

Adarsh Pandey

SOFTWARE DEVELOPER

India

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Summary

Results-driven **Backend Developer** with **5+ years** of experience architecting **scalable, high-performance APIs** and designing **event-driven microservices**. Proficient in **Spring Boot, gRPC, Docker, and Kafka**, with hands-on experience using **Red Hat OpenShift** for container orchestration. Successfully optimized payload efficiency with **Avro and Protobuf**, reducing API payload size by **60%** and achieving sub-50ms response times. Passionate about **API security, distributed caching, and role-based access control (RBAC)**, ensuring robust and efficient backend systems. I enjoy **mentoring** developers, **resolving** technical challenges, and **leading** teams to build **complex solutions** in **cloud-native environments**. An avid learner exploring **Generative AI** and **AI model integrations**, with a keen interest in open-source projects and personal hobby projects aimed at building innovative solutions.

Work Experience

Citi Bank

Pune, India

BACKEND DEVELOPER

Oct. 2022 - Present

- Developed **Dockerized microservices** using **Spring Boot, gRPC, and GraphQL**, deployed on **Red Hat OpenShift**, achieving **sub-50ms latency** for critical workflows.
- Designed **Kafka**-based event-driven architectures for asynchronous communication across 10+ microservices.
- Implemented schema-driven development with **Avro**, reducing payload size by **60%** and optimizing Docker image layers for faster deployments.
- Improved backend performance by **50%** using advanced indexing in **MongoDB** and **Oracle**, and **Hazelcast** distributed caching on OpenShift.
- Mentored junior developers on API design, coding standards, and **Red Hat containerization best practices**, improving team efficiency.

Tata Consultancy Services

Kolkata, India

BACKEND DEVELOPER

Jun. 2019 - Oct. 2022

- Modernized SOAP-based systems to RESTful APIs, reducing response times by **35%**.
- Designed an API gateway to handle high traffic and prevent service overloads.
- Optimized aggregation pipelines in **MongoDB**, reducing report generation time from 10s to 2s.

Education

Amity School of Engineering and Technology

Noida, India

BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING

June 2015 - May 2019

Skills

Technologies	Spring Boot, gRPC, GraphQL, Docker, Kubernetes, Kafka, Avro, Hazelcast, OpenShift (Basic), Red Hat AMQ
Databases	MongoDB, Oracle, Azure Cosmos DB, Query Performance Optimization
Tools	Java 8+, JUnit, Git, Maven, Jenkins, Helm, Podman, IntelliJ IDEA, Postman
Architecture	Event-Driven, Distributed Caching, Cloud-Native Design, RBAC
AI Integration	Hugging Face APIs, Model Inference, AI Pipelines

Projects

AI PORTRAIT GENERATION SYSTEM

- Developed a **Dockerized Spring Boot** microservice deployed on **Render**, integrating **Stable Diffusion model through Hugging Face** for AI-based image generation.
- Engineered a backend pipeline to handle **parameter-enhanced prompts**, optimizing request handling and API response time.
- Integrated a lightweight UI hosted on **Vercel**, enabling users to generate images with minimal interaction.
- Implemented secure API authentication using **OAuth2 and API keys** to securely access Hugging Face models.
- Designed a microservices-based approach, making the backend extensible for additional AI-powered features.

Key Achievements

- Achieved a **60% payload reduction** by migrating JSON-based APIs to **Protobuf**, optimizing serialization and deserialization.
- Designed a **hybrid API model** (REST + gRPC), enabling backward compatibility during system migration and supporting diverse client needs.
- Led the design and implementation of a **multi-region onboarding system**, scaling to handle thousands of concurrent users with sub-second latency.
- Integrated **Apache Kafka** with schema-driven development to ensure reliable and asynchronous data pipelines across 10+ microservices.