

SATHISH RAJA

Senior Full-Stack & AI Software Engineer | Node.js, React.js & GenAI Specialist

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PROFESSIONAL SUMMARY

Senior Software Engineer with 14+ years of progressive experience in full-stack web application development and AI-agent architectures across Singapore. Proven track record of designing distributed task-processing queues, optimizing Docker containerization to cut deployment errors by 50%, increasing API transaction throughput by 40%, and delivering 10+ production-grade applications across government, finance, robotics, and SaaS domains. Skilled in Node.js, React.js/Next.js, TypeScript, and modern GenAI frameworks including LangGraph, Retrieval-Augmented Generation (RAG), and the Model Context Protocol (MCP).

CORE TECHNICAL SKILLS

AI & LLM Architecture: LangGraph, Multi-Agent Orchestration, Retrieval-Augmented Generation (RAG), Model Context Protocol (MCP SDK), Qdrant Vector Database, Ollama, LangChain

Frontend Engineering: Next.js 16, React 19, TypeScript, Zustand, TanStack React Query, Tailwind CSS v4, Framer Motion, Redux Toolkit

Backend & Systems: Node.js, Express 5, BullMQ, Redis (ioredis), Mongoose, RESTful APIs, Microservices, System Design

Databases & DevOps: MongoDB Atlas, MySQL, PostgreSQL, Docker, AWS (EC2, S3), Nginx, CI/CD Pipelines (GitHub, Bitbucket)

Security & Utilities: JWT, Helmet, Express Rate Limit, Bcrypt, Zod Validation, Multer, Cloudinary, Automated Unit Testing (TDD)

PROFESSIONAL EXPERIENCE

Principal Full-Stack & AI Consultant (Independent) – SmartHireAI Platform Project

Independent Consulting | 10/2024 – Present | Singapore / Remote

- Architected and engineered an end-to-end, multi-tenant AI Applicant Tracking System (ATS) with secure routing dashboards for candidates, admins, HR recruiters, and hiring managers.
- Developed complex, non-linear recruiting workflows using @langchain/langgraph and @langchain/ollama to coordinate autonomous AI screening agents.
- Built a heavy-duty document parsing pipeline using pdf2json and pdfjs-dist to ingest candidate resumes into a local Qdrant vector database via semantic text embeddings.
- Implemented an asynchronous background worker cluster using BullMQ and Redis (ioredis) to handle long-running profile screening and ML candidate ranking without blocking the core API event loop.
- Shipped a highly interactive frontend using Next.js 16 (TurboPack), React 19, Zustand, and Tailwind CSS v4, featuring real-time data fetching with TanStack Query and interactive Kanban boards via dnd-kit.
- Deployed the Model Context Protocol (MCP SDK), enabling autonomous agents to safely read file states, trigger calendar tools, and dispatch high-deliverability candidate notifications via Resend and Nodemailer.

Senior Software Engineer

Konica Minolta Business Solutions Asia Pte Ltd | 12/2022 – 09/2024 | Singapore

- Developed and integrated high-scale enterprise full-stack software bridging internal engineering systems and international third-party hardware modules.
- Orchestrated containerized application pipelines using Docker, standardizing deployment environments and cutting staging-to-production deployment errors by 50%.
- Designed and implemented highly performant RESTful APIs for critical automated workflows, boosting overall data transaction throughput by 40%.
- Partnered with Business Development teams, analysts, and end-clients to translate enterprise requirements into modular software components and microservice parameters.
- Coordinated with cross-functional engineering teams to evaluate and enhance software-hardware interfaces for AMR systems, analyzing proposed technical solutions against customer requirements.
- Led code interfaces and software logic configuration for Autonomous Mobile Robots (AMRs), including MiR Robots and MiR Fleet allocation ecosystems.

Senior Software Consultant

Helius Technologies Pte Ltd | 02/2022 – 12/2022 | Singapore

- Shipped scalable enterprise web applications leveraging the Node.js ecosystem and contemporary client-side frameworks.
- Assured full backward-compatibility across rolling updates of feature rollouts on legacy code segments.
- Moderated tech-stack roadmap design reviews, driving strategic infrastructure decisions alongside engineering leaders.
- Delivered advanced technical support to resolve complex, multi-system integration challenges across project workstreams.

Senior Software Engineer

Unisoft Infotech Pte Ltd | 02/2021 – 01/2022 | Singapore

- Directed end-to-end development of client-facing platforms using Node.js backend patterns and modular React structures.
- Optimized database indexing routines and server processing pipelines to maintain low-latency responses for external consumer interfaces.
- Drove Agile sprint planning and retrospectives with the project manager, improving team velocity and delivery predictability.

Application Programmer

Optimum Solutions Pte Ltd | 08/2020 – 01/2021 | Singapore

- Built robust web interfaces for public-sector platforms, tuning UI components to pass rigorous government usability metrics.
- Developed RESTful APIs for a government initiative and integrated the eNETS payment gateway into a citizen-facing chatbot, improving transaction reliability.

Application Programmer

Housing & Development Board (via Talentvis) | 07/2017 – 08/2020 | Singapore

- Engineered the "Parking Auntie" chatbot platform, aggregating real-time geographic parking data across LTA, URA, and HDB sources.
- Implemented multi-tier photo-parsing routines enabling citizens to submit geographic photo notifications for automated verification.

Software Engineer

Cromly Pte Ltd | 04/2016 – 03/2017 | Singapore

- Developed and customized web applications using Node.js and Koa.js for a social media design portal, marking the transition to a full Node.js-based stack.
- Built API-centric, modular content infrastructure enabling interactions between home décor merchants and residential property owners, deployed on AWS EC2.

Software Engineer

Aspro Technologies | 09/2015 – 03/2016 | India

- Managed core relational schema optimizations using clean OOP principles across full-stack software applications.

Web Application Developer

iClick Media Pte Ltd | 11/2014 – 07/2015 | Singapore

- Programmed, debugged, and optimized corporate web properties powered by transactional database structures.

PHP Developer

Dons Infomedia | 12/2012 – 10/2014 | India

- Authored clean backend software patterns to resolve multi-tenant business process dependencies.

PHP Developer

Nangil Infotech | 02/2009 – 11/2012 | India

- Maintained consumer-facing portals using standard relational architectures and clean layout formats.

KEY PROJECT HIGHLIGHTS

- **sWorkflow (Konica Minolta):** Built a configurable automation platform orchestrating complex workflow scripts for autonomous robotics fleets, enabling seamless third-party device integration.
- **sInfra (Konica Minolta):** Engineered a multi-floor operations manager integrating elevator signals with robotic fleet routing APIs, with configurable mission scheduling.
- **sConnect (Konica Minolta):** Developed a real-time MiR robot monitoring application with graphical performance dashboards, giving operations teams live visibility for decision-making.
- **Insurance Policy Automation:** Scripted custom workflow schedules that minimized clerical processing operations for corporate finance systems.

EDUCATION

Bachelor of Engineering in Computer Science & Engineering

Anna University, Chennai, Tamil Nadu, India | 06/2004 – 04/2008