Rahul Anand Nayanegali

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SUMMARY

Software Engineer with extensive experience building scalable web applications using **React**, **TypeScript**, and **Micro Frontends**. Deep expertise in component architecture, state management, and modern frontend development practices. Proficient in **Python (Flask) and Node.js** for backend services, real-time data streaming, and data processing. Skilled in **robust API integration** and **error handling strategies**, driving technical excellence through **TDD** and **Clean Architecture**. Strong communicator who thrives on **pair programming**, knowledge sharing, and translating ambiguous business requirements into high-quality technical solutions.

TECHNICAL SKILLS

Frontend: React, TypeScript, Next.js, Web Components, JavaScript, State Management (Redux, Apollo Client)
Architecture: Micro Frontends (Module Federation), Monorepos (NX), Functional Programming, TDD, Clean Architecture, SOLID
AI-Augmented Engineering: AI-powered development workflows using Kiro, Claude Code, OpenCode CLI, MCP; Prompt engineering (CoT, Few-Shot) to accelerate delivery; context optimization for efficient AI collaboration.
Testing: React Testing Library, Jest, Playwright, Cypress
Backend: Python, Flask, Node.js, REST APIs, GraphQL, WebSockets, SSE (Real-Time)
Cloud & Tools: AWS (ECS, EC2, S3, Lambda, CloudFront), Docker, Chrome Extensions, Vite/Webpack, NX, Git, CI/CD pipelines
Soft Skills: Proactive Communication, Pair Programming, Code Reviews, Whiteboarding

EXPERIENCE

Software Development Engineer (Frontend)   Jun 2025 – Dec 2025
Amazon (Contract via Lares IT Solutions Inc)   *Seattle, WA*
 – Decoupled a business-critical **React + TypeScript** frontend using the **Strangler Fig** pattern, incrementally migrating legacy flows to **micro-frontends (Module Federation)** with zero production downtime.
 – Built and evolved schema-driven UI modules in **React**, contributing core capabilities to **ActionWidget**, a micro-frontend workflow engine that renders dynamic, compliance-heavy user flows.
 – Integrated complex backend APIs into the frontend through well-defined contracts, implementing robust **error handling**, validation, and edge-case management for high-reliability user journeys.
 – Designed AI-assisted testing workflows by authoring BDD-style specifications, enabling LLM-assisted autonomous generation of **Playwright** integration tests and expanding test coverage.
 – Raised code review quality by enforcing single-purpose diffs, separating structural refactors from behavioral changes to reduce cognitive load, isolate risk, and enable safer incremental evolution of the codebase.
 – Accelerated delivery and code quality through **pair programming**, design reviews, and shared frontend standards across a distributed engineering team.

Software Engineer   Aug 2024 – Jun 2025
Shoptaki   *New York, NY*
 – Implemented reusable components with TypeScript & Storybook, reducing development time by 20% & maintaining UI consistency across web & mobile apps, enhancing scalability.
 – Developed **Python** data processing pipelines and reporting services, leveraging PostgreSQL for structured storage and enabling analytics across the platform.
 – Designed and optimized RESTful APIs using Node.js and ArangoDB, improving data retrieval and reducing backend processing time by 25%.

Engineer, Web Development   Feb 2021 – Jan 2023
CodeCraft Technologies   *Bangalore, India*
 – Established a Test-Driven Development (TDD) environment for an IoT project by integrating React Storybook and Jest, which reduced post-deployment bugs by 40% and was adopted as the standard boilerplate for company projects.
 – Built and maintained backend services in **Node.js** and Python, deployed on Amazon ECS and EC2; utilized S3 for file storage and AWS Lambda for background data processing.
 – Migrated application state from Redux to Apollo Client (GraphQL), optimizing data fetching patterns and implementing a unified GraphQL infrastructure layer; eliminated boilerplate code and reduced bundle size by 20%.

- Integrated Storybook to decouple UI development from backend dependencies, enabling parallel development streams and ensuring rigorous component isolation for the UI library.
- Modernized the build infrastructure for a high-traffic streaming platform, optimizing asset delivery and upgrading Webpack/Babel to slash build times by 50% and enable ES6+ features.

Assistant Systems Engineer   Nov 2018 – Apr 2020
Tata Consultancy Services   *Bangalore, India*
- Built **real-time IoT dashboard** using React, Flask, and Server-Sent Events (SSE) for live sensor monitoring, handling continuous data streams at scale.
- Built backend services in **Python (Flask)**, exposing RESTful API endpoints for authentication, data retrieval, and real-time updates; integrated with React frontend for 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.

Sri Siddhartha Institute of Technology   Tumkur, India
Bachelor of Engineering in Electronics and Communication Engineering
- Received the Outstanding IEEE Student Volunteer Award

CERTIFICATIONS

AWS Certified Cloud Practitioner
Master JavaScript – LinkedIn Learning