Mohammad Anas

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SUMMARY

Java Backend Engineer with production experience shipping **Spring Boot 3** microservices in a live Fintech environment. Eliminated duplicate financial transactions via idempotency architecture; reduced API latency **30%** through targeted query optimization. Focused on **high-concurrency systems, JPA/Hibernate, and distributed data** — built for SaaS, Fintech, and Enterprise Java stacks.

EXPERIENCE

Software Engineer Intern — Aug 2025 – Nov 2025
Sahind Technologies (Fintech Startup) — *On-Site, Lucknow*

- Reduced **API response latency by 30%** by rewriting N+1 **MySQL** queries using **Hibernate JPA** fetch joins and query-level indexing across 3 core Fintech modules.
- Achieved **100% transaction success rate** on Razorpay and telecom integrations by implementing retry logic with **idempotency keys** and **Spring Security + JWT** token validation on all financial endpoints.
- Eliminated duplicate transaction entries in a concurrent recharge flow by engineering a **thread-safe idempotency layer**; deployed the hardened build to **AWS EC2** in production.

PROJECTS

PayGuard — Idempotent Payment Processing System | *Java 17, Spring Boot 3, Redis, MySQL, JPA*

- Engineered an idempotent recharge API sustaining **1000+ concurrent requests** using **Redis-cached idempotency keys** with configurable TTL — zero duplicate charges under load.
- Enforced **ACID compliance** and prevented race conditions using **JPA Optimistic Locking (@Version)**, eliminating dirty-write conflicts in multi-threaded payment flows.
- Proved thread-safety at scale with **ExecutorService + CountDownLatch** stress tests simulating real burst traffic; documented zero data corruption across 10,000+ test transactions.

FlowState AI — Burnout Detection Platform | *Spring Boot 3, Python, React.js, Docker, MySQL*

- Architected a **3-service Docker-composed microservices** system (Spring Boot API gateway, Python ML service, React dashboard) with inter-service communication over REST.
- Shipped a **Random Forest** burnout prediction model with **87%** accuracy, replacing a heuristic rule system and cutting false-positive alerts by **40%**.
- Secured all inter-service and client-facing endpoints with **Spring Security + JWT** bearer tokens; enforced role-based access across analyst and admin roles.

RESEARCH & PUBLICATIONS

GeoSentinel: Computational Framework for Conflict Simulation — Nov 2025 – Present

- **Objective:** Developed a synthetic simulation engine modeling interplay between kinetic warfare and information warfare using quantitative indices.
- **Architecture:** Built a dual pipeline in **Python** integrating **DistilBERT** transformers and **PCA**.
- **Validation:** Implemented **Granger Causality** tests to validate lead-lag relationships between narrative spikes and kinetic escalation.

TECHNICAL SKILLS

Core: Java, Spring Boot 3, Hibernate JPA, Spring Security, Spring MVC, REST APIs
Architecture: Microservices, Idempotency Patterns, Optimistic Locking, JWT Auth, Docker
Databases: MySQL, **Redis** (caching, TTL, idempotency keys)
Tools & Cloud: Git, Maven, Postman, AWS EC2, Docker Compose
Supporting: Python, React.js, Pandas, Scikit-learn, JavaScript (ES6+)

EDUCATION

Babu Banarsi Das Northern India Institute Of Technology — Lucknow, India
B.Tech in Information Technology — GPA: 7.5/10.0 — *2022 – 2026*
Coursework: Data Structures & Algorithms, DBMS, OOP (Java), OS, Computer Networks

ACHIEVEMENTS & CERTIFICATIONS

- **Make4Lucknow Hackathon Finalist** — Ranked **Top 10** out of **400+** teams competing across Lucknow's tech ecosystem.
- Solved **100+ DSA problems** on LeetCode & GeeksforGeeks (arrays, strings, linked lists, recursion, trees).
- **Java Core & Advanced** Certificate — ShapeMySkills | **Innovation & Design Thinking** — Kalam Pragati 2025