

PAALAMUGAN S

Staff Software Engineer · Full Stack JavaScript / TypeScript

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PROFESSIONAL SUMMARY

Staff Software Engineer with 9 years building and shipping scalable **full-stack platforms** in React, **TypeScript**, **Next.js**, **Node.js**, **GraphQL** and AWS. Owns products end to end: schema and API design, Next.js front ends, the CI/CD that releases them, and the architectural calls other teams escalate. Delivered across healthcare, logistics and SaaS.

TECHNICAL SKILLS

Frontend	React 19, Next.js, TypeScript, JavaScript, Angular, Vue, Svelte, Gatsby, Vite, Redux, Zustand, TanStack Query, React Hook Form, Tailwind CSS, Storybook, styled-components, Material UI
Architecture	Micro-frontends, single-spa, Module Federation, monorepos, design systems, component libraries, GraphQL federation, state management, scalable UI infrastructure
Backend	Node.js, Express, NestJS, GraphQL, AWS AppSync, REST, tRPC, AWS Lambda, Prisma, Sequelize, Socket.io, RabbitMQ, PubSub
Cloud & DevOps	AWS (Lambda, AppSync, API Gateway, Bedrock, S3, CloudFront, DynamoDB, Amplify, EC2, Cognito), Azure AD, Docker, Kubernetes, Jenkins, GitLab CI/CD, GitHub Actions, SonarQube
Testing & Tooling	Jest, Vitest, React Testing Library, Cypress, Playwright, Mocha, Chai, pnpm, esbuild, tsup, Changesets, Datadog RUM

PROFESSIONAL EXPERIENCE

Staff Software Engineer · Glidewell Dental

May 2023 - Present
Bangalore / Chennai, India

- Architected and delivered a Lab Management System (LMS) serving **500+** dental labs on **React 19, TypeScript, GraphQL and AWS AppSync**, cutting order processing time by ~35% and manual data-entry errors by ~60%.
- Led the migration from a monolithic **Angular** app to a React 19 micro-frontend ecosystem on single-spa, Vite Module Federation and SystemJS, enabling 5 independent team deployments and cutting release cycle time by ~50%.
- Engineered a React monorepo design system with 9 independently publishable npm packages, adopted across **4+** enterprise apps, reducing UI development time by ~40%.
- Designed and shipped an AI-powered Digital RX conversational platform on **AWS Bedrock** (Claude 3.5), MCP, React and AWS Lambda, cutting dentist consultation prep time by ~45%.
- Built an **MCP** server and client architecture with JSON-RPC workflows handling **1,000+** daily AI automation requests at sub-200ms average latency.
- Engineered a **GraphQL** gateway on AWS AppSync with pipeline resolvers and schema federation, cutting downstream API integration effort by ~30% across 3+ teams.
- Shipped payment scheduling and AutoPay workflows in **Next.js**, tRPC and TanStack Query, improving on-time payment rates and reducing billing support tickets.
- Standardized org-wide CI/CD on GitHub Actions across frontend, backend, ECS and serverless workloads, cutting deployment time from days to hours for **3+** engineering teams.
- Mentored **5+** engineers through architecture reviews, technical RFCs and pairing, reducing PR review cycle time by ~30% and raising team code quality.

Senior Software Engineer, Full Stack · Quantiphi Analytics Solutions

Aug 2021 - Apr 2023
Bangalore, India

- Architected micro-frontend modules for Maersk's global logistics platform in React, **Redux and TypeScript**, supporting **50,000+** daily active users and reducing cross-team integration effort by ~35%.
- Built and deployed secure **Node.js and Express** microservices with Prisma and TypeScript for General Motors' enterprise platform, holding **99.9%** uptime across 500+ concurrent requests.
- Extended Dialogflow CX with multilingual DOM integrations across **8+** languages for the AHCCCS healthcare platform, lifting chatbot engagement by ~40%.
- Optimized frontend build pipelines with custom Webpack configs, cutting production bundle size by ~45% and CI build time by ~30%.
- Established TDD and BDD infrastructure with **Jest, Cypress** and React Testing Library to **85%+** coverage, reducing the production bug rate by ~40%.

- Shipped full-stack features across 4 SaaS products (Atatus, ReplayBird, LeadMine, UI Inspector) serving **50,000+** end users, in React, **Angular, Vue, Node.js and TypeScript**.
- Architected distributed synthetic monitoring on **Node.js, Redis and ClickHouse**, running web, DNS, SSL and TCP checks from **10+** global regions.
- Built enterprise APM and browser monitoring for Atatus, adding application, infrastructure, logs and RUM capabilities used by **200+** enterprise clients.
- Engineered Stripe-powered subscription and billing systems in **Vue and TypeScript**, processing **\$1M+** ARR with zero payment downtime.
- Built a Chrome extension for session recording and playback with **10,000+** weekly active users and a **4.5+** star store rating.

Junior Software Engineer, then Software Developer · Add-On Technology / Muthu Soft Labs

Aug 2017 - Nov 2018
Chennai, India

- Built MEAN-stack e-commerce and enterprise web applications with **Angular**, React, Node.js, Express, TypeScript, Redux, Sequelize and MySQL.

SELECTED PROJECT

Multi-tenant SaaS CRM for a real-estate builder

Private client work, 2020

- Built the CRM on a pnpm and **Turborepo** monorepo: a Next.js 16 App Router app acting as BFF, a NestJS 12 REST API, and Prisma 7 on Postgres 16, all of it running from a Docker Compose stack with pgbouncer and Redis, and 233 row-level security policies enforcing tenant isolation across 32 models and five roles (owner, admin, manager, sales exec, telecaller).
- Integrated WhatsApp Cloud API messaging with webhook event handling and delivery status, Redis pub/sub behind an SSE service for realtime updates, an audit log, and consent tracking. **208 Vitest test files** cover tenant isolation, API contracts and booking flows, across roughly **130k lines** of TypeScript and 416 commits.

OPEN SOURCE & PROJECTS

- Published @paalstack/react-ui, @paalstack/react-hooks and @paalstack/react-icons, reusable React npm packages built around scalable frontend architecture and developer experience.
- Open-sourced a production-ready **React 19** micro-frontend starter with Vite Module Federation and single-spa, used by developers building enterprise micro-frontend architectures.
- Built paalamugan.com on **Next.js** with a **95+** Lighthouse score, covering performance engineering and modern frontend practice.

EDUCATION & CERTIFICATIONS

Bachelor of Engineering, Electronics & Communication Engineering

2013 - 2017

P.B College of Engineering, Chennai, India · Certifications: paalamugan.com/certifications