MENGXUAN LIANG

FULL STACK SOFTWARE ENGINEER

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TECHNICAL SKILLS

React.js, React Router, Redux, JavaScript, HTML, CSS, Python, Flask, Node.js, Express, SQL, SQLite3, PostgreSQL, Websocket, Git, AWS, Render, OpenAI, NLP, Prompt Engineering

PROJECTS

PAWBLR [Live](#) | [Github](#) •*React • Redux • Flask • Python • HTML5 • CSS3 • PostgreSQL • AWS • Websocket • OpenAI*
A social platform for pet lovers with posting, commenting, following, and AI-powered chat.

- **AI Assistant Integration:** Integrated OpenAI's GPT-3.5 Turbo for personalized dog care tips, behavior advice, and fun facts. Engineered AI prompts for dynamic responses, enhancing user interaction across both frontend and backend.
- **User Following System and Quick Find**: Developed a user following system using Redux for state management and Flask with Sequelize ORM for backend handling, allowing users to follow others and interact with posts. Created a quick find feature with SQLAlchemy and PostgreSQL for efficient querying, and integrated Redux thunks and reducers for managing asynchronous data fetching and updates.
- **Media Storag**e: Integrated AWS S3 for secure storage of user-uploaded media, utilizing pre-signed URLs for direct client-side uploads. Leveraged Flask for backend file handling and React for state management, optimizing performance and reducing server load.

SOLOCAMP [Live](#) | [Github](#) • *React • Redux • Flask • Python • HTML5 • CSS3 • PostgreSQL • Cloudinary*
A Bandcamp-inspired e-commerce web application empowering artists to showcase, stream, and sell their music.

- **Album Creation and Track Upload**: Developed an album management system, using useRef for file uploads and useState for managing album details. Integrated useEffect for data fetching and validation, and implemented backend file handling with Flask to ensure a smooth upload process for artists.
- **Two-Sided Platform**: Built a dual-sided platform with React, Redux, and Flask, leveraging useNavigate for navigation and useLoaderData for efficient data loading. Managed state with Redux and implemented RESTful API endpoints to support album management and user interactions.
- **Database Management**: Structured backend data with PostgreSQL and SQLAlchemy, using join tables to model many-to-many relationships between users and albums. Ensured data normalization and optimized query performance for scalable and efficient data retrieval.

WORK EXPERIENCE

Preschool Director & Teacher   Boston, MA   **July 2016 – June 2022**

- Pioneered the integration of technology in early education by introducing an app for parent communication, and utilizing digital tools for managing enrollment data. Created a tech-friendly environment that increased satisfaction and communication frequency by 20%, boosted enrollment rates by 5%, and reduced teacher workload by 10%.

EDUCATION

Full Stack Web Development   App Academy – 2024

Master of Arts | Educational Administration   University of Massachusetts – 2016

Master of Arts | British and American Literature   Southwest University – 2017