

SHASHI KUMAR PANDEY

Senior Software Engineer | Distributed Systems & Infra Scale | Cloud-Native | AI-Augmented Engineering
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Senior Software Engineer with 9+ years of experience designing and scaling **distributed systems** and **cloud-native microservices**. Proven ownership of high-throughput, low-latency platforms (100K+ RPM) with deep expertise in **Kafka**, **MySQL**, and **event-driven architectures**. Strong focus on **scalability**, **fault tolerance**, and **p99 latency optimization**, with end-to-end system design and production reliability experience.

EXPERIENCE

Senior Software Engineer (Member of Technical Staff 3)
Exotel | Bengaluru

May 2025 – Present

- **Owned architecture and delivery of a distributed billing platform** for 7K+ customers using **Kafka-based event-driven microservices**, reducing reconciliation time from **1 week to 1 day** while ensuring consistency through delayed validation and idempotent processing.
- **Led performance engineering for a high-throughput system (100K RPM)**, identifying bottlenecks in **Kafka consumers and MySQL query paths**, and reducing **p99 latency to <200ms** under peak load through query optimization, batching, and concurrency tuning.
- **Optimized Kafka-based processing pipelines** by addressing **consumer lag, partition imbalance, and backpressure handling**, improving throughput stability and reducing processing delays during burst traffic scenarios.
- Designed a **fault-tolerant distributed job processing system** handling **1M+ delayed jobs/day**, implementing **queue sharding, retry strategies, and autoscaling workers**, achieving **99.95% availability** and handling **3x traffic spikes** without degradation.
- Built an **observability platform** capturing **1M+ events/day**, integrating distributed tracing and log correlation to debug production issues; reduced **MTTR by ~50%** and improved incident visibility across services.
- **Drove cross-team design discussions and production rollout**, aligning backend, infra, and product teams to deliver scalable and reliable system architecture.
- Implemented **AWS WAF-based API security layer**, reducing **security incidents to zero**, passing InfoSec audits, and avoiding **~\$100K/year in potential breach costs**.

Software Development Engineer 2
SAP Labs India Pvt. Ltd. | Bengaluru

Aug 2016 – May 2025

- Built and scaled Spring Boot microservices serving **500K+** daily API requests, maintaining **<200ms p99 latency** in production environments.
- Designed a Kafka-based distributed data pipeline processing **10M+** events/day, ensuring reliable, fault-tolerant cloud-to-edge data synchronization.
- Improved system efficiency by automating tenant provisioning, reducing onboarding time from **2 days to 30 minutes** through API-driven database and infrastructure orchestration.
- Developed a real-time IoT analytics system processing time-series data with sub-second latency for **20+ enterprise customers**.

SIDE PROJECTS

- Built a **multi-agent AI automation system** using LLM APIs for content generation, review, and publishing workflows; reduced manual effort by **~90%** and designed modular agent orchestration..

TECHNICAL SKILLS

Languages: Java, Golang

Distributed Systems: Kafka, Event-Driven Architecture, Microservices, High Throughput Systems

Databases: MySQL, PostgreSQL, Redis, Elasticsearch

Cloud & Infra: AWS, Kubernetes, Docker.

Core Concepts: Scalability, Fault Tolerance, High Availability, System Design, Performance Optimization, Observability

EDUCATION

M.Tech, Software Engineering — BITS Pilani

2016–2020