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 to receive inputs and send the data to the backend wherewt-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, allowing to add new spots.
- 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

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