

Upendra Vikram Singh

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Professional Summary

Seasoned Professional with 16+ years of experience in Java programming, specializing in architecting and designing scalable, resilient, and high-availability software systems. Proven expertise in modern Java (JDK 17+), Spring Boot 3.x, and microservices architecture, with a strong emphasis on transactional ACID semantics and advanced microservice design patterns. Proficient in guiding teams on performance optimization, security within SSDLC, and code scalability. Adept at leveraging GenAI tools for code review, implementing CI/CD pipelines, and containerization with Kubernetes.

Technical Skills

Languages: Java (JDK 17+), SQL, JavaScript, Python

Frameworks: Spring Boot 3.x, Spring Cloud, Hibernate, JPA

Architectural Patterns: Microservices, Saga Pattern, Outbox Pattern

Tools & Platforms: Kafka, Redis, ElasticSearch, Oracle, MySQL, Kubernetes, Docker

DevOps: CI/CD (Jenkins, GitHub, GitLab CI), Git, Maven, Gradle

Security: SSDLC, SAST, DAST, SCA, OWASP best practices

GenAI & Code Quality: Leveraging GenAI tools for code review, SonarQube

Cloud: AWS

Other: Redis, Kafka, Agile methodologies, mentoring and team leadership

Professional Experience

Technical Manager

Shell Recharge (on payroll of Samin Tekmindz, Noida) | Feb 2021 — Present

- Architected and implemented microservices-based systems using Java (JDK 17+) and Spring Boot 3.x, enhancing system scalability, resiliency, and high availability.
- Applied complex design patterns, including Saga and Outbox, to enable distributed transactions and robust error handling in microservices.
- Led initiatives on transactional ACID compliance, ensuring secure and reliable data handling in distributed systems.
- Integrated Kafka, Redis, and Elasticsearch for event streaming and in-memory data caching, improving system response times by over 30%.
- Ensured system security by embedding security standards (SAST, DAST, SCA) within the SDLC (SSDLC) process, resulting in a 40% reduction in security vulnerabilities.
- Oversaw code review sessions utilizing GenAI tools to increase review accuracy and identify scalability and functional improvements.
- Guided a team of 10 developers on containerization and Kubernetes, enhancing deployment consistency and reducing downtime by 20%.
- Designed and optimized CI/CD pipelines to enable streamlined deployments, significantly reducing deployment time and enabling faster feedback loops.
- Mentored team members, providing training on microservice best practices, transactional design, and system performance optimization.

Technical Lead

Mahindra Comviva, Gurugram | Apr 2011 — Feb 2021

- Spearheaded the design of scalable web applications using Java, Spring Boot, and PostgreSQL, accommodating a 200% growth in user base.
- Developed microservice-based architectures with a focus on high performance

and horizontal scalability, achieving a 50% improvement in response time.

- Led code review sessions with a focus on both functionality and scalability, achieving a defect reduction of 25%.
- Provided technical mentorship to junior developers, fostering a high-performance team and contributing to improved delivery timelines.
- Implemented CI/CD automation, enabling more frequent and reliable deployments with reduced manual intervention.
- Enhanced the system's security posture through proactive code fixes and thorough vulnerability assessments using SSDLC principles.

Software Engineer

BEL, IntegraMicro, Bangalore | Dec 2007 — Mar 2011

- Developed robust Java applications focusing on high scalability and performance, contributing to an uptime improvement of 20%.
- Collaborated in a cross-functional team, actively participating in design discussions for improving service reliability and fault tolerance.
- Worked on optimizing database interactions with Oracle and PostgreSQL, achieving reduced query latency.
- Assisted in the implementation of caching mechanisms using Redis, improving data access times and reducing the load on primary databases.

Education

Bachelor of Technology in Information Technology

Integral University, Lucknow

Graduated: 2006

Projects

Sky(CSMS) and NNI(Roaming OCPI) - OCPI & OCPP based EV Charging System

- **Description:** EV Charging platform to facilitate the EV driver to locate chargers and charge the vehicle. Sky as CPO to manage and operate the charge points and NNI as OCPI layer to provide the roaming charging support.
- **Technologies Used:** Java, Spring Boot, Kafka, Redis, OpenSearch (Elastic Search), MySQL, Docker, Docker compose and K8s.
- **Key Contributions:**
 - Designed and implemented the system architecture with a focus on scalability and fault tolerance.
 - Integrated Kafka for event-driven architecture and Redis for caching, enhancing response times by 40%.
 - Led a team in implementing CI/CD pipelines, reducing deployment time by 30%.
- **Outcome/Achievements:** OCPI compliance EV eco system and support for the integration with roaming CPO network. Provide whitelable solution to small to medium charge points network owner and make accessible thier chargers to EV drivers.

Mobiquity (Digital Finance Solution)

Description: Mobiquity Money is an all-inclusive platform that equips un-banked and under-banked consumers with a stored value account linked to their

mobile number enabling them to perform multiple financial transactions including domestic and international money transfer, bill payments, merchant payments, bulk payments, ticketing, savings, loans and insurance. Apart from bringing the financially underserved in the formal financial mainstream, the solution enables financial service providers to acquire new customers, create long-term loyalty with existing ones, and seize new revenue opportunities to increase their footprint in the market.

- **Technologies Used:** Java, Spring boot, RabbitMQ, MuleESB
- **Key Contributions:**
 - Requirement gathering
 - Mapping requirements to deliverable solutions
 - Guiding and mentoring team
 - Planning and Tracking deliveries
 - Maintaining the compliance and audit process of delivery
 - Collaboration and coordination with other cross functions involved in delivery
 - Code review
 - Coding complex changes
 - API design to integrate with external world
 - Security review
 - Delivery using Agile & Scrum methodologies

Customer Value Management

Description: MobiLytix™ Multi-Channel Campaign Management platform is a marketing solution that equips operators with tools to develop strategies to maximize customer lifetime value.

The platform enables operators to identify a customer's service usage patterns. This, in turn, is used to micro-segment customers. The information can thus be leveraged to proactively target customers with relevant promotions.

Winback Solution:

Winback Solution helps to track an inactive customer base in real-time. This is aimed at improving reach rate and minimizing message delivery timelines.

Churn Prediction:

Churn Prediction engine uses predictive analytical modelling to manage customer churn. This is achieved by proactively identifying customers who are most likely to churn. The operator's business team can thus proactively engage with these customers.

Subscriber Loyalty Solution:

Subscriber Loyalty Solution enables marketers to launch a subscriber-specific loyalty program to maximize sales, brand engagement and loyalty. Higher profitability is achieved when loyalty programs improve usage levels.

Roles & Responsibilities

Involved in Design and Development from scratch

Intense coding

GUI development for the segmentation module

Guiding and mentoring Team

- **Technologies Used:**

- **Key Contributions:**

- Designed the machine learning model for real-time recommendations, achieving high accuracy.
- Deployed the model on AWS, scaling it to handle increased traffic.
- Optimized algorithms, reducing latency and enhancing user engagement.