G. SATHISH

FULL-STACK & MOBILE SYSTEMS ENGINEER

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Open to Full-Time • Hybrid • Remote
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PROFESSIONAL SUMMARY

Full-Stack & Mobile Systems Engineer with 2+ years of production experience architecting offline-first mobile platforms, distributed real-time backends, and enterprise-grade cloud API infrastructure. Core expertise in Flutter/Dart, Node.js 22 (ESM), TypeScript, PostgreSQL, BullMQ, and AWS. Proven delivery record across cellular SMS gateways, offline-first supermarket POS, 3-app on-demand food delivery networks, and EdTech platforms — from native Android daemons to Google Play Store releases. Interactive system architectures and case studies available at **sathishdev.in**.

TECHNICAL SKILLS

Mobile Systems	Flutter · Dart · Kotlin Android · Drift ORM (SQLite WAL) · Offline-First Sync · ESC/POS Bluetooth · Foreground Services · Provider/MVVM
Backend & Queues	Node.js 22 (ESM) · Express 5 · TypeScript 5 · Prisma ORM 6 · BullMQ · Redis · WebSockets (ws) · Socket.io · Zod · AES-256-GCM · HMAC-SHA256
Frontend & Web	React 19 · Next.js 14 · Tailwind CSS 4 · Vite 6 · HTML5 · CSS3 · JavaScript ES6+
Databases	PostgreSQL 16 · Drift SQLite (WAL) · MongoDB · Firebase Firestore · Qdrant Vector DB
Cloud & DevOps	AWS EC2 · AWS S3 · Docker · Nginx Reverse Proxy · GitHub Actions · Linux Admin · CI/CD
AI & Ecosystem	RAG Pipelines · Qdrant Cloud · Groq LLaMA 3.1 · Server-Sent Events (SSE) · Meta Business API · Playwright

PROFESSIONAL EXPERIENCE

Full-Stack Software Engineer
Sep 2025 – Present
Dhigrowth, Coimbatore (Hybrid)

- Architected FlatSMS, a distributed cellular SMS gateway replacing commercial CPaaS providers (Twilio/MessageBird): engineered persistent WebSocket channels between Node.js 22 cloud control plane and native Kotlin Android telephony daemons, with Redis-backed BullMQ queues guaranteeing zero-loss message delivery and exponential retries under network partitions.
- Enforced cryptographic security for FlatSMS: implemented AES-256-GCM database payload encryption and HMAC-SHA256 signed outbound webhooks, enabling tamper-proof third-party delivery callbacks.
- Built MyShop, a 100% offline-first Flutter POS for retail grocery operations: leveraged Drift (SQLite WAL) for sub-millisecond local reads eliminating checkout counter freezes during network outages; engineered direct ESC/POS byte-stream Bluetooth thermal receipt printing achieving sub-300ms latency.
- Delivered Judah Food Delivery, an integrated 3-app ecosystem (Customer, Partner, Driver) synchronizing live order dispatch and GPS telemetry via bidirectional Socket.io channels; integrated Google Maps Directions API and Razorpay idempotent webhook transaction processing.
- Configured and deployed Nest Pilot (hostel management SaaS) backend infrastructure on AWS EC2 with Docker containerization, Nginx reverse proxy, and automated GitHub Actions CI/CD pipelines.

Flutter Mobile Developer
Jul 2024 – Sep 2025
Elanoxtech, Coimbatore (On-site)

- Developed Ovantica, a consumer re-commerce marketplace for refurbished smartphones: implemented diagnostic trade-in flows, real-time Firestore catalog feeds, and Razorpay payment gateway state machines.
- Built Virtual2Live, an immersive 360° virtual property and venue discovery platform: integrated panoramic video player, location-based venue search via Google Maps API, and Firebase social authentication.
- Engineered lalassa, a full-featured pet care booking application: built appointment scheduling with calendar conflict resolution, Firebase FCM push reminders, and verified veterinary listings.
- Optimized rendering pipelines across all mobile apps targeting sub-16ms frame delivery on mid-tier Android devices; reduced production APK sizes through unused asset purging and R8 minification.

Independent Software Engineer (Freelance) **Jun 2023 – Jun 2024**
Coimbatore & Karur, TN

- Designed and shipped Mayiliragu Academy LMS end-to-end: built cross-platform Flutter student app, React/Vite admin examination portal, and Node.js/Prisma backend on AWS EC2; integrated Google Drive API proxy pipelines for tamper-resistant video streaming and single-device binding via Firebase Auth.
- Built Premium Parts ERP for automotive distributors: engineered offline-first SQLite synchronization, geo-fenced attendance tracking, QR inventory barcode scanning, and automated PDF invoice generation.
- Delivered WhatsApp Sender SaaS via Meta Business Cloud API: implemented asynchronous BullMQ message queues, real-time webhook listeners for delivery receipt tracking, and rate limiting with token rotation.

FEATURED ENGINEERING PROJECTS

FlatSMS — Distributed Android SMS Gateway | Case Study • GitHub
Node.js 22 · TypeScript · BullMQ · Redis · WebSockets · Kotlin · React 19 · Prisma · PostgreSQL
Replaced commercial CPaaS (Twilio) with commodity Android SIM hardware; cloud control plane with persistent WebSockets, zero-loss BullMQ queues, AES-256-GCM security, and a React 19 console.

MyShop — Offline-First Retail Grocery POS & ERP | Case Study • GitHub
Flutter · Dart · Drift SQLite WAL · ESC/POS Bluetooth · Node.js · Prisma · Next.js 14
100% offline-resilient grocery checkout engine with Drift SQLite WAL. Sub-300ms Bluetooth thermal receipt printing via direct ESC/POS byte-streams; automated background cloud sync with Next.js 14 admin dashboard.

Mayiliragu Academy LMS | Google Play Store
Flutter · React · Node.js · Prisma · PostgreSQL · Firebase Auth · AWS EC2
Full-stack EdTech suite for competitive exam preparation. Google Drive API secure video streaming proxy, single-device account binding, and interactive timed mock exam engine.

Judah Food Delivery Logistics Suite | Google Play Store
Flutter · Socket.io · Node.js · Google Maps API · Razorpay · PostgreSQL · AWS EC2
Real-time 3-app logistics network (Customer, Partner, Driver). Live GPS polyline dispatching via Socket.io; idempotent Razorpay payment lifecycle with cryptographic webhook verification.

RAG AI Chatbot Engine | GitHub
Node.js · TypeScript · Qdrant Cloud · Groq LLaMA 3.1 · SSE Streaming · Playwright · Flutter
Full-stack RAG pipeline: Playwright web/PDF parsing → semantic chunking → Qdrant vector search → real-time SSE streaming with Groq LLaMA 3.1 and Flutter citation client.

EDUCATION

Bachelor of Technology — Information Technology **2020 – 2024**
VSB Engineering College, Coimbatore, Tamil Nadu