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# Maxwell Reed

## A (curious) Software Engineer

[maxjreed.dev](https://maxjreed.dev)

### SKILLS

ReactJS / NextJS, Rust, React Router, Redux, Tanstack Table, Tanstack Query, styled-components, Material UI (MUI), Semantic UI, TailwindCSS / Sass, HTML 5 / CSS 3, JavaScript / TypeScript, Apollo / urql / GraphQL, Vite / Vitest / Jest, Cypress/Playwright, Storybook, Git / GitHub (Version Control), NodeJS / Express / PostgreSQL/MySQL, Databases (Relational / NoSQL), MongoDB, Python (Flask, Quart), Streamlit, langchain, pinecone, ChromaDB, AI (Copilot, gpt-3.5-Turbo, Stable Diffusion), Web Accessibility (Wave, a11y, WCAG 2.1, WAI-ARIA), Stripe, RESTful APIs, AWS / Cloudflare / Vercel, Webpack, Flatfile, SQLAlchemy, BryntumGantt, Mocha / Chai, Angular

### EXPERIENCE

#### Pacific Health: Irvine — Senior Software Engineer (TypeScript, React, Rust)

January 2025 – Present

- Led the architectural and technical design as a two-engineer team, launching a complex scheduling product from conception to production, now serving **17,000+ monthly users** on a **Rust, GraphQL**, and **React** stack.
- Contributed to a metadata-driven backend framework (**YAML/CSV** → **Rust/SQL/GraphQL** codegen), where schemas, CTE-based queries, and seed SQL are generated from declarative configs—dramatically accelerating schema evolution and reducing boilerplate.
- Designed, built, and shipped a fullstack scheduling platform in 9 months that handles tens of thousands of schedules, supports role-based access control, and reduces operational workflow times by **80%+**.
- Architected and shipped a **Rust** based sync service using procedural macros and a custom semantic-matching DSL to map complex FHIR-like MongoDB documents to normalized SQL tables—safely syncing **100k+ documents** into PostgreSQL via Kafka consumers and direct DB pipelines to establish a single source of truth.
- Built a reusable **GraphQL** filter engine used across the application that composes nested filters, sorting, and pagination into type-safe **JSON** structures eliminating repetitive query wiring and enabling performant and highly composable filtering on the frontend.
- Collaborating with the security team to implement a full-stack OIDC/PKCE authentication flow in **Rust** and **TypeScript** to strengthen platform security and user authorization.
- Providing guidance on Jira points estimations and **React** best practices on the development team.
- Replaced **Redux** with a **Jotai + Apollo** state architecture, enabling complex UI interactions, reducing global state complexity, and significantly increasing team development velocity and code quality/readability.
- Designed and built advanced scheduling UX features such as drag-and-drop personnel assignment, calendar filtering, time-range conflict checks, and role-aware views surfacing availability constraints directly in the calendar experience.
- Provided technical leadership across the stack by owning key architectural decisions, reviewing Rust/TypeScript changes, helping estimate and break down Jira work, and coaching teammates on **Frontend** performance, **GraphQL** patterns, and backend best practices.
- Drove enterprise-wide data access improvements by presenting architectural diagrams that exposed data integrity issues to an architecture council, enabling cross-team alignment and adoption.
- Streamlining the frontend development process by identifying points of redundancy and addressing issues.

#### Persistent Technologies: Remote— Senior Software Engineer (TypeScript, React, Python/ Flask, TailwindCSS, Databricks, Azure, Streamlit)

May 2024 – Present

- Designing features, guiding technological choices and leading a team of engineers to execute on various AI healthcare products.
- Decomposing products into roadmaps and manageable tasks using **Linear** (now **Jira**) and assigning tickets to the engineering team.
- Leveraging **Git** and **Github** for version control and contributing to pull request reviews, increasing team code quality.
- Designing and building AI products, and architecting a system solution leveraging RAG (Retrieval Augmented Generation) using **Python/Flask**, **langchain** and **Pinecone** and other cutting edge/modern web tools and frameworks.
- Designing intuitive frontends using **Streamlit** and **React** for multiple AI proof of concepts and business proposal applications.
- Contributing to the design and execution of AI products leveraging RAG and AI models like **Llama-3**, **OpenAI GPT's**, and **Gemini**.
- Utilizing **Azure** AI services to create resource groups and develop endpoints for connecting to various AI providers.

## ComplyAI: Los Angeles — Lead Frontend Engineer (React, TypeScript, GraphQL, Python/Flask, AWS)

September 2023 – December 2024

- Designing and building various custom dashboards using **React**, **HTML**, **CSS**, and **TypeScript** for enhanced data visualization.
- Administering a **React** state management solution using a combination of **Zustand**, hooks, and **tanstack-query**.
- Architecting a new frontend Codebase from scratch (**React**, **Vite**, **TailwindCSS**) utilizing best practices.
- Building data charts using a combination of **Recharts** for visualization, and **Python/Flask** for data retrieval.
- Designing and implementing authn/authz flows leveraging **Auth0**, in **React**, **Python** and building out an RBAC system according to OWASP best practices.
- Building multiple mobile responsive views and components leveraging **TanStack-table**, **TanStack-query**, and **TailwindCSS** styling.

## First Resonance: Los Angeles — Frontend Engineer (React, Tailwind, TypeScript, GraphQL)

April 2022 – March 2023

- Improved performance by **200%** on multiple app views by optimizing **Apollo** queries and mutations using the **React** profiler.
- Spearheading performance improvements by up to **25%** of **Apollo** queries and mutations utilizing **caching**; building custom **React** hooks to improve the functionality of frontend websites allowing faster development and improving developer experience.
- Identifying security and performance issues utilizing **webpack-bundle-analyzer** to find out-of-date dependencies reducing bundle size by **15%** improving performance.
- Providing constructive feedback during code reviews using **Git/Github** addressing issues before merging changes into production.

## Apple: San Francisco — Software Engineer (React, Sass, TypeScript, Cypress, Playwright)

August 2021 – June 2022

- Troubleshooting and resolving critical issues (e.g., **React** and **Typescript**), such as preventing further bugs and unblocking critical features on core internal **Apple** applications; building out accessible and mobile-responsive **React** features with **Ant Design**.
- Optimizing **Cypress** and **Playwright** testing suites thus enabling comprehensive integration and end-to-end testing from **0% to 75%+** code coverage for multiple internal applications.

## Freelance: Los Angeles — Software Engineer (ReactJS, TypeScript, TailwindCSS, NextJS)

2020, June 2023 – Present

- Planning, co-designing and building a mobile-first website for Colearnable (**NextJS**, **React**, **TypeScript**, **TailwindCSS**) as well as implementing accessibility following **WCAG 2.1** guidelines with **Wave**.

## Education

Western Governors University BS Software Engineering - (2026) Projected Graduation

Chapman University BA Communications Studies(ip) - 2014-2016

## Certifications

Codesmith Software Engineering Immersive Graduate (LA41) - March 2021

- Graduated top of class in a program with a 5% admission rate, specializing in comp. sci. and web dev fundamentals.

## Projects

### Quikhub (SolidJS, TypeScript, TailwindCSS)

- A **SolidJS** dashboard application leveraging signals and functional reactive programming concepts to view commit history with timestamps, user repos, and organizations, grouped by day to make it easier to fill out my timecards.
- Leveraging **Github's GraphQL** API fetching user repos and history, displaying that information in an intuitive way.

### GandalficusAI (React, NextJS, TypeScript, Sass)

2023 – Present

- **NextJS/React/MongoDB** chat application using SSO. Tweaked an AI model to respond like Gandalf.