Nakul Mitra
Java Developer | Spring Boot | Microservices

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in https://www.linkedin.com/in/nakul-mitra-microservices-spring-boot-java-postgresql/

👤 Summary

Java Backend Developer with 3.8+ years of hands-on experience in building and scaling enterprise-grade microservices using **Spring Boot, Java (8–17)**, and **PostgreSQL**. Proven track record in designing high-performance **RESTful APIs**, implementing **Redis-based rate-limiting**, and migrating legacy systems to modern, distributed architectures. Adept at **performance tuning**, system optimization, and leading backend teams to deliver clean, maintainable, and scalable code. Passionate about solving real-world problems through efficient backend architecture and continuously learning to stay ahead in backend engineering.

🧠 Skills

Technical: Java, Spring Boot, Hibernate, PostgreSQL, Redis, Microservices, Linux, Batch Processing, Aspect-Oriented Programming, JUnit

DevOps & Tools: Git, GitLab, Jenkins, VS Code, STS, Postman

Security & Code Quality: RESTful API Security, Log4j, SonarQube, SAST

Soft Skills: Leadership, Agile Development, Problem-Solving, Performance Optimization

💼 Professional Experience

Java Backend Developer (System Engineer),
Tata Consultancy Services

Oct 2021 – Present | Noida, India

- Designed and optimized RESTful APIs and database queries, improving transaction speed by 40% and reducing server costs by 15%.
- Optimized system performance by resolving 5+ critical bottlenecks in Java & Spring Boot applications, increasing efficiency by 35% and reducing latency for 2,000+ daily active users.
- Led a backend team to deliver scalable, maintainable, and high-performance solutions, aligning with business needs and best coding practices.
- Designed and implemented IP-based rate limiting using Redis and Sliding Window algorithm, enabling dynamic request throttling with real-time configuration updates through polling.
- Proactively identified and resolved critical bugs, improving system reliability, performance, and user satisfaction.
- Collaborated with cross-functional teams, ensuring seamless backend integration with frontend applications.

🏅 Achievements

- Received 15+ awards & recognitions for outstanding contributions, problem-solving, and technical excellence.
- Recognized by stakeholders and leadership for delivering high-quality solutions and optimizing system performance.
- Key contributor to system performance enhancements, earning consistent positive feedback from end-users.
- View My Awards & Appreciations ⬀

📂 Projects

Prime Events
Dec 2021 – present

As a developer and later backend lead, I have played a key role in architecting and delivering scalable, high-performance solutions, ensuring an enhanced user experience and system efficiency.

- **Microservices Migration:** Transition from a monolithic application to microservices, improving scalability, maintainability, and system performance. This required extensive planning, coordination, and a seamless end-user transition.
- **Technology Upgrade:** Managed the upgrade from Java 8 to Java 17 and Spring Boot 2.7.0 to 3.4.3, conducting a successful Proof of Concept (POC) to ensure a seamless transition with minimal risk.
- **Migration Planning:** Designed a comprehensive migration strategy, outlining code refactoring, dependency upgrades, and testing methodologies to ensure a seamless transition with minimal downtime.
- **Spring Boot Upgrade & Stability Fixes:** Previously guided the Spring Boot 1.5.7 to 2.7.0 upgrade, resolving critical duplicate bean conflicts that were breaking HQL queries, ensuring application stability.
- **Implemented IP-based rate limiting** using Redis and the Sliding Window algorithm, with dynamic throttling and real-time config updates via polling.
- **Data Analytics & Reporting:** Developed an Excel-based analytics export feature, enabling users to extract and analyze structured data efficiently.
- **Automated Ranking System:** Designed and implemented an idea-ranking system, optimizing the evaluation process based on jury assessments, significantly reducing manual effort and enhancing decision-making efficiency.
- **Offline Evaluation System:** Enabled jury members and event organizers to conduct offline evaluations, improving accessibility and reducing evaluation time by 50%.
- **Performance Optimization:** Reduced high-latency service response time from 7s to 550ms, improving system speed and enhancing user experience.
- **Automated File Management:** Implemented an automated file cleanup system, removing obsolete files to optimize server storage and system performance.
- **Offline Event Management:** Developed functionality to import and manage previously conducted events, allowing organizers to upload past event data seamlessly.

🎓 Education

B.Tech, IMS Engineering College
2017 – 2021 | Ghaziabad, India

- SGPA: 8.72
- Earned a Python Certification, showcasing proficiency in Python programming.
- Developed a Scientific Calculator, implementing complex mathematical computations. ⬀
- Created a COVID-19 Tracker, providing real-time pandemic-related statistics and insights. ⬀
- Built a Vegetation Classification System using Image Processing and Convolutional Neural Networks (CNN) to identify leaf classes with 96.4% accuracy, trained on 350 images across 7 classes. ⬀