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 where users can post, comment, follow, like and engage in real-time interactions.

- **AI Assistant Integration**: Integrated an AI-powered assistant using the OpenAI API and GPT-3.5 Turbo for personalized dog care tips, behavior advice, and fun facts. Engineered NLP prompts to generate dynamic responses based on user queries, boosting user interaction and engagement on the platform.
- **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 Storage**: 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

Web Development	App Academy – 2024
Master of Arts	Educational Administration	University of Massachusetts – 2016
Master of Arts	British and American Literature	Southwest University – 2017