

RAVI KUMAR MEDAM

Senior Full-Stack Engineer | AI-Augmented Product Architect

13+ Years • Design Systems & Web Components • Angular / React / Next.js • Node • Prisma • PostgreSQL • LLM, RAG & Agentic Engineering
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PROFESSIONAL SUMMARY

Senior engineer with **13+ years** shipping production software, now operating end-to-end across the stack. Deep specialist in **enterprise design systems and component architecture** — currently architecting a framework-agnostic design system (StencilJS / Web Components) consumed by Angular, React, Vue and vanilla JS product teams, distributed as first-class npm packages with an AI-powered design-to-code workflow. Over the past two years I have extended that foundation into **full-stack, AI-augmented product delivery**: modelling PostgreSQL schemas with Prisma and Drizzle, building Node, .NET and Go services, shipping Android, desktop (Electron / Tauri / Flutter) and PWA clients, and deploying on Vercel, Supabase and Neon — with **LLM applications, RAG pipelines and agentic tool-calling workflows** used as first-class engineering capability for architecture, scaffolding, test generation, review and documentation. Proven delivery for enterprise clients across EdTech, banking, energy, insurance and healthcare.

CORE COMPETENCIES

AI & LLM Engineering: LLM application development (Claude, GPT, Gemini, Llama); Retrieval-Augmented Generation — chunking, embeddings, vector search (pgvector, Supabase Vector, Chroma, Pinecone); agentic workflows, tool/function calling & structured outputs; **Model Context Protocol (MCP)** servers & clients; prompt engineering, evals & guardrails; LangChain, LlamaIndex, Vercel AI SDK; streaming UIs & token-cost optimisation

AI-Augmented SDLC: Claude Code, GitHub Copilot, Cursor, Windsurf; spec-driven & agent-orchestrated development; AI test generation to high coverage; AI-assisted refactoring, code review, migration and documentation; Figma MCP + AI design-to-code pipelines

Design Systems: StencilJS, Custom Elements, Shadow DOM, Design Tokens, Storybook, Chromatic visual regression, Component API design, multi-framework distribution, private npm / Figma npm registries, semantic versioning, WCAG 2.1 AA

Frontend: Angular 7 → latest (Standalone APIs, Signals, SSR), React 18/19, Next.js 14/15 (App Router, RSC, Server Actions), TypeScript, Web Components, Ionic, Micro-Frontends, Tailwind CSS, shadcn/ui & Radix, Framer Motion, GSAP, Angular Material, DevExpress, Bootstrap, SCSS/SASS/LESS

State & Data: RxJS, NgRx, Signals, TanStack Query, Zustand, Redux, REST, WebSockets / Socket.io, Zod schema validation

Backend & Databases: Node.js, Express, TypeScript services, Prisma ORM, Drizzle ORM, PostgreSQL, Supabase, MySQL, SQLite, Redis, JWT / Argon2 / bcrypt auth, RBAC & multi-tenancy, rate limiting, Helmet, Pino logging; working knowledge of .NET 9 (Clean Architecture + CQRS/MediatR), Go and Python

Cross-Platform Delivery: Capacitor (Android / iOS), Flutter (Windows desktop + mobile from one codebase), Electron, Tauri, Progressive Web Apps, Windows installers (NSIS)

Cloud & DevOps: Vercel, Supabase, Neon, Render, Docker, GitHub Actions CI/CD, environment & secrets management, preview deployments, AWS fundamentals

Testing & Quality: Jest, Vitest, Jasmine, Supertest, Playwright, Storybook interaction tests, Chromatic visual regression, automated CI quality gates, AI-assisted coverage expansion

Tooling: Git / GitHub / GitLab, Webpack, Vite, Stencil Compiler, npm workspaces & monorepos, JIRA, Figma

PROFESSIONAL EXPERIENCE

Senior Front-End Engineer | Happiest Minds Technologies, Hyderabad

Mar 2025 – Present

Project: Fasttrack Component Library (Enterprise Design System) — Ascend Learning | StencilJS, Web Components, React, Angular, TypeScript, SCSS, Storybook, Jest, Chromatic, Figma

- **Design system architecture:** Architecting Fasttrack, a framework-agnostic, enterprise-grade design system built on StencilJS and native Web Components — a single component codebase consumed by Angular, React, Vue and vanilla JS product teams across the client ecosystem.
- **Multi-framework wrapper packages:** Designed and built the framework distribution layer — dedicated Angular and React npm packages generated via Stencil output targets — so consuming teams install one package and use components idiomatically in their own framework, with full typings and framework-native bindings.
- **Angular output types:** Implemented all three Angular output strategies — classic NgModule-based components, SCAM (Single Component Angular Module) and modern Standalone components — enabling seamless adoption across legacy and latest Angular versions from a single source of truth.
- **Chromatic quality gates:** Integrated Chromatic visual regression and Storybook interaction testing into the CI/CD pipeline, catching visual and interaction regressions automatically on every pull request before merge.

- **Figma npm registry + AI design-to-code:** Published the React, Angular and core component packages to the private Figma npm registry, enabling UX designers to install the design system directly inside Figma and use AI to generate production-consistent component code and high-fidelity mockups referencing the real, published components — closing the designer–developer gap and accelerating design-to-code delivery.
- **Accessibility & tokens:** Building WCAG-compliant components (buttons, modals, forms, data tables, navigation) on a design-token architecture (color, typography, spacing) for consistent theming and brand alignment.
- **Documentation & adoption:** Publishing interactive Storybook documentation with live examples, API references and design-token guides, driving cross-team adoption.
- **AI-accelerated delivery:** Leveraging AI-assisted workflows (Claude, Copilot, Windsurf) for component scaffolding, unit-test generation and documentation — measurably reducing component development cycle time.

Web UI Developer | Schrill Technologies (Client: Infosys / British Petroleum)

Mar 2023 – Jun 2024

Project: *Credit Risk Management System — BP* | Angular, TypeScript, DevExpress, REST APIs, Microservices

- Developed complex UI screens with Angular and DevExpress integrated with microservices for a global credit risk platform.
- Implemented interactive data visualisations (charts / graphs) powering quantitative risk analysis dashboards.
- Led architecture of a reusable Angular component library consumed across multiple business applications; enforced coding standards for efficiency, readability and reuse.

Senior Software Engineer | Cloudtern Solutions, Hyderabad

May 2022 – Jan 2023

Project: *ArkCase Case Management System — Armedia* | Angular, Angular Material, TypeScript, Jest

- Developed reusable Angular / Angular Material components for the open-source ArkCase CMS platform.
- Implemented Jest test suites for regression safety; managed mock API integration with JSON Server ahead of backend delivery.

Senior Software Engineer | WalkingTree Technologies, Hyderabad

Mar 2021 – May 2022

Project: *IVYTech — Global Electronics Repair & Service Platform* | Angular, SCSS, Bootstrap, REST APIs

- Built the front end with Angular, HTML5, SCSS and Bootstrap using scalable component architecture with REST API integration.
- Developed custom Angular directives and reusable service layers; integrated an npm bar-rating library for the user review system.

Associate Technical Lead | FIS Global, Bengaluru

Aug 2019 – Mar 2021

Project: *Business e-Banking — FIS* | Angular, Angular Material, TypeScript, Bootstrap

- Led front-end development of an enterprise commercial banking platform using Angular, Angular Material and TypeScript.
- Architected a reusable component library and REST API service layer for commercial banking workflows; led successful client demos in Agile sprints.

Senior Software Engineer | Compassites Solutions, Bengaluru

Jun 2018 – Aug 2019

Project: *MedLife — India's Leading Digital Healthcare Platform* | Angular, Bootstrap, Google Analytics, GTM

- Designed and developed the majority of customer-facing pages using Angular and Bootstrap, owning the UI lifecycle from design to production.
- Integrated Google Analytics, Facebook Pixel and Google Tag Manager for user-behaviour tracking and growth insights.

Software Engineer | Mphasis Limited, Bengaluru

Sep 2015 – Jun 2018

Project: *AIG / Virgin Money Insurance — South Africa* | HTML5, CSS3, Bootstrap, JavaScript, jQuery

- Built responsive UI for home, auto and funeral insurance platforms with full cross-browser compatibility.
- Developed responsive email templates, landing pages and banner ads for insurance product campaigns.

UI Developer | Clay Tokens Infotech Pvt. Ltd., Davanagere

Sep 2012 – Sep 2015

Tech: *HTML5, CSS3, Bootstrap, JavaScript, jQuery, JSF*

- Developed front ends for Chit-Fund industry management and Student Life Cycle Management applications, including i18n, input validation and cross-browser support.

AI & FULL-STACK PRODUCT ENGINEERING (INDEPENDENT)

A portfolio of complete, runnable products designed, built, tested and deployed solo — end-to-end architecture, database modelling, API design, UI, cross-platform packaging and CI — using AI-augmented engineering workflows.

Aurora ERP — multi-company enterprise suite. 13 integrated modules (HR, Attendance, Leave, Payroll, Projects & Kanban, Timesheets, Purchase, Inventory, Sales & CRM, Finance, Expenses, Approvals engine, Reports) with role-based access control and a full REST API; face-recognition attendance capture. *Next.js 14 App Router · Tailwind · Framer Motion · Recharts · Express · Prisma · PostgreSQL · JWT + RBAC*

Arogya+ HMS — hospital management platform. SRS-driven web ERP covering all staff roles plus Patient and Employee PWA apps on one REST API; Argon2 auth, RBAC, structured logging, automated Vitest + Supertest suites and a route smoke test across roles.

TypeScript monorepo · React · Vite · Express · Prisma · PostgreSQL · Vitest · Pino

Unified Business Management Application — three companies, one system. Runs a group of three companies — manpower & payroll, printing, and signage & fabrication — from first enquiry through survey, quotation, approval, advance, production, QC, delivery and installation, plus manpower deployment, attendance, live tracking, HR, payroll and inventory. One `/api/*` backend serves both the web application and the Android client. *Next.js 16 App Router · React 19 · TypeScript · Prisma · Tailwind v4 · Framer Motion · Android client*

TransitOne — logistics & transport suite. Six licensable modules on one shared core, one login and one master-data set: fleet management (vehicles, drivers, fuel, maintenance, inspections, parts, expenses), live vehicle tracking with trips, playback, geofences and alerts, and a logistics ERP covering quotations, bookings and consignments (LR). *Next.js · React · Prisma · PostgreSQL · driver & agent Android apps*

Real Estate Solutions Suite. Ten modules on one connected data spine covering the full property lifecycle — marketing & listings, lead capture & sales, construction execution, unit booking & collections, handover, and post-sale rental & facility operations — implementing an SRS with six traced end-to-end flows, shipped with architecture and traceability documentation. *TypeScript · React · Node · Prisma · PostgreSQL*

Nestly — on-demand home-services marketplace. Four deliverables in one monorepo: customer mobile app, partner (expert) mobile app, admin/ops panel and realtime backend. *React · Vite · Tailwind · Framer Motion · Express · Prisma · Socket.io · Android APKs via Capacitor*

Peoplr HRMS. Next.js React Server Components querying PostgreSQL through Prisma at request time; verified pipeline of typecheck → unit tests → lint, with a five-role route smoke test against both dev and production builds. The Android build uses native camera, geolocation and push notifications. *Next.js 15 · RSC · Prisma · PostgreSQL · Vitest · Android app via Capacitor*

MedCore EMR. Electronic medical records platform on serverless Postgres with Drizzle ORM, a Radix/shadcn component layer and TanStack Query data layer; blob storage for clinical documents. *Express · Drizzle ORM · Neon serverless Postgres · React · Radix UI · TanStack Query*

MSMS — manufacturing solutions management system. Production operations built from an authored SRS first — module design, process flows, KPI catalogue and a phased roadmap — then implemented across separate server and web workspaces. *React · Vite · Express · Prisma · SRS authoring*

Construction Industry Solutions. Project, resource and site-operations platform for construction firms, specified as a written requirement document and delivered as a working MVP. *Next.js · Prisma · TanStack Query*

Inventory Management System. Stock control delivered across three surfaces over shared infrastructure — a web application, an Android client and Odoo add-ons — built one traced slice at a time: authentication, goods receipt, then the movement ledger. *Web · Odoo add-ons · shared infrastructure · Android client*

Attendance Management System — native Android. An attendance client written natively in Java, with project switching, filtered reporting and offline-tolerant sync for field teams. *Java · native Android*

Family Chit Fund — native Android. Tracks a family chit end to end: monthly instalments, who took the chit and when, extras paid afterwards, carry-over months, chit requests and the closing settlement for every member. Fully bilingual in English and Telugu, with APKs built in GitHub Actions. *Kotlin · Jetpack Compose · Supabase · GitHub Actions CI · native Android*

AgriShop ERP — native Windows desktop. A Go 1.24 desktop application with an embedded web frontend, shipped as a signed NSIS Windows installer so it deploys on machines with no runtime prerequisites. *Go 1.24 · embedded web frontend · NSIS Windows installer*

TechCrest Global Solutions — corporate platform. An eighteen-page marketing site rebuilt as a server-rendered application, reproduced one-to-one in design, content and behaviour — including product detail, free-trial, demo-booking and subscription flows — but crawlable and fast on first paint. *Next.js 16 App Router · React 19 · SSR / SEO*

Architecture & documentation practice. Authored enterprise-grade SRS and system-design documents (Attendance Management, Manufacturing Solutions, Real Estate, Logistics, Billing) — from module design and process flows to KPI catalogues and phased roadmaps; designed a multi-tenant SaaS ERP platform from scratch (database-per-tenant, modular monolith, AWS) with complete architecture documentation and diagrams.

EDUCATION

B.Tech — Computer Science & Engineering | AVR & SVR College of Engineering

Graduated 2012

LANGUAGES

English • Telugu • Hindi