

KARTIK GUPTA

Backend Engineer | Java | Spring Boot | Microservices | AWS

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SUMMARY

Backend engineer with 5+ years of experience, including Java backend development for Poshan Tracker at Digital India Corporation. Built and maintained multiple modules for a national platform serving millions of beneficiaries. Experienced in REST APIs, microservices, AWS and performance optimization, with hands-on Spring Boot and Spring Security project experience.

TECHNICAL SKILLS

Java and backend: Java 21, Spring Boot, Spring Security, Spring Data JPA, Hibernate, REST APIs, microservices

Data and messaging: SQL, PostgreSQL, MySQL, MariaDB, DynamoDB, Redis, RabbitMQ

Cloud and delivery: AWS (EC2, ECS, S3, Lambda), Docker, Jenkins, CI/CD, SonarQube, Git, Postman, Linux

EXPERIENCE

Deputy Manager - Software Development

Nov 2021 - Present

Digital India Corporation, Ministry of Electronics & IT | New Delhi, India (Remote)

- Develop and maintain multiple Java backend modules for Poshan Tracker, spanning **300+ REST APIs** across 10+ services supporting millions of beneficiaries nationwide.
- Led the monolith-to-microservices decomposition into **10+ independently deployable services**, improving fault isolation, release safety and availability.
- Cut API response times to **sub-200ms** and server load by **approximately 40%** through SQL optimization, Redis caching and backend refactoring under sustained production traffic.
- Migrated core data stores to AWS DynamoDB, supporting **millions of records** with low-latency reads and writes under heavy production traffic.
- Introduced RabbitMQ asynchronous processing to move long-running workflows off the request path, decouple services and protect latency at peak load.
- Built Jenkins CI/CD pipelines with SonarQube quality gates and Postman API validation; containerized services with Docker on AWS EC2 and ECS, sustaining **99.9% uptime** on critical workflows.
- Rebuilt registration and beneficiary-management modules, reducing infrastructure costs by **30%**. Designed and delivered ABDM/ABHA integration with token-based authentication and authorization.

Software Engineer Trainee

Jul 2021 - Nov 2021

Infogain Solutions Pvt. Ltd. (now Tenarai) | Pune, India

- Completed enterprise Java training in Spring Boot, Hibernate and RabbitMQ; built REST services using enterprise design patterns through project work and a capstone build.

PROJECTS

XIRR Calculator

xirr-calculator.kartikgupta.in

Java 21, Spring Boot 3.5, Spring Security, PostgreSQL, Apache POI, Docker

- Built an XIRR calculation tool with Excel ingestion and Newton-Raphson/bisection solvers; processed workbooks in memory without persisting financial data. Implemented role-based access control, BCrypt hashing, email-verified password reset and rate limiting.

AWARDS

Contributed to Poshan Tracker, recipient of the Prime Minister's Award for Excellence in Public Administration 2024 (Innovation).

EDUCATION

Bachelor of Technology in Computer Science

2017 - 2021

MIT-WPU, Pune