

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 State hook and onClick handler to toggle its visibility.
- The onClick event handler is utilized to manage the visibility of lyrics. Users can toggle the number of lines displayed. The useEffect hook, along with Redux store's state is used to fetch lyrics and other relevant data from 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 the useContext hook 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 in the frontend 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 • Express • SQLITE • NODE

- Sequelize and express are utilized to manage data of spot and review to the frontend and useEffect, useSelector, and Redux store are employed to efficiently manage application state. CSS used to ensure a user-friendly and visually appealing interface.

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