

Fiona (Haijian Hou)

FULL STACK SOFTWARE ENGINEER

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I am passionate about web development and skilled in problem-solving. I thrive on learning new skills and getting knowledge. With 5 SCI/EI journal publications and 9 conference papers, I have a strong research background.

TECHNICAL SKILLS • JavaScript • Python • Flask • React • HTML/CSS • REDUX • EXPRESS • NODE • SQLITE

RELEVANT SKILLS • GitHub • VS Code • Figma • AWS • dbdiagram.io

PROJECTS

MUSEIC | [Github](#) | [Live](#)

React • Redux • Flask • Python • AWS

- AWS services are used for audio file storage. And **FLask**, **SQLAlchemy** are used to create and seed database tables for related info.
- A dropdown menu is implemented to manage the adding, updating and deleting operation, with **useState** hook and **onClick** handler to toggle its visibility.
- Implemented an **onClick** event handler to control the visibility of lyrics, allowing users to toggle the number of lines displayed. **Redux thunk** and **dispatch** are used to fetch lyrics and other data from the backend.
- implemented a feature to create a song using **useState**, **useEffect**, and **useDispatch**.

PUZZLEPAW | [Github](#) | [Live](#)

React • Redux • Flask • Python • AWS

- Implemented an auto-scrolling display for liked comments, allowing users to quickly view popular comments. Utilized **useRef** to calculate **clientWidth/scrollWidth** and **setInterval** to control the scrolling interval timing.
- Created sidebar with dog's latest information and used **Context** to store pairing parameters to control the sidebar open or close. Users can perform **CRUD** actions from the sidebars.
- Utilized **useState** to define a pairing parameter, and **setInterval** to update it at regular intervals. The updated parameter is used as an index of photo arrays that is fetched from the backend stored in **Redux** states.
- All photos are stored using **AWS** and **FormData** is used to receive inputs and send the data to the backend where **wt-form** is used to validate data before creating/updating operations and seeding/updating data in tables.

CastleBnB | [Github](#) | [Live](#)

React • Redux • Express • SQLITE • Sequelize

- implemented review management functionality using **redux** for state management, enabling users to seamlessly add, update, and delete their posted reviews.
- Implemented a feature to create new spots using **useState**, **useEffect**, and **useDispatch**.
- Implemented a review feature using **useState**, **onMouseEnter**, and **onMouseLeave** events, allowing users to rank spots with 1-5 stars.

EXPERIENCE

Volunteer • *Mira Mesa Library* • SD, CA

06/2023 — present

- Hosting a conversation group, English learners can practice and make friends in the group.

Worker II • *Del Mar Union School District* • SD, CA

5/2023 — 9/2024

- Selected as the Employee of the Month, earned best custom
- Created engineering handcrafts and provided a friendly environment to inspire kids' creativity.

Intern • *Sunway Communication NARI* • SD, CA

9/2022 — 3/2023

- Setup, maintain and measure TDoA and PDoA systems.
- Designed mmWave Dielectric Resonator Antenna (DRA) 1×8 mmWave DRA array, covered from 24.25 GHz-29.5 GHz and 37 GHz-43.5 GHz.

EDUCATION

APP ACADEMY • Full Stack Web Development

Completed 03/2025

Beijing JiaoTong University • Electromagnetic Field Theory and Microwave • Doctor's Degree • Beijing, China 2018

University of California • Visiting Student • San Diego, CA 2014-2015