

Rahul Nayanegali

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TECHNICAL SKILLS

Frontend: React, TypeScript, JavaScript, Redux, React Query,

Backend: Java, Node.js, REST APIs, GraphQL

Architecture: Micro front-end, TDD, Workflow engines, domain modeling, modular architecture, SOLID, dependency inversion

Testing: Jest, Cypress, Playwright, Vitest

Cloud & DevOps: AWS (Lambda, S3, CloudWatch), CI/CD pipelines

Tools: Chrome Extensions, Vite/Webpack, Git

EXPERIENCE

Software Development Engineer

Jun 2025 – Present

Amazon

Seattle, WA

- Modernized a large legacy system using the Strangler Fig pattern, enabling incremental migration to a modular declarative architecture without production disruption.
- Designed and built **ActionWidget**, a reusable workflow engine powering multi-step compliance workflows with conditional logic, 10+ field types, uploads, and registry-backed state.
- Implemented a domain translation layer converting business APIs into generic workflow schemas, decoupling UI from domain logic and improving maintainability.
- Established clear feature boundaries (ActionWidget, PolicyWorkflow, ProactiveCompliance, IssueRemediation) with modular components, hooks, and utilities to improve composability and testability.
- Re-architected testing infrastructure by migrating Cypress to Playwright, slashing execution time by 98% (20m → 20s) and implementing BDD patterns that enable LLMs to autonomously generate test suites.

Software Engineer (Part-Time)

Jul 2023 – May 2025

Aquila Test

Remote

- Engineered a Chrome extension enabling a **no-code workflow** for enterprise Selenium suites by automating XPath collection, slashing setup time **from 2 days to under 20 minutes (95% reduction)**.
- Designed a service-oriented architecture and defined strict API interfaces with clear separation of concerns between UI, content scripts, and background processes.
- Enforced Test-Driven Development (TDD) and strict commit discipline (separating behavior vs. structure), mandating that all behavioral changes were backed by unit tests.

Software Engineer

Aug 2024 – Jun 2025

Shoptaki

New York, NY

- Championed the adoption of TypeScript across the engineering stack, establishing strict type safety standards that reduced runtime errors by 30% and accelerated developer velocity through improved tooling.
- Implemented reusable component library for SmartID with TypeScript & Storybook, reducing development time by 20% & maintaining UI consistency across web & mobile apps, enhancing scalability.
- Designed and optimized RESTful APIs using Node.js with ArangoDB, improving graph data retrieval and reducing backend processing time by 25%.

Web Development Engineer

Feb 2021 – Jan 2023

CodeCraft Technologies

Bangalore, India

- Built customizable survey, leaderboard, and voting UIs for enterprise clients.
- Modernized legacy JavaScript codebases to ES standards and migrated components to React.
- Migrated state management from Redux to Apollo Client, reducing codebase size by 20% and simplifying application architecture.
- Led the modernization of a legacy codebase by upgrading Webpack, Babel, and Material UI, reducing build time by 50%, decreasing technical debt by 60%, and increasing test coverage by 50%, resulting in 40% faster development speed.

Assistant Systems Engineer

Nov 2018 – Apr 2020

Tata Consultancy Services

Bangalore, India

- Built real-time IoT dashboards using React, Flask, SSE, and AWS Lambda for large-scale sensor monitoring.

- Integrated front-end applications with Flask APIs and RESTful services, handling authentication, data retrieval, and real-time updates to ensure seamless data flow.
- Collaborated with UI/UX designers to translate wireframes and prototypes into functional, visually appealing web interfaces, ensuring accessibility and consistency.
- Optimized front-end performance using techniques such as lazy loading, image compression, JavaScript minification, and elimination of render-blocking resources for faster load times.
- Managed source code efficiently using Git and GitHub, implementing version control best practices, code reviews, and structured branching strategies.

EDUCATION

Pace University

New York, NY

Master of Science in Computer Science

- Received the **Computer Science Departmental Award** for outstanding academic performance.