Suguna Jayaram

Senior Software Engineer | React · Next.js · TypeScript · Node.js | Micro Frontends · Generative AI

Coimbatore (open to Chennai / Bengaluru) | +91 90434 05386 | sugufloyd01@gmail.com

LinkedIn | GitHub | Portfolio: sugunajayaram.tech | Available: Immediate

SUMMARY

Senior Software Engineer with 9+ years of experience building scalable, high-traffic web applications using React, TypeScript, Next.js and modern frontend architecture. Hands-on experience with **Micro Frontend (MFE) architecture**, reusable component systems, React Hooks, Redux, application integration, routing, state management and frontend performance optimization across **large-scale web applications and e-commerce platforms.** Strong experience working with cross-functional teams on modular frontend development, production debugging and independently delivered business features. More recently focused on **AI-integrated applications, LLM-powered workflows and Generative AI engineering.**

CORE SKILLS

Frontend & Architecture: React, Next.js, TypeScript, JavaScript, **Micro Frontend (MFE) Architecture**, Frontend Architecture, Application Integration, React Hooks, Redux Toolkit, Redux-Saga, Reusable Components, Routing, Tailwind CSS, Ant Design, HTML5/CSS3, Storybook

Backend & Data: Node.js, Express.js, REST APIs, Python, FastAPI, PostgreSQL, MongoDB, MySQL, Neo4j, FAISS

AI / GenAI: Claude API, OpenAI, Prompt Engineering, Hybrid RAG (FAISS + BM25 + RRF + Neo4j), Cross-Encoder Reranking, Corrective RAG, NeMo Guardrails, DeepEval, CrewAI, LangChain, Ollama, Human-in-the-Loop Design

Testing & DevOps: Jest, Cypress, Playwright, Docker, GitHub Actions, CI/CD, Vite, Webpack, Git

PROFESSIONAL EXPERIENCE

Senior Software Development Engineer Jun 2025 – Jun 2026

Cloud Assert Technologies · Client project: K-12 Cybersecurity Product

- Worked on a **Micro Frontend (MFE) architecture** for a large-scale web application, developing modular React applications aligned with independent business domains.
- Developed and maintained reusable **React and TypeScript components** within the MFE ecosystem, improving consistency and maintainability across frontend modules.
- Worked with **application routing, Redux state management, API integration and cross-module communication** within the Micro Frontend architecture.
- Collaborated with multiple frontend teams to integrate independently developed modules into a unified application experience.
- Built reusable dashboards and frontend workflows with a focus on performance, maintainability and production stability.
- Integrated **AI-powered content analysis using Claude API,** enabling intelligent analysis workflows within the application.
- Worked with **REST APIs, Docker, GitHub Actions and CI/CD workflows** for development and deployment.

Photon Interactive Pvt. Ltd. Mar 2022 – Jun 2025

Senior Software Engineer · Client project: US omnichannel retail e-commerce

- Worked on a large-scale **Micro Frontend (MFE) architecture** for a high-traffic e-commerce platform, developing and integrating independently managed frontend modules across key business domains.
- Developed React/Next.js modules including **Product Grid, Product Filter, Carousel and promotional experiences**, following modular frontend architecture and reusable component patterns.
- Built and maintained **shared React components and frontend utilities** to provide consistent UI behavior and reduce duplication across independently developed frontend modules.
- Worked with **React Hooks, Redux and Redux-Saga** for component state, application state and asynchronous business workflows within a modular frontend environment.
- Collaborated with multiple frontend teams to integrate MFE modules with the broader application, addressing **routing, state management, API integration, cross-module dependencies and UI consistency**.

- Migrated **40+ legacy class components to React Hooks** and optimised rendering, reducing re-renders by ~30% and improving page load time by ~20%.
- Replaced 6 third-party libraries with native implementations, shrinking the JavaScript bundle by ~18%.
- Managed production issues, performed code reviews and collaborated with cross-functional teams to deliver features across a large-scale distributed frontend codebase.
- Raised unit-test coverage to **80%+ with Jest and Enzyme** while maintaining quality across ongoing MFE feature development.

Merlion Apps Jun 2021 – Mar 2022

Senior Software Developer

- Built responsive React/TypeScript applications with Node.js, Express.js and MongoDB, delivering **5 business workflow modules and reusable UI components.**

Infognana Solutions (SRJ Info Jnana System Pvt. Ltd.) Nov 2019 – May 2021

Software Engineer (Project Delegate)

- Delivered HR, attendance, leave and payroll modules (CPF and overtime calculations) for Singapore-based clients using React, Node.js, PHP/Laravel and MySQL.
- Built an online learning platform (video/audio calls, quizzes, trial packages) and an appointment system with Singpass record validation.

Ardhas Technology India Pvt. Ltd. Sep 2017 – Jun 2019

Software Developer

- Built a school inspection module (scheduling, approval workflow, status tracking) and API services with PHP/Laravel, JavaScript and MySQL.

AI & AGENTIC AI PROJECTS (PERSONAL)

OrgPulse AI: Adaptive GraphRAG GitHub FastAPI · FAISS · BM25 · Neo4j · Streamlit

- Routes queries by intent, entities and complexity to either a fast hybrid path using **FAISS + BM25 + RRF** or an advanced path using HyDE, fusion queries, cross-encoder reranking and multi-hop Neo4j graph retrieval.
- Added corrective RAG and self-reflection to re-retrieve when context quality is weak; answers include sources, graph paths and confidence while flagging risks and contradictions across documents.

Hybrid RAG with Knowledge Graph GitHub FastAPI · FAISS · Neo4j · Docker

- Built Q&A over a large architecture PDF using section-aware chunking, FAISS + Neo4j retrieval, cross-encoder reranking and a grounded **GPT-4o-mini** prompt with source attribution.
- Added **NeMo Guardrails** for input/output validation and a **DeepEval** suite covering answer relevancy, faithfulness and contextual relevancy.

AI Sales & Lead Intelligence Team GitHub CrewAI · FastAPI · React · RAG

- Built a sequential CrewAI workflow with **7 specialized agents plus a discovery agent** to research companies, qualify leads, match opportunities to real services using RAG, fact-check claims and draft outreach.
- Added source-tracked claims, code-level validation, automated evaluation and **human approval before outbound communication.** Live demo: sales.sugunajayaram.tech

AI Web Automation Agent GitHub React · TypeScript · Python · FastAPI · Ollama · Playwright

- Built a browser agent that converts natural-language tasks into browser actions, observes page state, validates outcomes and replans after failures, with human approval required for sensitive actions.

EDUCATION

B.E. Computer Science | Nehru Institute of Engineering & Technology, Coimbatore | 2015