# SAI GOPAL PANCHAKARLA

Senior Full Stack Engineer | +(91) 9032745802 | Hyderabad, IN
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## SUMMARY

Senior Full Stack Software Engineer with 6+ years of experience building scalable web applications and cloud-hosted systems. Specialized in Node.js, TypeScript, and Vue.js, with hands-on experience building LLM-powered features using the Gemini API, background job processing, and microservices architecture. Led the migration of a legacy Java monolith to microservices using Domain-Driven Design, and delivered RESTful APIs, CI/CD pipelines, and Redis caching. Experienced in Agile/Scrum environments.

## SKILLS

**Programming Languages:** JavaScript, TypeScript, Java, SQL, HTML, CSS
**Frameworks & Libraries:** Node.js, Express.js, Vue.js, Nuxt.js, BullMQ, Angular, Play Framework
**Cloud Platforms:** AWS (EC2, S3, RDS), Docker, GitHub Actions, CI/CD Pipelines
**Architecture & APIs:** Microservices, REST APIs, Message Queues, Domain-Driven Design (DDD), System Design
**AI & LLM Integration:** Gemini API, LLM Integration, GenAI, Prompt Engineering, Structured Output Parsing
**Databases:** MySQL, Redis, Relational Databases (RDBMS), Query Optimization, Database Schema Design
**Tools & Methodologies:** Git, GitHub, Postman, Jira, Agile/Scrum, Vitest, Unit Testing, Code Review

## WORK EXPERIENCE

**Senior Software Engineer** Sep 2023 - Present
Fourth Rev Edu Pvt. Ltd. *Hyderabad, IN*

- Led the migration of a legacy Java monolith to microservices (Node.js, TypeScript, Vue.js, Nuxt.js), defining service boundaries with Domain-Driven Design and moving over in phases, which cut feature development time and enabled independent, zero-downtime releases.
- Built an AI grading pipeline on the Gemini API that scores student answers against rubrics using structured prompts and parsed structured output, with BullMQ background jobs and automatic retries on failed calls, cutting manual grading time by an estimated 60%.
- Designed and implemented GitHub Actions CI/CD pipelines that automated releases and cut deployment time by over 85%.
- Rebuilt SMS and WhatsApp campaign delivery in Node.js and TypeScript, replacing the old synchronous threaded sending with chunked batch processing, rate limiting, concurrency control, and automatic retries for more reliable sends.
- Added a Redis cache in front of the database for frequently read endpoints, checking the cache in the controller before querying and returning cached responses directly, which reduced database load and response times.
- Deployed backend services on AWS (EC2, RDS, S3) and containerized the platform with Docker for client on-premise deployments.
- Introduced unit testing with Vitest and code review standards across sprints, catching issues earlier and reducing post-release bugs.

**Software Engineer** Aug 2020 - Sep 2023
Fourth Rev Edu Pvt. Ltd. *Hyderabad, IN*

- Maintained and enhanced Java and Play Framework modules in a large monolithic application, fixing production issues and delivering feature changes while keeping the system stable.
- Developed native Android features and updated Angular front-end components in a legacy codebase.
- Optimized relational database schemas and rewrote complex SQL queries to improve query performance.

## EDUCATION

**Bachelor of Technology (B.Tech)**, in Electronics and Communication Engineering 2016 - 2020
Koneru Lakshmaiah Education Foundation