Ritwik Singh

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SUMMARY

Backend Software Engineer with **3 years of experience** designing and scaling **high-throughput, low-latency distributed payment systems**. Backend owner of the **Payment Links platform at PayU**, handling **140K+ links/day** with peak traffic of **500+ TPS**. Experienced in building **scalable microservices**, optimizing **read-heavy architectures (80–90% traffic)**, implementing **multi-level caching (Redis + in-memory)**, and driving **event-driven systems using Kafka**.

EXPERIENCE

PayU Payments *July 2025 – Present*
Software Engineer

- Led **architectural redesign** of Payment Links backend by consolidating **two services into a single scalable system** with optimized APIs, database schema, caching layers, and asynchronous workflows.

- Backend owner for platform managing **140K+ links/day** and peak traffic of **500+ TPS**.

- Designed **read-heavy architecture (80–90% traffic)** using **MySQL read replicas** to ensure high availability and horizontal scalability.

- Achieved **sub-200ms response times** via **multi-level caching** using Redis and in-memory caches.

- Engineered bulk processing engine handling **2,000 records per batch** for asynchronous merchant link generation.

PayU Payments *July 2023 – June 2025*
Associate Software Engineer

- Implemented backend logic for Payment Links lifecycle handling across **6 states**, ensuring consistency and **idempotency** during retries and concurrent payment attempts.

- Published **20M+ lifecycle events/month** to **Kafka**, enabling asynchronous notifications and webhooks.

- Optimized high-volume SQL queries, reducing average read latency by **20%** under peak load.

PayU Payments *January 2023 – June 2023*
Software Engineer Intern

- Contributed to backend development across **3 lending service modules** used in production.

- Improved pre-production bug detection by **15%** via automated API testing and reduced manual regression effort by **40%**.

- Achieved **90%+ SonarQube coverage** through unit tests and static analysis.

- Improved debugging by propagating correlation IDs across services, reducing investigation time by **20%**.

EDUCATION

SRM University B.Tech in Computer Science and Engineering
CGPA: **9.37**

SKILLS

Languages: Java, SQL
Backend: Spring Boot, REST APIs, Microservices
Databases & Messaging: MySQL, Redis, Kafka
Cloud & Tools: AWS (EC2, RDS), Docker, GitLab CI/CD, Grafana, Git