Kendall Lu

Software Engineer
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Technical Skills

Strong: Javascript(ES6+), HTML5/CSS3, React, Redux, Git, Webpack, NodeJS, Express, RESTful API, Async I/O, NoSQL, SQL
Experienced: React Native, D3.js, TDD (Jest, Enzyme), GraphQL, Redis, Docker, CI/CD, TravisCI, AWS(RDS/EC2/EBS/S3), Electron, Scrum, Agile

Experiences

React Blue | Software Engineer **2019**

- Architected with React-Redux and D3.js, an interactive React component tree visualization tool to streamline the process of blueprinting a React-file structure at scale, supporting complex parent/child node relationships and custom templating
- Implemented Redux state management to allow for application scalability with a predictable and immutable central store, while leveraging the time-travel dev tool to isolate transactions to allow for a more easily maintained/debugged codebase
- Reduced expensive D3 re-renders using React's Profiler to record render/commit phases along with performance metrics, followed by isolating, targeting and stress-testing throughput bottlenecks to ensure robustness of pertinent business logic
- Memoized props with React Hooks allowing D3 and React to concurrently paint 80% more nodes to the DOM
- Leveraged Local Storage to allow multi-platform (Electron and Web application) caching of non-sensitive data, proper state hydration on reload and delayed query executions of data on specific event listeners, which reduced latency by 40%
- Integrated React with D3.js to dynamically render potentially deeply nested component data and visualizing hierarchical algorithmic architecture by allowing users to observe subtrees of component dependencies in real-time
- Authored a collection of modular traversal and caching algorithms that rapidly inserts, deletes and mutates D3 hierarchy data, as well as implemented data structures to simplify the logic for a undo/redo feature, streamlining user experience
- Applied TDD utilizing Jest and Enzyme to develop a suite of unit and integration tests, that expedites iteration and feature addition, improves codebase stability and reduces manual testing while swiftly detecting unexpected outcomes
- Utilized React Router to create a control panel interface that establishes static routes in order to dynamically render distinct views, capitalizing on React's virtual DOM for boosted loading performance while increasing real estate for the D3 tree

Projects

Charity M. | *SPA for users to share non-profit contributions on social media outlets* **2019**

- Developed the front-end with React adhering to the Flux architecture's one-way data binding and automated reconciliation with fiber's optimized render/commit phases to the Virtual DOM to reduce unnecessary component re-rendering
- Deployed a Redis caching layer to propagate write-through caching at multiple entry points allowing for both efficient re-fetches of in-memory data and persistence of data

Dinder | *A cross-platform app for pairing your palate with the perfect meal* **2019**

***Dinder** - Mobile*

- Utilized React Native to architect a mobile version of the existing web application, leveraging native features such as gesture handlers for more fluid and responsive user interaction, and live reload to help consolidate the development process

***Dinder** - Web*

- Overhauled the previous codebase with React hooks for cleaner, more maintainable, and extendable component code by leveraging useEffect to combine component lifecycle method logic and useState to flatten state initialization
- Instituted Express' intuitive routing and middleware capabilities to make API calls to third-party APIs, filtered the data into a digestible format for our React client, and provided relevant response data upon successful API calls.
- Stored persistent and relational data with PostgreSQL to perform predictable queries for user accounts, restaurant information, and food image favorites while capitalizing on SQL's ability to maintain strict data integrity and atomicity

Pick and Choose | *a responsive SPA for budget travel and adventure* **2019**

- Engineered a Node.js/Express server to efficiently organize routing and chaining middleware, allowing for simplification of the process surrounding the handling of client-based HTTP requests and subsequent server responses to the front-end.
- Incorporated Bcrypts' one way hashing algorithms to prevent rainbow attacks as well as expediting authentication, and caching sensitive data in a deployed SQL database to allow for one to many relationships and guaranteeing data integrity

Education

University of California, Riverside **2015 - 2019**
School of Business and Administration, Finance Concentration

Public Talks

Ethiq Software Engineering Speaker Series | *React Hooks* **2019**

Interests

Finance and Tech Podcasts, Cheap wine "connoisseur", poppin' a cold one, League of Legends, exercise and healthy lifestyle