Nikhil Reddy

Software Developer

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Professional Summary

- 4+ years of professional experience building robust backend and full-stack applications using Java, Spring Boot, Kafka, Python, and cloud-native tools across banking, healthcare, and media domains, with a strong track record of delivering high-impact solutions in fast-paced environments.
- Proven ability to collaborate cross-functionally with QA, DevOps, and UI/UX teams, combined with strong problem-solving and analytical thinking skills to architect scalable microservices, secure APIs, and optimize system performance.
- Highly adaptable and continuously learning engineer, with a passion for mastering new technologies and implementing modern development practices such as CI/CD, containerization, security protocols, and graph-based algorithmic logic.

TECHNICAL SKILLS:

- **Languages:** Java 8/11/17, Python, JavaScript, TypeScript, SQL, Shell Scripting, Bash, HTML, CSS
- **Backend Frameworks:** Spring Boot, Spring MVC, Spring Security, Spring Data JPA, Hibernate
- **Frontend:** Angular 12+, Next.js, Tailwind CSS, Bootstrap, jQuery, JSP
- **J2EE Technologies:** Servlets, JSP, JDBC, JUnit, JAXB, JMS, JSTL, Multi-threading, EJB, JavaBeans
- **Databases:** MySQL, PostgreSQL, Oracle DB, MongoDB, Redis
- **APIs & Integration:** REST, JSON, Swagger, Postman, OAuth2, JWT, SOAP, GraphQL
- **Messaging & Eventing:** Apache Kafka, RabbitMQ
- **DevOps Tools:** Jenkins, GitHub Actions, Maven, Gradle, Docker, Kubernetes
- **Cloud Platforms:** AWS (EC2, S3, RDS, Lambda, CloudWatch)
- **Version Control & CI/CD:** Git, GitLab, Bitbucket, Jenkins, GitHub Actions
- **Testing Frameworks:** JUnit5, TestNG, Mockito, Selenium, REST Assured
- **Data Science & other tools:** Data Structures & Algorithms, Sckit-learn, TensorFlow, Numpy, Pandas
- **Monitoring & Logging:** ELK Stack, Prometheus, Grafana, Splunk, Log4j
- **Project Management:** JIRA, Confluence, Agile/Scrum

EXPERIENCE

Client: Codelance IT, USA **Jan 2024 - Present**
Role: Software Developer

- Built a **graph-based** role validation microservice for the banking transaction platform using **DFS** to trace user-role-permission relationships across services, eliminating privilege escalation issues and reducing access misconfigurations by 30%.
- Applied **BFS** for permission propagation and implemented **cycle detection** to prevent circular role assignments, improving system stability and maintaining consistent access control across distributed banking modules.
- Designed and implemented scalable **microservices** architecture using **Spring Boot** and **Kafka**, applying design patterns like **Singleton** and Factory to ensure modularity and ease of maintenance while supporting 10K+ concurrent users.
- Developed **Spring Boot** microservices communicating via **Apache Kafka** for real-time transaction events, enabling decoupled processing and increasing system scalability during peak loads by 40%.
- Integrated **JWT** and **OAuth2**-based security across microservices, enabling fine-grained authorization and eliminating insecure hardcoded token mechanisms used in earlier legacy services.
- Containerized and deployed services using **Docker** and **Kubernetes** on **AWS EKS**, achieving 99.95% availability and reducing manual provisioning effort by over 60% through Helm chart automation.
- Optimized transactional service hosting by configuring **AWS EC2** instances, implementing efficient **S3** storage strategies for artifacts, and tuning RDS databases, resulting in a 25% reduction in infrastructure costs and improved system reliability.
- Managed codebase using **Git** by creating feature branches for new **microservices**, performing peer code reviews through pull requests, and resolving merge conflicts promptly, which reduced integration errors and sped up release cycles
- Built **CI/CD** pipelines using **GitHub Actions** and **Jenkins**, integrating automated **JUnit/Mockito** test runs and artifact deployment workflows, cutting release cycle time from 3 days to under 6 hours.

Client: Cognizant, India **Feb 2022 - June 2023**

Role: Full stack Java Developer

- Refactored appointment scheduling logic using time slot **bucketing** and **hash-based indexing** on patient records, which reduced database scan time and improved query performance by 40% in high-volume booking modules.
- Developed and maintained **Spring Boot microservices** for managing electronic medical records (EMRs), securing endpoints with **JWT** and integrating with external systems via **REST** and **GraphQL** APIs for real-time patient data exchange.
- Integrated **Oracle DB** with optimized queries and added indexed views for high-frequency medication and trial data access, resulting in 30% faster API response times during clinical decision-making workflows.
- Implemented caching of frequently accessed patient appointment data using **Redis**, reducing database load and improving API response times by 30%, while storing unstructured medical notes and audit logs efficiently in **MongoDB** for flexible querying and faster retrieval
- Automated **CI/CD** workflows using **Azure DevOps** and **Docker**, enabling smooth deployment of containerized microservices to **Azure App** Services and reducing deployment rollback time by 60% during hotfixes.
- Automated routine system administration tasks on Windows environments using **PowerShell scripts**, improving deployment efficiency and reducing manual errors by 35%.
- Developed responsive **Next.js** interfaces with **Tailwind CSS** & **TypeScript** for lab report uploads & prescription management, improved interaction times by 25%, in low-bandwidth hospital environments.
- Monitored application logs and patient data access with **ELK stack** and **Splunk**, detecting and resolving critical issues to maintain 99.9% system uptime and ensure smooth healthcare operations.
- Coordinated **sprint** planning and task tracking through Jira dashboards, enabling early identification of blockers and improving feature delivery predictability by 20%.
- Followed **Agile methodologies** in two-week sprints, working closely with **QA, UI/UX**, and product teams to deliver backend features on time and incorporate continuous feedback.

Client: Adobe, India **Jan 2021 – Feb 2022**

Role: Associate Java Developer

- Developed **Java** backend services for managing digital media content by creating **modular classes** and interfaces, which improved code reuse and reduced maintenance time by 30%.
- Leveraged **Servlets** and **JSP** to implement dynamic content rendering and user session management, enhancing responsiveness and user interaction within the media management system.
- Enhanced **content search** and **sorting** by implementing optimized algorithms within service methods, which cut response times by 25%, improving user navigation speed.
- Increased software reliability by practicing Test-Driven Development (**TDD**), writing **unit tests** with **JUnit4** and **Mockito** before implementing features, which raised test coverage to 85% & reduced post-release bugs by 40%.
- Improved API robustness by implementing centralized **error handling** that returned consistent error messages, reducing client-side error troubleshooting time significantly.
- Optimized **MySQL** database schemas by adding indexes and restructuring tables, which reduced query execution time by 35% and sped up content retrieval processes.
- Created **Bash scripts** to automate routine maintenance tasks on Linux servers supporting media services, which reduced manual errors during deployments and improved system uptime.

RESEARCH PROJECT

Integrated Healthcare Data Security System

- Led a team of 3 members to design and implement a secure healthcare database prototype integrating **AES-256** and **TLS 1.3** encryption, ensuring **HIPAA compliance** and protecting sensitive data at rest and in transit.
- Applied **graph-based** algorithms to optimize access control relationships and efficiently resolve complex user permission hierarchies, enhancing security and operational efficiency.
- Developed and enforced granular Role-Based and Attribute-Based Access Control mechanisms to restrict unauthorized data access in accordance with **HIPAA** regulations.
- Engineered real-time audit logging and **anomaly detection** features using behavioral analytics to monitor user activities and identify potential security threats.

CERTIFICATIONS

AWS Certified Developer Associate - DVA-C02

EDUCATION

Masters in Information Systems - Saint Louis University (Dec 2024)