

Raman Agarwal

Senior Software Engineer

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PROFESSIONAL SUMMARY

Full stack engineer with 6+ years of shipping production software end to end: backends, React or Next.js interfaces, the AWS infrastructure underneath, and the LLM features on top. Strongest where the logic is hard, things like API and data modelling, PostgreSQL performance, and auth and multi-tenancy, with the DevOps and AI glue (Docker, GitHub Actions, EC2/Lambda/RDS, OpenAI, Claude) built in along the way. Most of that work has landed in healthcare, fintech, and enterprise platforms.

TECHNICAL SKILLS

Backend	Node.js, Express, Nest.js, Fastify, FastAPI, Django, REST, GraphQL, WebSockets, Sequelize, Cron jobs, SMTP, Mocha, Playwright
Cloud & DevOps	AWS Console, EC2, Lambda, S3, RDS, Cognito, Bedrock, Transfer Family, SFTP, Docker, GitHub Actions, CI/CD, Jenkins, Portainer
AI & LLM	OpenAI API, Claude, Prompt design, Few-shot, Data extraction, JSON mode, Classification, Fine-tuning, RAG, Vector Search, Embeddings, Tool calling, Guardrails, Agents
Data & Caching	PostgreSQL, MongoDB, MySQL, Redis, Neo4j, Firebase, Query optimization, Indexing, Schema design
Architecture	Microservices, Monolith migration, Event-driven, RBAC, JWT / JWE, OAuth2, Multi-tenancy, API Gateway, Webhooks
Frontend	React.js, Next.js, Vite, Vitest, React Query, Responsive UI, Tailwind CSS, Framer Motion, State management
Languages	TypeScript, JavaScript, Python, SQL
Integrations	FHIR, Razorpay, Keycloak, SurveyJS

WORK EXPERIENCE

Senior Software Engineer EngineersMind · Bangalore, India	Jan 2026 – Present
- Lead backend architecture across 3 production microservices supporting live healthcare and AI workloads, roughly 50K API requests a day at 99.9% uptime. - Brought average API latency down 44% (380ms -> 213ms) by tuning PostgreSQL queries, adding composite indexes, and layering in a Redis cache. - Cut deployment cycle time 60% after moving to multi-stage Docker builds, with GitHub Actions handling CI/CD across staging and production. - Build REST APIs on Fastify and TypeScript with strict schema validation, holding core endpoints at sub-10ms p99. - Own the AWS footprint (EC2, RDS, S3): backups, provisioning, and alerting all run automated.	
Software Engineer EngineersMind · Bangalore, India	Nov 2024 – Dec 2025
- Designed an RBAC system with 5+ permission tiers on JWT/JWE token auth, and unauthorized access incidents in production stopped after it shipped. - Rolled out a distributed Redis caching layer that dropped database read load ~35% on the busiest endpoints. - Shipped backend work across 3 concurrent product streams, keeping sprint delivery above 95% on-time. - Pushed for standardized API error handling in architecture review; client-reported bugs dropped 25% after.	
Full Stack Engineer GKMIT · Udaipur, India	May 2024 – Nov 2024
- Built full-stack features across Node.js backends and React frontends for 2 mid-scale SaaS products. - Found and fixed slow PostgreSQL queries, restructured a few schemas, and got report generation down from ~8s to ~1.5s. - Integrated payment gateways and notification APIs, then wrote the integration tests to back them.	

- Contributed to 8 enterprise systems over 3.5 years (backend APIs, data pipelines, frontend modules) across healthcare and fintech.
- Introduced automated integration testing, structured logging, and code review standards across a 6-person team, which cut the production bug rate ~40%.
- Built the ZenEquity ESOP platform from scratch: Razorpay payments, vesting schedules, multi-tenant admin dashboards.
- Implemented AES-256 database encryption and S3 backup automation for PUMAS LYV, a HIPAA-adjacent healthcare app.
- Built a multi-step workflow engine on SurveyJS with conditional branching, used for document-processing automation in DoxApply.

KEY PROJECTS

6 featured below, 15 shipped in total

XCSM — AI Governance Platform Backend

Mar 2026 – Present

Zero-downtime deploys. Greenfield backend for XCSM, EngineersMind's governed orchestration layer for enterprise AI. Built from scratch on Fastify and TypeScript, with Sequelize over PostgreSQL, multi-tenant data isolation, JWE token auth, and rate-limiting middleware. Wrote the Vitest suite, ran it in Docker, and set up CI/CD through GitHub Actions to EC2 with config in Secrets Manager. Deploys are zero-downtime.

Stack: Fastify, TypeScript, PostgreSQL, Docker, AWS EC2, GitHub Actions

EngineersMind Website — Web Platform Migration

Apr 2026 – May 2026

100/100 independent audit. Migrated EngineersMind's public site, the storefront for its enterprise AI, robotics, and data platforms, off Create React App and plain JavaScript onto a typed Vite 8 + React 19 + TypeScript stack in six weeks, deleting a legacy admin surface that shipped aws-sdk, the SES client, Cognito auth, and crypto-js to every visitor. Built the test suite from zero to 3,373 cases including 29 Playwright e2e specs, and put a Lighthouse budget and release-please tag-triggered deploys under a site that had none of the three. Independently audited at 100/100 across all seven assessment areas.

Stack: React, TypeScript, Vite, Vitest, GitHub Actions

Mayo Clinic — CxTriage Referral System

Jan 2026 – Mar 2026

~60% less manual triage. AI-powered patient referral triage for Mayo Clinic, built on EngineersMind's CxTriage module. It reads urgency from unstructured clinical notes and uses OpenAI to return structured JSON, routing each referral to the right specialty. FHIR, email, Outlook, and UI submissions all come through one pipeline that normalizes them in real time, and missing information triggers a follow-up email instead of a manual chase. Cut manual triage by about 60%.

Stack: Fastify, TypeScript, PostgreSQL, OpenAI, Claude

Rx-Analysis — Prescription Analytics

Oct 2025 – Jan 2026

10K+ records processed. FastAPI backend, architecture and auth owned end to end. AWS Cognito handles OAuth2 and RBAC, with Lambda triggers on the user lifecycle. An analytics pipeline runs over 10K+ prescription records for compliance reporting, and OpenAI pulls structured data out of freeform notes. Runs in Docker on AWS.

Stack: FastAPI, Python, AWS Cognito, OpenAI

HealthBus — Benefits Platform Migration

Nov 2024 – Jan 2026

4 teams deploy independently. Migrated HealthBus's monolithic employer benefits platform (medical, pharmacy, and care navigation in one place) to event-driven microservices on AWS Lambda and API Gateway, so four service teams can each ship on their own schedule. Also built the EDI 834, claims, and accumulator file exchange: SFTP on AWS Transfer Family and Lambda, encrypted end to end. Wrote the private Node.js modules for the Sequelize models and migrations behind the CRUD APIs.

Stack: AWS Lambda, API Gateway, Node.js, Microservices, Transfer Family, SFTP

ZenEquity — ESOP Platform

Oct 2020 – Jan 2023

200+ employees · 3 clients. End-to-end ESOP platform with grant issuance, cliff and vesting schedules, and an employee dashboard, used by 200+ employees across three clients. Built the Razorpay payments and webhook handling, a custom scheduler for mailing files and data, and the backend APIs and infrastructure. Also cut page load times across the frontend.

Stack: Node.js, MySQL, Razorpay, React

EDUCATION

Bachelor of Computer Applications (BCA)
Bangalore University

2017 – 2020