# Nikhil Rai

# Summary \_\_\_\_\_

Full-stack Developer with 2.5+ years of experience building scalable backend systems and modern web apps serving 10M+ users. Specialized in Java, Spring, Kafka, and AWS, with experience in TypeScript, Node.js, and React.

# Experience \_\_\_\_\_

Limeroad

Gurgaon

Software Development Engineer 2

Nov 2022 - present

## Search and Recommendation System

- Led 4-engineer team building scalable semantic search & recommendation engine 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 hybrid vector search (text + image embeddings) and L2R model for ranking.
- Optimized infra costs by 50% with an auto-scaling strategy leveraging AWS spot instances for the Solr cluster.

## Competitive Pricing Intelligence System

- Built pricing intelligence system monitoring 500K+ SKUs daily across 5+ competitors for price parity actions.
- Designed distributed scraping pipeline using Apache Airflow DAGs, Node.js/Puppeteer, and auto-scaling EC2 fleet (0-10 instances), reducing processing time from 24 hours to 4 hours with 99.2% reliability.
- Implemented product discovery with Google Lens API & React-based validation tool, achieving 95% automation.
- **Delivered BI reports** with insights, powering ₹2M+ annual revenue through price parity & vendor negotiations.

#### Server-2-Server Payment Service & Integration

- Built payment-gateway agnostic service with Spring framework and strategy pattern, supporting 5+ providers.
- Enhanced system resilience with circuit breakers, reducing failures by 90% and achieving a 99.2% success rate.
- Optimized payment flows with Server-Sent Events, reducing server load by 23% and improved user experience.
- Introduced the 'Pay with Rewards' feature, boosting checkout conversions by 8% and retention by 15%.
- Built seamless payment UI with live status tracking and failover flows, increasing successful checkouts by 5%.

## Technical Skills \_\_\_\_\_

Backend Development: Java, Spring, Hibernate/JPA, Node.js, Python, Kafka, RabbitMQ, REST APIs, Microservices Databases & Caching: MySQL, Amazon Redshift, MongoDB, Redis, Aerospike, Apache Solr, Varnish, ZooKeeper Cloud & Infrastructure: AWS (EC2, Lambda, RDS, S3, API Gateway, SNS), Docker, Nginx, NewRelic, Jenkins CI/CD Frontend Technologies: React, TypeScript, JavaScript (ES6+), Next. js, Jest, HTML5, CSS3, Tailwind CSS

## 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

### ${f Achieve ments}$ \_\_\_\_

- Awarded Best Innovator at Limeroad for leading Search & Recommendation, boosting user engagement by 20%.
- SIH finalist for building a Deep learning based maritime search & rescue solution for the Indian Coast Guard.