Nikhil Rai

✉ nikhil.06.rai@gmail.com   📞 098715 66429   🔗 nikkurai9999   🐙 Nikzero6

Summary

Backend Software Engineer with **2.5+ years** building scalable, distributed systems serving **10M+ users**. Skilled in **Java**, **Spring Boot**, **Kafka**, **AWS**, and **System Design** with proven success **leading teams** and driving **revenue growth**.

Experience

Limeroad   *Gurgaon*
Software Development Engineer 2   *Nov 2022 – present*

Search and Recommendation

- **Led 4 engineers** to build a scalable semantic search & recommendation system for **5M+ products** at **50K+ RPM**.
- Architected and **migrated legacy Solr** to a distributed cloud setup with **HTTP-proxy caching** using Varnish and **real-time updates** using Kafka, reducing response times to **sub-30 ms** (75% improvement).
- **Boosted search CTR by 20%** using a hybrid **vector search** model combining text and image embeddings.
- **Optimized infra costs by 50%** with an auto-scaling strategy leveraging **AWS spot instances** for Solr cluster.

Ads Monetization Platform

- **Spearheaded** development of a real-time bidding system enabling **5K+ vendors** to compete for premium spots.
- Designed scalable **bidding engine** with **Vickrey auctions**, integrated with search and recommendation pipelines.
- **Increased revenue by 12%** and **vendor engagement by 35%** via real-time bidding and analytics dashboards.
- Implemented **high-availability architecture** using **Redis Cluster** for caching and Kafka for event streaming.

Payment Service

- **Built payment-gateway agnostic service** with Spring Boot and strategy pattern, supporting **5+ providers**.
- **Enhanced system resilience** with **circuit breakers**, reducing failures by 90% and achieving **99.2% success rate**.
- Optimized payment flows with **Server-Sent Events**, **reducing server load by 23%** and improved user experience.
- Introduced **'Pay with Rewards'** feature boosting **checkout conversions by 8%** and **retention by 15%**.

Technical Skills

Backend Development: Java (8+), Spring Boot, Hibernate/JPA, Kafka, RabbitMQ, RESTful APIs, TypeScript, Node.js

Databases & Caching: MySQL, Amazon Redshift, MongoDB, Redis, Apache Solr, Varnish, Aerospike, ZooKeeper

Cloud & Infrastructure: AWS (EC2, Lambda, RDS, S3, API Gateway, SNS), Docker, Nginx, NewRelic, Jenkins CI/CD

Education

Delhi Technological University   *New Delhi*
B.Tech in Mechanical Engineering (Minor in Computer Engineering)   *July 2019 – June 2023*

- CGPA: **9.30/10.00**, ranked **3rd** in the Department
- **Merit-Cum-Means scholarship** recipient from Delhi Government for all **4 years**

Achievements

- Awarded **Best Innovator** at **Limeroad** for leading **Search & Recommendation**, boosting user engagement by **20%**.
- **Smart India Hackathon finalist** for building a maritime **search & rescue** solution for the **Indian Coast Guard**.
- Secured **2nd place** among **500+ teams** in **Vihaan 2021**, a national hackathon by **IEEE DTU**, leading a team of **4**.
- Placed in the top **3.7 percentile** out of **1.2 million candidates** who appeared for **JEE Mains 2019** across India.