

# Dylan Compton

## Full-Stack Software Engineer

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### Technical Skills & Technologies

Languages and Frameworks: *TypeScript, GraphQL, React, Vue.js, Express, Jest, Vitest, JavaScript (ES6), SCSS, CSS, HTML5*

Technologies: *Redis, Redux, Node.JS, SQL (PostgreSQL), NoSQL (MongoDB), Bun, Vite, Webpack, CI (Netlify), MS Office, AWS, Docker*

### Experiences

#### Software Engineer | *BuQL (Hosted by OSLabs)* | December 2023 - Present

- Built the product in **Bun** to introduce a server-side GraphQL caching solution and, through Bun's use of the JavaScriptCore engine and Zig language, optimized start and response times from the database or cache.
- Headed **GraphQL** query security by identifying **rate and cost limitation** solutions and introducing an optional sanitization middleware that verified queries against an allow list, reducing injection risk and blocking ~25% of characters.
- Advocated for the use of **ioredis** over **Redis** for the superior DX and 5.25% smaller set/get latency, noting the syntactic differences as irrelevant given the scope; subsequently established the **ioredis** connection.
- Integrated **Vite** for better build times and **HMR** speeds, prioritizing performance in the npm package; Vite also introduced Rollup's **tree-shaking** algorithm for asset optimization (~8% smaller bundle sizes for medium-sized applications).
- Leveraged **MongoDB**, and the ORM **Mongoose**, for the frontend demo's data, allowing for schema flexibility and potential horizontal scaling for more advanced demonstrations; MongoDB's focus on DX sustained development productivity.
- Wrote tests via **bun test**, enabling **custom match extensions** for future iteration and independence from cumbersome testing frameworks such as Jest (40% size increase), without sacrificing versatility, such as UI and DOM testing.

### Open Source

#### Software Engineer | *Cyber Stars* | March 2024

- Implemented **PostgreSQL** to store 33% of the structured and predictable data retrieved from the **NASA API**, taking into consideration the read-heavy nature of the app and the data's predictable types and schema structures.
- Tested authentication with **Vitest**, for competitive testing speeds, as well as the simplistic configuration that bettered the DX; this permitted a **multithreaded** approach while avoiding an encumbered application (34% smaller than Jest equivalent).

#### Software Engineer | *coolercards* | January 2024

- Iterated on a middleware design pattern written using **Express** for **HTTP/API endpoint** requests, allowing for code modularity via router and controller files that, alongside the Express informational ecosystem, kept debugging more straightforward.
- Improved test code coverage with **Jest** by 25%, testing the back-end before continuing on the iteration; the minimal configuration and the shortened feedback loops from parallel execution enabled an expedited iteration process.

#### Software Engineer | *The Stockyards* | January 2024

- Synthesized 5 **React** components, such as the user portfolio and news display, and took advantage of the **virtual DOM** to provide efficient, browser-agnostic DOM manipulation, aligning the application with **Flux architecture**.
- Deployed **Webpack** to maintain flexibility for plug-in options and configuration in anticipation for iteration; the accommodation to ES6+ syntax made it particularly suitable as the **Node.js** application's HMR and code uglification tool.

### Education

- Codesmith | *Advanced Residency for Software Engineering* | December 2023 - March 2024
- Honors Student, Honors Ambassador (3.6 GPA) | *Austin Community College* | August 2022 - May 2023

### Talks/Publications

- [Docker Image Security Tech Talk](#):: "Overview of seven general precautions engineers should take when creating images."
- [CI/CD Security Tech Talk](#): "Virtual presentation on why CI/CD security is important, case studies, and common solutions"
- [Medium.com](#): Looking for a GraphQL caching solution in Bun? It's time to BuQL Up

**Hobbies & Interests:** Free soloing in Austin; tastefully smack talking fantasy football league competitors (NFL); joining fantasy roleplaying campaigns that get rescheduled to oblivion