

Ganesh Kumar Akula

Full Stack Engineer

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Professional Summary

Full-Stack Engineer with 2.5+ years experience building production systems for government and enterprise clients using NestJS, React, TypeScript, and MySQL within Nx monorepo architectures. Experience spans core module ownership on nationally adopted platforms and independent end-to-end delivery of a production-deployed academic publishing system. Currently expanding into AI engineering and building LLM-powered applications.

Technical Skills

- **Languages:** JavaScript, TypeScript, Python (currently expanding)
- **Frontend:** React.js, Next.js, Ant Design, Tailwind CSS
- **Backend:** Node.js, NestJS, REST APIs, TypeORM
- **Databases:** MySQL, PostgreSQL
- **Architecture:** Nx Monorepo, Modular Service Structure
- **Tools:** Git, GitHub, GitLab, Postman, Swagger/OpenAPI
- **AI-Assisted Development:** Cursor AI, Claude

Work Experience

Full Stack Engineer

March 2024 – Present

Schemax Export Techno Craft Pvt. Ltd

- Delivered 3 production platforms end-to-end, independently scoping requirements with stakeholders independently scoping requirements with stakeholders through feature delivery.
- Two platforms (Parakh ITMS, SQA AF) were adopted by Indian central government education bodies, a third (AutoExpert) now powers a 30+ branch dealer network.
- Shipped full-stack modules (React/NestJS/MySQL) within a shared Nx monorepo, enabling consistent code reuse and faster delivery cycles across all three platforms.
- Established REST API contracts documented with Swagger and validated with Postman consumed reliably across frontend, third-party, and cross-team integration points.
- Managed collaborative delivery pipelines on GitLab, including branching strategy and release coordination.

Projects

Parakh ITMS – Exam Paper Generation Platform (Central Government – NCERT/Parakh Cell)

NestJS, TypeORM, MySQL, React, TypeScript, Nx Monorepo

- Co-developed (2-engineer team) a question-bank and paper-generation platform adopted by NCERT's Parakh cell to standardize exam difficulty and ability-type distribution across Indian state education boards, deployed for the AP Intermediate and Meghalaya Secondary boards, demonstrated to 15–25 boards, with quotations issued to 5.
- Built difficulty- and ability-weighted paper generation logic with duplicate-question prevention across sets, plus full CRUD master modules (Class/Subject/Chapter) with role-based permissions.
- Engineered a multi-language translation pipeline (English to Hindi, Urdu, Telugu, Sanskrit) with native-script input support, and structured multi-tenant deployment architecture (isolated DB/config per state board).

SQAAP – School Quality Assessment Platform (Central Government – MOU with AP State Board)

NestJS, TypeORM, MySQL, React, Nx Monorepo

- Co-built (2-engineer team, solo-owned major modules) a school quality assessment platform spanning 15 backend modules and 25 frontend screens across a state-district-school hierarchy, under signed MOU with the AP state board.
- Owned the Assessment module end-to-end – the platform’s core scoring engine – including draft, submit, and approval workflows and domain-wise score aggregation.
- Built the School Registration and Domain/Sub-Domain/Question master modules from scratch with shared service layers consumed across frontend and backend.

Pinaca Publishers – Academic Journal Management Platform (Personal – Freelance)

NestJS, PostgreSQL, Next.js, React, TypeORM

- Solo-architected and delivered a five-role academic journal management platform modeling a real multi-stage peer-review workflow with audit-logged state transitions and journal-scoped access control, deployed (Vercel/Railway/Supabase) and in owner UAT ahead of production rollout.
- Engineered and shipped a database migration scoping editorial resource pools to individual journals via foreign-key constraints, executed against a live production database with zero downtime.
- Implemented defense-in-depth JWT authentication (explicit opt-in for public routes) and SEO infrastructure (RSS feeds, dynamic sitemap, JSON-LD) for the public journal catalog.

AI-Agent-ContentAudit Tool (Personal – AI Buildathon’25)

NestJS, Next.js, TypeScript, OpenAI GPT-4o-mini, Playwright, MySQL

- Solo-built a full-stack, multi-agent content audit platform that scores written content across 9 quality dimensions (SEO, AEO, SERP performance, readability, grammar, clarity, structure, humanization, differentiation) via 9 independently prompted GPT-4o-mini agents run in parallel.
- Developed a secondary LLM validator/critic agent that cross-checks each analyzer’s raw output against the source content and corrects inconsistencies before persistence – an agentic self-QA layer with before/after diff logging for observability.
- Built a Playwright-based headless-browser scraper for URL-based audits (iterated off an initial axios/cheerio approach to handle JS-rendered pages), with TypeORM/MySQL persistence and a custom animated analytics dashboard (Recharts, Framer Motion) featuring a gauge-style overall score and expandable per-dimension breakdowns.

Additional Projects:

- **AutoExpert (Tandm)** – Dealer management system for a 30+ branch Bajaj dealership group (expanding to Triumph), built Exchange Receipt and OEM Sales modules end-to-end plus an automated Tally-ERP integration layer (log parsing, error alerting, SFTP) reconciling sales data across branches. (*NestJS, React, TypeORM, MySQL*)

Education

Bachelor of Technology in Electrical & Electronics Engineering

Baba Institute of Technology & Sciences (affiliated to JNTUGV)

2023

CGPA: 6.3

Certifications

- **AI Buildathon’25** – AI for Vizag & Evolutyz Corp – Recognized for building the AI-Agent-ContentAudit Tool