

Vinay Kumar Singh

Development Engineer

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Summary

Backend Developer specializing in Java, Spring Boot, and Microservices, with expertise in building scalable, secure, and high-performance enterprise applications. Skilled in API design (REST, GraphQL, gRPC), messaging systems (RabbitMQ, WebSocket), and distributed systems, with hands-on experience in Spring Security (JWT, OAuth, SAML), Hibernate, Liquibase, MySQL/PostgreSQL, Elasticsearch. Proficient in CI/CD (Jenkins/Nexus/OpenShift), containerization (Docker).

Work Experience

Development Engineer | Prospecta Software Gurgaon, India Mar 2024 – present

- Engineered OneView 360° data visualization widgets (Header Data, Data Quality, Recent Activity, Custom Data), enhancing data usability for over 50,000+ enterprise records and reducing manual reporting time by 30%.
- Designed and developed Data Quality Matrices (DQM), enabling stakeholders to assess and improve data quality, resulting in a 15% improvement in data accuracy across key datasets.
- Built and optimized the Task Analytics Dashboard, improving SLA monitoring and enabling 20% faster decision-making through actionable insights.
- Upgraded the organization's Angular project from v16 to v19, improving load times by 25%, reducing deprecated warnings by 90%, and ensuring compatibility across 50+ modules.

Technical Skills

Backend & Frameworks: Java, Spring Boot, Hibernate/Envers, JPA, Microservices, Spring Security, Liquibase, JWT, OAuth, Spring AOP, Multitenancy

APIs & Messaging: REST, gRPC, RabbitMQ, GraphQL, WebSocket

Databases & Storage: PostgreSQL, MySQL, Elasticsearch, Redis

DevOps & CI/CD: Docker, Nexus, Jenkins, Git, Bitbucket, Maven, Kubernetes, OpenShift, Prometheus, Grafana

IDE & Tools: Postman, Mockoon, IntelliJ, STS, VS Code

Projects

Microservices & Custom Starters 🔄

- Developed and maintained a suite of Spring Boot microservices, including dev-auth-server, dev-sandbox, and dev-integration. Key features include enterprise-grade authentication using Spring Security and Nimbus JOSE + JWT, OAuth, auditing with Hibernate Envers, Liquibase, asynchronous messaging with RabbitMQ/gRPC, REST/GraphQL/WebSocket APIs, and Elasticsearch for message persistence.
- Implemented high-volume data pipelines, sending 1 million+ records in batches from dev-auth-server to dev-sandbox for bulk insertion into PostgreSQL, and subsequently synchronizing the data to dev-integration via RabbitMQ for Elasticsearch indexing.
- Custom Starters:**
 - Multitenancy Starter:** Supports multi-tenant architecture with RabbitMQ, gRPC and essential microservices features. Integrating with this ms enables multi-tenant along with security. (dev-infra-starter, dev-rabbitmq-starter, dev-shared-utility).
 - Security Starter:** Provides robust authentication and authorization mechanisms for microservices. Post integration with any ms, enables robust security by reducing development time by 50%. (dev-auth-starter)

Technologies Used: Spring Boot, Spring Security, Nimbus JOSE + JWT, Hibernate Envers, Liquibase, GraphQL, REST, WebSocket, RabbitMQ, gRPC, Elasticsearch, Swagger, AOP, Multitenancy, Docker

We-Care (Hospital Management System) 🔄

Developed a comprehensive hospital management system to streamline and automate various healthcare operations, ensuring efficiency and seamless communication between stakeholders.

- Managed appointments, prescriptions, invoices, and medications efficiently.
- Implemented JWT-based authentication with role-based access control (RBAC).
- Secure Sign-in/Sign-up functionalities for different user roles (Doctors, Patients, Admins).
- Enabled real-time doctor-patient communication using WebSocket for instant chat.
- Designed a scalable and secure architecture with optimized database performance.

Technologies Used: Java, Spring Boot, Spring Security, MySQL, WebSocket

Education

Java Backend Development, Masai School, Bengaluru, India Nov 2022 - Nov 2023

Bachelor of Science (Mathematics), Veer Kunwar Singh University, Arrah, India Apr 2018 - June 2022