Abhishek Kr. Upadhyay

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PROFESSIONAL SUMMARY

Senior Software Engineer with 4+ years of experience designing and building scalable, fault-tolerant, distributed backend systems using **Java**, **Spring Boot**, and **AWS**. Proven track record delivering high-availability microservices and event-driven architectures serving millions of connected **IoT** devices, with deep expertise in cloud infrastructure, multi-region deployments, caching strategy, and system performance optimization.

EXPERIENCE

Senior Software Engineer — Netradyne Technologies Private Limited, Bangalore *Jan 2025 – Present*

- Designed and engineered a highly scalable, fault-tolerant, distributed **Spring Boot** system for OTA updates across millions of **IoT** devices, cutting rollout times by **50%** and improving device uptime.
- Architected multi-cluster, multi-region cloud infrastructure for high availability; made backend **Java** services multi-cluster compliant and deployed **AWS EC2** instances across regions per data-residency requirements, using **PostgreSQL** and **DynamoDB** for cross-cluster data storage and consistency.
- Led migration of the core messaging layer from **AWS SQS** to **AWS Kinesis**, redesigning the event-driven architecture and reducing processing costs by **80%**.
- Directed end-to-end delivery of a remote device wake-up capability spanning **Angular** UI, **Spring Boot** services, **SMS** orchestration, and device workflows, enabling on-demand wake of offline devices for live-stream requests and contributing to closing a new enterprise customer.
- Owned full-lifecycle delivery of a cloud-managed **Wi-Fi** hotspot feature — remote activation, secure credential management, mobile-app password updates, and fleet-wide data-usage visibility — across **Angular** and **Spring Boot** services.
- Partnered with product, QA, and cross-functional engineering teams to drive features from requirements and technical design through implementation, testing, and production rollout.
- Mentored engineers through architecture/design reviews, code reviews, and production debugging, driving adoption of scalable and maintainable engineering practices.

Software Engineer — Netradyne Technologies Private Limited, Bangalore *Jul 2022 – Dec 2024*

- Implemented **Elasticsearch** to optimize query performance, reducing API latency by **70%**; further cut infrastructure overhead via caching strategy, payload compression, and **SQS** batch processing.
- Migrated device-facing APIs from **OAuth** to **JWT**, enabling secure, stateless service-to-service authentication at scale.
- Built application metrics and auditing capabilities to improve observability, monitoring, and troubleshooting across distributed backend services.
- Developed **Spring Boot** microservices integrating **Salesforce**, **AWS**, and **IoT** services to automate feature provisioning and lifecycle management across millions of devices.
- Built an **Angular** operations portal backed by **Spring Boot** services for device log management, enabling support teams to configure log collection, trigger diagnostics, and upload device logs to **AWS S3** — accelerating production troubleshooting.
- Resolved critical production issues across backend services, device integrations, and operational workflows, improving system reliability and reducing recurring incidents.

TECHNICAL SKILLS

Languages: Java, Python, SQL, NoSQL, JavaScript, TypeScript

Backend & System Design: Spring, Spring Boot, Microservices, Distributed Systems, Event-Driven Architecture, REST APIs, High Availability, Fault Tolerance, Caching, Load Balancing, Hibernate, MyBatis, JUnit, Mockito

Cloud & Infra: AWS (EC2, Lambda, SQS, SNS, Kinesis, S3, DynamoDB), Docker, Kubernetes, Jenkins, CI/CD

Data: PostgreSQL, MySQL, Redis, Elasticsearch, DynamoDB, Cassandra, MongoDB

AI-Assisted Development: Cursor, ChatGPT, Claude, GitHub Copilot

Tools & Practices: Git, Linux, Maven, Agile, DataDog, Grafana, Prometheus

EDUCATION

IIT Kharagpur *Kharagpur, India*
Master of Science in Chemistry *Nov 2020 – Apr 2022*

Kirori Mal College, Delhi University *Delhi, India*
Bachelor of Science in Chemistry *Jul 2016 – May 2019*