

Jiaqi Duan

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EDUCATION

UC Santa Cruz

- Master of Science in Computer Science and Engineering *Expected Dec 2025*
- Bachelor of Science in Computer Science and Engineering *Dec 2022*
- Bachelor of Art in Psychology *Dec 2022*

PROJECTS

Yi - A SaaS web app offering robust financial and business management *Apr 2024 - Present*

- Built a scalable front-end with **Next.js** and **TypeScript**, enhancing load times and interactions.
- Developed RESTful APIs with **Django REST Framework**, reducing latency and enhancing data retrieval.
- Implemented **Redux Toolkit** for state management, ensuring consistent data flow and better performance.
- Deployed **PostgreSQL** for scalable data storage, optimizing transactions and ensuring data integrity.

Pathways - An AI-driven web app facilitating self-directed learning *Aug 2023 - Present*

- Utilized **OpenAI APIs** with prompt engineering to generate personalized learning pathway for users.
- Managed real-time data with **Firebase** for synchronization and **RxJS** for handling asynchronous updates.
- Enhanced data handling and search capabilities with **Pinecone** for high-performance vector search and retrieval.
- Leveraged **LangChain** for advanced language model processing to improve user interaction and content generation.

PetWell - A pet care mobile app for calorie tracking and health monitoring *May 2024 - Present*

- Enabled multilingual support using **i18next**, providing language options for a diverse user base.
- Implemented **Django Allauth** for secure user authentication and streamlined account management.
- Developed cross-platform app with **React Native** and **Expo**, ensuring smooth iOS/Android performance.
- Integrated **Firebase Cloud Messaging** for push notifications, enhancing user engagement with timely reminders.

EXPERIENCE

Full Stack Developer & AI Research Lead, Tech4Good Lab – Santa Cruz, CA *June 2023 – Present*

- Led and mentored a team of **10** developers on the Pathways Application, providing technical oversight.
- Conducted thorough **user research** and refined the product based on extensive **literature reviews**.
- Developed key components of the application using **Solid.js**, **Express.js**, **Vite**, **TypeScript**, and **Figma**.
- Enhanced the **OpenAI Chat Creation API** with **prompt engineering** to improve performance and accuracy, and automated modules using **OpenAI Function Calling APIs** to streamline user interactions.

Backend Developer Intern, WayOps – Remote *July 2021 - August 2021*

- Collaborated with team members and advised management, aligning development with business goals.
- Improved **SQL** query performance through indexing and optimization techniques for faster data retrieval.
- Redesigned database schema using **normalization techniques** to reduce redundancy, resulting in faster query execution.

Coding Instructor, Code For Fun – Sunnyvale, CA *Feb 2023 - Dec 2023*

- Instructed over **5,000** students in programming, both in small and large group settings.
- Designed and employed curriculum to guide students in applying coding principles to real-world projects.
- Devised personalized learning plans using adaptive learning technologies, catering to diverse student needs

SKILLS

- **Programming Languages:** Python, JavaScript/TypeScript, Java, C/C++
- **Other Technologies:** React, Next.js, Tailwind CSS, Django, Django REST Framework, Express.js, Vite, Firebase, PostgreSQL, MongoDB, Unix/Linux
- **Languages:** English, Mandarin, Cantonese