Tommy Li

Software Engineer

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Technical Skills

Strong: JavaScript, React (Hooks, Router), Redux, Node.js, Express, SQL (PostgreSQL), NoSQL (MongoDB), GraphQL, Apollo, Authentication (bcrypt, OAuth 2.0, JWT), Docker, Webpack, Git/Github, OOP, Chart.js, Chakra UI, Material UI, Bootstrap, HTML/CSS/SASS
Experienced: TypeScript, TDD (Jest, Supertest, Puppeteer, React Testing Library), AWS (Devops), CI/CD (AWS CodePipeline), Heroku

Experience

Kensa | Software Engineer | OSLabs *2022 - Present*

- Developed GraphQL API monitoring app using React to dynamically generate components at runtime and maintain one-way data flow across the entire application, increasing scalability and creating a more intuitive debugging process
- Implemented a GraphQL IDE using Monaco Editor to allow users to test GraphQL queries, providing a one-stop testing and data-monitoring playground to speed up development process for GraphQL schemas and resolvers
- Created an npm package for app users to easily establish connection between Apollo server and a SQL database through an API key to collect and store query metrics of all requests that are sent to custom GraphQL API endpoints
- Used Redux Toolkit to allow React components to subscribe to a central store that holds a moderate amount of states that are needed in multiple places in the application, eliminating the need for prop drilling and preserving session state to be used across multiple pages
- Applied ChakraUI to greatly improve user interface and increase productivity during development process by making use of its large library of functional blocks to create customizable and reusable React components
- Created custom TypeScripts types and interfaces to leverage auto type-checking functionality to minimize bugs and prevent runtime errors, improving application scalability and facilitating cross-development among teams
- Integrated Apollo Server to an Express backend to communicate with SQL database and provide a self-documenting GraphQL API to the frontend for faster request queries with strongly typed schemas and fields that provide descriptive error messages before execution
- Incorporated Apollo Client to create custom React hooks using predefined GraphQL fields to query the exact data and resources from SQL database in a single request on the client side, eliminating over-fetching or under-fetching problems
- Containerized application using Docker to create standardized and highly portable environments for hosting purposes
- Deployed application using AWS Elastic Beanstalk and setup Cloudfront distribution to direct all incoming traffic to registered domain name as well as sending all outgoing requests using a secure HTTPS port (kensats.link)

Open Source Projects

MonoJstick | Code snippet sharing app

- Created code snippets sharing app with React, leveraging virtual DOM to allow for faster DOM operations in a single page application
- Integrated React-Router to generate new routes and dynamically handle client-side routing, centralizing all routes in one component to provide seamless user experience in a single page application by mitigating component re-renders
- Used Firebase Authentication SDK to build secure multi-platform authentications and user creation and management

Rumblr | Earthquake information app

- Implemented Node/Express server to handle user load with event-driven, non-blocking input/output calls, integrating custom multi-layer middleware controlling dynamic response formats to execute asynchronous tasks
- Incorporated USGS API into backend controllers to retrieve and purify a myriad of earthquake data, simplifying frontend data retrieval
- Followed TDD with Jest and Supertest to ensure all REST API endpoints are operating properly and able to handle various edge cases throughout development, helping the app to scale by alerting any breaking changes when adding additional features
- Used Material-UI to improve the UX design, fix inconsistencies across browsers and devices with reusable components

Education

California Polytechnic State University, San Luis Obispo, CA | Bachelor of Architecture *2016 - 2021*

Tech Talk

Jeeny and Bractlet Speakers Series - Serverless Architecture (Lambda)

Interests

Indoor Bouldering | Hiking Mt Baldy | Listening to alternative rock (Maneskin, Polyphia) | Playing Overwatch | Working out | Playing Guitar | Sketching buildings | Cooking Italian dishes | Reading sci-fi books | Browsing architecture news | Doing house repair and maintenance