BRYAN LEE

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Technical Skills

Strong: JavaScript (ES6+), React (Context, Hooks, Fiber, Router), Redux, Node.js, Express, SQL, Postgres, NoSQL, Mongoose, Webpack, Version Control (git), OAuth, OOP, Chrome API

Skilled: Java, Python, Sass, AWS, CI/CD (Travis), Jest, Enzyme, Puppeteer, WebSocket, D3.js, Mapbox, Docker

Experience

Reactime | Full Stack Developer

- Reactime is a Chrome Extension for state debugging for React developers. Reactime has been featured in React Status, a newsletter for React developers, and has been nominated as the productivity booster in React Summit 2020
- Developed an NPM module and a browser extension for React that provides time travel functionality among state changes and displays interactive graphical representation of components to improve development workflow and debugging process
- Configured recursive traversal algorithm for React Fiber's FiberNode tree that inspects stateful components and adds middleware to setState methods to record state changes and enable communication between the application and Reactime
- Utilized Chrome API's message methods to create publisher/subscriber pattern, with background script as the message broker handling multiple instances of ports in sync, maintaining streamlined network between the application and Devtool panels
- Integrated D3 library to React to display data-driven visualization for stateful component hierarchy by formulating SVG elements in a tree diagram within lifecycle methods, enhancing user experience with interactive display of state changes and relationships
- Implemented React Hooks and Context API by refactoring class components to functional components, creating a single store of state using Flux design patterns, handling complex state logic with useReducer and eliminating unnecessary prop drilling
- Adopted Sass in designing the application interface to modularize styling and improve scalability by sharing common attributes
- Employed Travis CI to automate configuration and testing, forming better error detection and synchronous business operation
- Containerized the application with Docker image to keep consistency among development and production environment setting
- Published package in npm registry to work in conjunction with Chrome Web Store App to provide easier accessibility on Reactime

Open Source Projects

SchemaGen | Schema Generator for Non-Relational Database

- Introduced OAuth and stateless session-based JWT authentication to create effortless signup/login experience for clients, reduce the database queries with faster response time and avoid the need to design secure practices for storing sensitive user data
- Deployed Jest and Enzyme in test driven development to facilitate debugging and facilitate workflow process through ensuring function output in isolation and asserting component outputs with shallow rendering, in result of better code maintainability
- Used React Router to build a Single Page Application to render multiple static routes from client-side, minimizing server requests

Questroom | Multi User Web Platform for Public Utilities

- Applied Redux Thunk middleware to dispatch actions on a resolution of AJAX requests, creating sequential flow in action queue to prevent performance delay, keeping singleton pattern of the store and mapping response to needed components for optimization
- Utilized stateful session cookies to cache login credentials with persistent, long-lived data and prevent CSRF attack by encryption
- Secured sensitive client data via Bcrypt with native unidirectional hashing and salt rounds, safeguarding against dictionary attacks

Instaphoto | Geolocation Image Search Engine

- Leveraged 3rd-party WebGL mapping library to render user's live location and geographic coordinates easily in a map component
- Implemented SQL database to create Entity-Relationship Model through strongly defined schema, allowing to handle complex queries from relational tables, meet ACID compliance and maintain data consistency with integrity by strict type enforcement
- Arranged module bundler to increase flexibility and faster development through hot module reloading, in addition to configuring light file size by utilizing minification and uglification in transpiliation, providing efficient loading time of the application
- Constructed server side caching for popular data requests to decrease network traffic and enable database load balancing, optimizing transactional workload and solving latency issue in a multi-user setting

Education

Boston College | B.S Computer Science   GPA 3.5, *Expected May 2021*

Relevant Coursework | Algorithms, Network Science, Randomness and Computation (Python), Computer Systems, Database Systems & Applications, Linear Algebra, Abstract Mathematics, Multivariable Calculus, Probability, Mathematical Statistics

Skills and Interests

Public Talks | "SQL Database Management" *at Build With Code*   *Aug 2019, New York City*

Interests | Weight Lifting, Table Tennis, Investing , European Soccer, Mario Kart DS, The Office, Lofi Hip Hop, Cooking