

Ryan McDaniel

Senior Software Engineer

508.446.6070 · rp.mcdan@gmail.com · github.com/ryanmcd118 · linkedin.com/in/ryanpmcdaniel · ryanmcdaniel.io

TECHNICAL SKILLS

JavaScript, TypeScript, React, Redux, Node.js, Express, SQL (PostgreSQL), NoSQL (MongoDB / Mongoose), Docker, AWS, CI/CD (GitHub Actions), HTML5, CSS/Sass, GraphQL, Webpack, TDD (RTL, Jest, Mocha), Version Control (git), WebSockets

EXPERIENCE

Senior Software Engineer & Team Lead, **CS Engineering**

May 2022 - Present

Software Engineer & Engineering Instructor

May 2021 - May 2022

- Maintained ed tech learning platform, public site, and internal tooling built with TypeScript, React, Redux, Postgres, and Node/Express, tested with Jest/RTL/Cypress, and streamlined with Docker and GitHub Actions.
- Spearheaded React-Redux codebase modernization, delivering major version updates to core application dependencies and achieving 100% class to functional component migration, resulting in a significant reduction of technical debt.
- Implemented React Testing Library and Jest for comprehensive unit and integration testing, simulating real-world user interactions in order to identify defects early, verify complex renders, and enable quicker debugging cycles.
- Contributed to large-scale TypeScript migration aimed at improving application maintainability and scalability, ultimately resulting in a 30% decrease in bug reports and a cleaner code architecture.
- Optimized central Node/Express logic by eliminating unnecessary queries and streamlining middleware, leading to increased platform reliability, targeted UX improvements, and expanded functionality in a pivotal internal tool.
- Developed a GitHub API integration to enable granular permission management across an array of company repositories, reducing administrative overhead and enhancing security measures for both technical and non-technical team members.
- Led a team of 7 engineers through a long-term platform overhaul via frequent in-depth code reviews, direct feedback, pair programming, and help desking, while adhering to a scrum workflow for timely feature launches.
- Delivered technical training to hundreds of junior engineers on core full-stack technologies and fundamental computer science concepts, strengthening proprietary curriculum and orchestrating large-scale technical growth.
- Managed 10 contractors and 2 full-time direct reports, improving organizational strength via expanded training processes, professionalized documentation, team culture cultivation, cross-division collaboration, and consistent process iteration.

Software Engineer, **lexiQL** - GraphQL migration aid developed under tech accelerator **OSLabs**

Feb 2021 - May 2021

- Engineered an algorithm to automate the generation of comprehensive GraphQL schemas from relational database inputs, facilitating the developer transition from a traditional RESTful architecture to GraphQL's efficient single-endpoint design.
- Leveraged React Context API and hooks to manage stateful logic in order to avoid unnecessary re-rendering, decrease error potential by eliminating unnecessary prop-drilling, and enable more declarative code.
- Used React Router to create dynamic, declarative routes within a single page application (SPA), decreasing server calls with client-side routing while displaying multiple page views and measurably improving application load time.
- Applied React Flow for interactive visualization of relational database tables and relationships, generating graphical representations of abstract concepts to facilitate better planning, faster debugging, and optimization across a dev team.
- Integrated Node.js and Express for efficient GraphQL query processing via custom middleware, capitalizing on Node's non-blocking I/O capabilities to boost API performance and reliability.

SELECTED PROJECTS

algoLife - Algorithm-solving platform with in-browser Mocha/Chai testing

- Employed TypeScript's static typing system in order to significantly reduce runtime errors and boost code predictability, resulting in increased developer productivity and accelerated development cycles.
- Deployed PostgreSQL database to organize extensible one-to-many relationships between tables while minimizing potential bugs with strictly enforced schemas, ensuring consistent and durable storage of user data.

Yak - Websocket-powered anonymous live message board

- Injected Redux to manage state in a modular React component architecture, producing a responsive SPA with limited prop-drilling and targeted re-renders, resulting in enhanced scalability and easier debugging.
- Facilitated real-time user posting by employing WebSockets, harnessing fast reaction time and continuous updates to handle high-frequency messaging and up/downvoting with small payloads, enabling a synchronous interactive UX.

PUBLIC TALKS & WORKSHOPS

JSHP Series, 2022-2024, Async JS; Classes, Prototypes, & OOP; Closure; Higher Order Functions & Callbacks; Recursion

Intro JS Series, 2021-2022, Variables, Control Flow, & Looping; Functions & Objects; Intro to HTML & CSS

SingleSprout Speaker Series, 2021, Frontend Framework Alternatives in the React Era

EDUCATION

Smith College, BA

Codesmith, Advanced Residency for Software Engineering

INTERESTS

Scuba diving, amateur mycology, pineapple pizza, and slowly consuming the half-read books piled up on my bedside table