Dhruv Thota

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Technical Skills

JavaScript (ES6+), React.js, Node.js, Express.js, SQL (Postgres, MySQL), NoSQL (MongoDB, Redis), TypeScript, Sass, Git, GraphQL, Webpack, REST APIs, Tailwind CSS, AWS (RDS, EC2), Jest, Supertest, Redux, CI/CD (Travis CI), OAuth

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Experience

Cachier | *Software Engineer* | Library of GraphQL caching solutions GitHub.com/oslabs-beta/Cache-MoneyQL *2022 - Present*

- Co-authored and published a scoped lightweight npm package that provides browser-side & server-side GraphQL caching solutions, with custom eviction policies and option for partial retrieval of queries, reducing query latency time by up to 90%.
- Integrated React hooks and GraphQL API to centralize state management allowing streamlined data flow, reducing prop drilling complications across multilayered nested components, implementing clean code practices to decrease initial load time by 60%.
- Displayed GraphQL API request/response data using React's custom component structure and unidirectional data flow, leading to minimal DOM re-rendering and accelerating app development.
- Designed a cache eviction policy (LRU-SLFR) that optimized space and time complexity (constant lookup) via linked-hashmaps, latency metrics and query recency to ensure rapid insertion/deletion, maintaining cache storage efficiently.
- Leveraged GraphQL introspection to implement cache normalization, allowing partial query retrievals, minimizing re-fetching and reducing requests to the database by upwards of 75%.
- Used React Router, reusable components and PostCSS transpiling to build a multi-page, interactive, real-time demo app to visualize query speed enhancements, and business insight into strategic cache evictions for developers.
- Introduced TDD via Supertest and Jest for writing unit, integration tests to ensure scalability as features evolved.
- Managed agile process with daily scrum meetings. Set sprint cycle goals, leading to a 20% increase in weekly commits.
- Product developed under tech accelerator OS Labs.

Open Source Projects *2020 - 2022*

Quitr | *Addiction breaking app with streaks and buddy system*

- Implemented a SQL database due to its efficiency in querying and joining relational user and habit data. Sanitized user input, reinforced ACID compliance and persisted user data through structured schemas.
- Programmed styled components to accelerate client page load time. Elevated interactivity of user experience with React to keep users coming back to the app (achieving 44% daily usage during test deployment) so their habit breaking journey is consistent.
- Created Webpack configuration for hot module replacement and effectively managed static assets in order to have control over app's bundling and optimize web performance.

Jushin | *Online web reception chat room*

- Used WebRTC and WebSocket library to implement real-time peer-to-peer video/audio conferencing.
- Implemented React Router for low latency page transitions and reducing server load in a multi-page web app.
- Containerized and deployed app along with a PeerJS server to allow multiple connections.

Nurture | *School administration software to manage student workload*

- Programmed a RESTful API in a Node.js server with Express with asynchronous functionality to handle requests to a SQL database.
- Incorporated join tables to efficiently handle relational data storage and allow for effective app scalability.
- Enforced data security protocols by integrating strict user authentication and verification systems via Bcrypt, JWT and session cookies to persist users through the application.

Public Talks & Publications

Security (Encryption, XSS, CSRF) | Jeeny & Bractlet Tech Talk Speaker Series *2022*
"Cachier: Lightweight GraphQL caching tool" - Medium article

Education

Stony Brook University - Bachelor of Science, Dean's List, SB Computing Society

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Interests & Hobbies

Woodworking: longboard, birdhouses, silhouette artwork. Kickboxing, basement boxing, snowboarding, weightlifting. Avid gamer.