

Rahul Agarwal

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Summary

Lead Software Engineer with 7 years of experience architecting scalable web applications, UI systems, and developer infrastructure. Led technical initiatives spanning security-compliant Web SDKs, browser databases, and Web Vitals performance optimization. Skilled in driving product delivery via React/Next.js, CI/CD, and AI-assisted workflows.

Skills

Languages: TypeScript, JavaScript (ES6+), HTML5, CSS3/SCSS, Python, SQL

Frontend Architecture: React, Next.js, Redux, Web Vitals & Performance Optimization, REST APIs, Micro-frontends

UI & Browser Storage: Tailwind CSS, Material UI, Shadcn UI, Recharts, IndexedDB (Dexie.js), DuckDB (WASM)

Build, Testing & CI/CD: Jest, React Testing Library, Playwright, Storybook, Webpack, Vite, Turborepo, GitHub Actions

AI & Developer Workflows: Claude Code, Dynamic Workflows, Loop Engineering, Model Context Protocol (MCP)

Experience

R Systems (Client - Spreedly) - Lead Engineer

September 2025 - Present

Payment Orchestration platform enabling secure card vaulting and multi-gateway transactions for enterprise merchants.

- Owned end-to-end architecture and delivery of Spreedly's **payment card Web SDK**, enabling **PCI DSS** compliance across **40+ card brands** with Hosted Fields (iframe inputs) and Express Checkout (React payment form).
- Consolidated bifurcated app repositories into a single monorepo, reducing **codebase size by 12K LOC** and unifying deployment pipelines to accelerate feature delivery and reduce technical debt.
- Expanded SDK payment capabilities by integrating **3D Secure (3DS)** to reduce fraud liability, and added alternative payment methods (PayPal, Stripe, Venmo, Click to Pay, ACH) to enable multi-gateway transaction flexibility.
- Engineered automated CI/CD pipelines featuring strict security gates (**SBOM, SRI hashes, test coverage**), eliminating manual errors and ensuring 100% release compliance.
- Built a full-suite reference app and developer documentation covering all SDK flows (tokenization, 3DS, APMs) to streamline merchant onboarding and testing.

Tech Stack: JavaScript, TypeScript, React, CSS, MUI, Github Actions, Playwright

Velotio Technologies (Client - LeversLabs) - Tech Lead

March 2024 - September 2025

LeversLabs transforms organizational data into actionable insights through rich, interactive charts and visualizations.

- Engineered a **client-side caching layer** with **IndexedDB** and **Dexie.js**, reducing API calls by **80%** and significantly accelerating data access.
- Built a **client-side querying engine** with **DuckDB**, enabling instant SQL operations on parquet files that cut server round trips by **60%**.
- Developed **20+ highly customized Recharts visualizations** for metric-based stories and forecasts.
- Created a **15+ component library** using **Shadcn** and **Tailwind CSS**, complete with **Storybook** documentation.
- Architected the app using **Next.js App Router**, applying best practices for server/client components, layouts, pages, and Auth0-protected route handlers.
- Integrated **Auth0** for secure, tenant-separated **OAuth2.0** authentication and role-based authorization.

Tech Stack: Next.js, TypeScript, IndexedDB, Dexie.js, DuckDB, Recharts, Shadcn, Tailwind CSS, Auth0, Storybook

Velotio Technologies (Client - Resume.io) - Senior Software Engineer

May 2023 - March 2024

Resume.io is a leading online resume builder trusted by over 20 million users worldwide.

- Developed and optimized **12+ ATS compliant resume templates** for a platform with **20M+ users**.
- Built the **Japanese resume template**, helping attract **17,000+ new users** from the Japanese market.
- Led the development of **"Create with AI"** and **"Create with Examples"**, 2 of the app's 4 core resume building flows.

- Engineered complete **internationalization and localization** for the Japanese market, delivering a seamless multilingual user experience.
- Ran **10+ A/B tests** to iteratively improve UX based on user behavior and conversion data.

Tech Stack: React, Redux-Saga, Styled Components, React-PDF, jQuery, TypeScript, Phrase App for i18n and l10n

Velotio Technologies (Client - Thriveworks) - Senior Software Engineer

March 2021 - May 2023

Thriveworks is one of the largest providers of mental health counseling and therapy services in the US.

- Joined as one of the first frontend engineers; built a **responsive MVP** appointment booking tool within **3 months**.
- Improved **PageSpeed** scores from **45 to 81 (desktop)** and **16 to 50 (mobile)** via lazy loading, bundle optimizations, and other web vitals enhancements.
- Architected Redux state management with redux-persist, reducing redundant API calls by **30%** and improving app responsiveness.
- Led the refactor of a complex, **multi-page appointment booking flow** featuring Formik forms and Stripe payment integration, resulting in a **60%** reduction in user-reported bugs.
- Developed **30+** responsive and accessible components (modals, tabs, dropdowns, carousels, blog viewers) for the shared **UI library**.
- Spearheaded the development of **support, client** and **Thrivecare counselor dashboards**, eliminating multiple legacy systems and reducing support response time by **45%** while improving counselor workflow efficiency.
- Wrote comprehensive unit tests with **React Testing Library**, maintaining **80%+ code coverage**.

Tech Stack: React, Next.js, TypeScript, Bootstrap, SCSS, Redux, Formik, Stripe, React Testing Library

Tata Consultancy Services - Software Engineer

August 2019 - March 2021

- Developed the frontend of a Kubernetes-based Continuous Deployment platform using **React** and **Material UI**. Built 10+ reusable, scalable components.
- Delivered critical modules including **dashboard, CRUD flows, cluster integrations and management**.
- Built performant data tables with virtualization and client-side operations, enabling users to efficiently navigate and filter deployment logs and cluster metrics.

Tech Stack: React, Material UI, React Table, Docusaurus, JavaScript, TypeScript, HTML, SCSS

Awards

- **Outstanding Leadership award** for Q4 2024, Velotio Technologies
Led and mentored a 15+ engineer team to deliver an insurance product **under a fixed deadline**.

Education

- **PSIT, Kanpur** - B.Tech, Computer Science and Engineering
- **Guru Nanak Public School (CBSE)** - Intermediate

August 2015 - May 2019

2015