and structured the data into the SQL database.
- Reduced TTFB by 400% through optimizing data structures and rendering techniques.
- Conducted user research and engaged in the beta testing with 60 users, leading to usability improvements.

## Experience

**Tract SWE Intern** | React, Javascript, Flask, AWS, OpenAI API

**Remote** Jun. 2023 - Sep. 2023

- Developed an AI chatbot for a web application that provides tailored outputs for 5,000+ early users by applying the RAG technique, which integrated the GPT model with the Mongodb database using LangChain.
- Deployed the Flask server with uWSGI and Nginx on AWS EC2, and set up https for data security.

**Charoen Pokphand Group SWE Intern** | Vue.js, Javascript, GraphQL

**Remote** Jun. 2021 - Sep. 2021

- Implemented a responsive website that helps promote the company's mission to 20,000+ customers.
- Developed an online code editor, including dashboard and file management, which enables synchronous coding.

## School Projects

**Roommate Finder** | Scrum, Next.js, Javascript, Firebase, Jest

Jan. 2023 - Mar. 2023

- Led a team of 5 students to develop a website enabling users to discover roommates match their preferences.
- Mapped out a strategic roadmap and deconstructed milestones into granular tasks, and distributed responsibilities among team members, which streamlined project execution and encouraged ownership.
- Cultivated effective teamwork through holding daily stand-up meetings and weekly sprint reviews.
- Documented the requirements specification for the product during the development, serving as a knowledge reservoir for future team members, expediting project comprehension and aiding in ongoing maintenance.

**Cloud-Based File Storage Server** | Golang

Jan. 2023 - Mar. 2023

- Developed a robust and scalable cloud-based file storage server based on the Raft Protocol utilizing Go.
- Guaranteed uninterrupted service availability and maintained data consistency, even with server failures.

## School Activities

**UCSD SMol Lab Research Assistant** | Javascript, jQuery, Firebase

**San Diego, CA** Sep. 2021 - Sep. 2022

- Publication: Lu Sun et al., *NewsGuesser: Using Curiosity to Reduce Selective Exposure*, CSCW, 2023.
- Developed a survey website with a data collection system to facilitate research on filter bubbles in news media.
- Gathered about 50 one-on-one surveys, instrumental in bolstering the empirical foundation of the research study.

**UCSD Department of CSE Undergraduate Tutor** | Haskell

**San Diego, CA** Sep. 2021 - Dec. 2021

- Planned and designed exams for the "Programming Languages" course with Prof. Polikarpova.
- Provided guidance during office hours to 60 students, supporting their learning of Haskell and Lambda calculus.