

VIVEK KUMAR

Software Engineer | Java Backend | Spring Boot | Microservices

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PROFESSIONAL SUMMARY

Software Engineer with 4 years of experience designing and building scalable backend microservices using Java, Spring Boot, Quarkus, and Kafka for enterprise telecom platforms at Netcracker Technology. Open-source contributor to OpenAPI Generator (26,700+ stars) with two merged pull requests. Strong in GraphQL and REST API development, event-driven architecture, CI/CD, unit testing, and clean, maintainable design for high-traffic production environments. Also builds and ships full-stack products end to end, including a live online examination platform (Spring Boot + Angular).

Core Competencies: Backend Development, Microservices Architecture, API Design (REST & GraphQL), Event-Driven Architecture, System Design & LLD, Database Design, Multi-Tenant SaaS, Authentication & RBAC, CI/CD Automation, Containerization, Cloud-Native Development, Agile/Scrum, Code Review, Unit Testing, Performance Optimization, Production Support

TECHNICAL SKILLS

Languages: Java, SQL, Groovy, TypeScript

Backend Frameworks: Spring Boot, Spring Framework, Spring Security, Spring Data JPA, Quarkus, Hibernate, jOOQ

APIs & Messaging: REST APIs, GraphQL, Apache Kafka, Event-Driven Architecture, Swagger/OpenAPI

Frontend: Angular, React, Tailwind CSS, HTML/CSS

DevOps & Cloud: Docker, Kubernetes, OpenLens, GitLab CI/CD, Jenkins, GitHub Actions, Flyway, Keycloak

Databases: PostgreSQL, H2

Testing & Tools: JUnit 5, Mockito, AssertJ, Git, GitHub, Maven, Postman, Prometheus, Micrometer

Concepts: Microservices, Distributed Systems, Transactional Outbox, Idempotency, Optimistic Locking, Design Patterns, Clean Architecture, Data Structures & Algorithms, LLD & System Design

PROFESSIONAL EXPERIENCE

Software Engineer

Sep 2022 – Present

Netcracker Technology, Bengaluru

- Designed and developed scalable backend microservices using Java, Spring Boot, GraphQL, and PostgreSQL, powering enterprise telecom modules used by major carriers including Etisalat (Emirates Telecommunications).
- Built GraphQL queries, mutations, and schema components, and implemented GraphQL-to-REST proxy layers, streamlining communication between internal microservices and external REST APIs.
- Developed and maintained RESTful APIs for 5+ business modules with complete Swagger/OpenAPI documentation, enabling seamless integration across internal teams and partner services.
- Implemented an Assigned Customers API aggregating customer data from multiple downstream services with advanced filtering and sorting, and built Tags & Alerts features on the Customer Insights platform for real-time classification and monitoring of customer activity.
- Played a key role in the Customer Sales & Representative Dashboard (CSRD) platform, developing backend services and designing CIP (Cloud Integration Platform) chains for structured customer-onboarding workflows.
- Implemented Kafka-based event-driven communication supporting asynchronous data processing across distributed services, decoupling downstream consumers and improving system resilience.
- Containerized and deployed services using Docker and Kubernetes through GitLab and Jenkins CI/CD pipelines, automating builds and streamlining releases within a microservices architecture.
- Delivered critical backend features for Etisalat using Groovy and Quarkus, diagnosing and resolving production issues in high-traffic telecom environments.
- Integrated Keycloak-based authentication and authorization for role-based access control, and improved observability through enhanced logging, error handling, and performance monitoring.
- Applied clean architecture principles and design patterns to modernize legacy modules; collaborated with QA, DevOps, and Product teams in Agile delivery, with regular code reviews and JUnit/Mockito unit testing.

OPEN SOURCE CONTRIBUTIONS

OpenAPI Generator — OpenAPITools/openapi-generator (26,700+ stars) | github.com/OpenAPITools/openapi-generator

- Contributed two merged pull requests to the industry-standard generator of API client libraries, server stubs, and documentation from OpenAPI specifications; both targeted for the v7.26.0 release.
- [PR #24810](#) (merged Aug 2026): Fixed the Kotlin jaxrs-spec server generator to emit KDoc (operation summary, description, parameters, responses) on generated interfaces, achieving documentation parity with the Java generator (Java, Mustache templates, Kotlin/JAX-RS).
- [PR #24819](#) (merged Sep 2026): Fixed a startup crash in every rust-server generated client example by parsing the port CLI argument as u16 via a clap value parser; regenerated all eight samples (Java, Mustache, Rust).

PROJECTS

MathStrokes (iota) — Online Mathematics Examination Platform for JEE — *Java 21, Spring Boot 3.5, PostgreSQL, Spring Security (JWT), Angular 22, KaTeX*

Live: iota-jee.netlify.app | Code: github.com/vivekkumarq/MathStrokes

- Built and deployed a full-stack timed-examination platform where teachers author LaTeX questions and students take 25-question, 60-minute papers with a server-authoritative clock, resumable attempts, and rank/percentile analytics. Engineered immutable attempt snapshots, server-side-only evaluation with JEE partial marking, rotating refresh tokens, and 63 unit tests plus 105 end-to-end assertions.

CatalystRead — Markdown-Driven Technical Publishing Platform — *Angular 22, TypeScript, Tailwind CSS v4, GitHub Actions*

Live: vivekkumarq.github.io/CatalystRead | Code: github.com/vivekkumarq/CatalystRead

- Built a fully static publishing platform serving 220+ technical articles across 30+ topics: build-time Markdown pipeline with syntax highlighting and related-article scoring, 500+ prerendered routes at ~120 kB initial transfer, instant search, dark mode, and auto-generated RSS/sitemap via GitHub Actions.

Event-Driven Order Platform — *Java 17, Spring Boot 3.5, Apache Kafka, Spring Data JPA, PostgreSQL*

Code: github.com/vivekkumarq/event-driven-order-platform

- Implemented a choreographed saga across independent order and inventory microservices communicating exclusively through Kafka: transactional outbox preventing dual-write failures, idempotent consumers with eventId deduplication, optimistic locking for concurrent stock updates, dead-letter topics with bounded retry, compensating cancellation events, and Prometheus/Micrometer business metrics.

Subscription & Billing Platform — *Java 17, Spring Boot, Apache Kafka, Keycloak, PostgreSQL, Flyway*

Code: github.com/vivekkumarq/subscription-billing-platform

- Built a multi-tenant SaaS billing backend with Keycloak JWT tenant isolation, mid-cycle plan changes with day-based proration, asynchronous usage metering through a partitioned Kafka pipeline with inbox-pattern idempotency and dead-lettering, immutable BigDecimal invoices with line-item breakdowns, quota threshold alerts, and custom revenue metrics exposed to Prometheus.

API Orchestrator Platform — *Java 17, Spring Boot, Spring WebClient, React 19, PostgreSQL*

Code: github.com/vivekkumarq/api-orchestrator-platform

- Developed a self-hosted, Postman-style API execution platform supporting collections, environments with variable substitution and request chaining via JSONPath extraction, seven assertion types, automatic retries with exponential backoff, an SSRF-safe outbound policy (scheme allowlist, blocked metadata endpoints), execution history with replay, and Postman v2.1 import/export.

Parking Lot Management System — *Java 17, Spring Boot, jOOQ, Flyway, PostgreSQL*

Code: github.com/vivekkumarq/ParkingLotManagement

- Designed a five-module REST backend for multi-block car parks: compare-and-set bay allocation preventing double-booking without table locks, BigDecimal pricing with grace periods and daily caps, reservations with background expiry sweeps, RSQL-filtered listings, revenue/occupancy/peak-hour reporting, and 241 tests including 23 dedicated concurrency tests.

EDUCATION

B.E., Computer Science Engineering

Aug 2018 – Aug 2022

SJB Institute of Technology, Bengaluru • First Class with Distinction, CGPA: 8.5 / 10

AWARDS & RECOGNITION

- **Spotlight of the Month Award (2025)** — Netcracker Technology, for outstanding contribution and value delivery.