

Amit Kumar

+91-9991091058 | amit.ak.ak933@gmail.com | linkedin.com/in/amit1058 | github.com/ak1058 | leetcode.com/u/user3824PF

Education

B.Tech. in Electronics and Communication Engineering

UIET, Kurukshetra University, Kurukshetra, India

Coursework: Data Structures and Algorithms, DBMS, OS, Computer Networks

August 2019 – August 2023

CGPA: 8.56

Experience

Software Engineer

Embitel Technologies (A Volkswagen Group Company), Bengaluru, India

September 2023 – Current

- Built a **Java/Spring Boot enterprise ticketing platform** handling **10K+ requests/day**, replacing third-party tooling and eliminating **\$15K/year** in licensing costs.
- Implemented **Kafka-based asynchronous workflows** with retries and **dead-letter queues (DLQs)** to improve fault tolerance and handle processing failures.
- Migrated a **monolithic nightly batch indexer** to an **event-driven Java microservices architecture** using **Kafka**, processing **25K+ records/day** and reducing dashboard latency from next-day updates to **near real-time**.
- Optimized a **high-throughput file-processing API** using **chunked streaming** and a **multi-threaded 6-worker parallel processing** model, reducing processing time from **15 min. to 2 min.** and **60%** less memory consumption.
- Designed and implemented a **health-check and failover microservice** with automated master-slave transitions, reducing system downtime from **2 minutes to 30–40 seconds** across **Kubernetes clusters**.
- Architected and maintained **highly scalable, fault-tolerant data pipelines** processing **millions of sensor events**, designed to handle **petabyte-scale data** and provide near real-time analytics for product and ML teams.
- Improved **P95 API latency from 450ms to 180ms** by implementing a **Redis cache-aside layer** with LFU eviction and TTL-based expiration, while optimizing **PostgreSQL queries** for production workloads.
- Provisioned **AWS infrastructure** for data-indexing pipelines using **Terraform**, including EC2, S3, and security groups, replacing manual cloud configuration with reproducible **Infrastructure-as-Code**.
- Containerized services using **Docker** and automated deployments through **Jenkins CI/CD pipelines**.
- Leveraged **AI-assisted development tools** such as **GitHub Copilot** to analyze stack traces and investigate production incidents, accelerating **root-cause analysis** and reducing debugging turnaround time.insights.

Projects

OpsCopilot | Java, Spring Boot, PostgreSQL, Google Gemini, LLMs

[GitHub](#)

- Built an **AI-powered SRE copilot** using Spring Boot and Google Gemini to translate natural-language operational queries into structured actions and insights.
- Implemented **LLM tool/function calling** and **AI guardrails** with controlled, read-only tools, mandatory execution, bounded iterations, and structured outputs for reliable AI-assisted debugging.

Zuno | Java, Spring Boot, Kafka, Redis, PostgreSQL, WebSockets

[GitHub](#)

- Built a **project and issue management platform** for **small startups and teams** with workspaces, teams, ticket assignment, real-time notifications, and collaborative workflows.
- Designed **event-driven microservices** using **Kafka** to decouple ticket, notification, and email workflows; integrated an **LLM workflow** for converting natural-language requirements into actionable tickets.

Skills Summary

Languages: Java, Python, JavaScript, SQL, Kotlin, C++

Frameworks: Spring Boot, Ktor, Django, FastAPI, React, Node.js

Databases & Messaging: PostgreSQL, Redis, Kafka, GraphQL

Cloud & DevOps: AWS, EC2, S3, Docker, Terraform, Jenkins, CI/CD, Linux

AI Engineering: LLMs, MCP, AI Agents, Prompt Engineering, GitHub Copilot, Claude, ChatGPT

Achievements

- **3× Spot Awards:** For impactful contribution and engineering excellence.
- **Smart India Hackathon 2022 – Winner:** Secured 1st place among 29,600+ teams for developing a road-health monitoring platform.
- **UNESCO India–Africa Hackathon – Winner:** Won among 100+ international teams for a healthcare innovation.