

# AMAN JHA

## Full Stack Developer | DevOps (Cloud-Native)

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### Summary

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Hackathon-winning Full Stack & DevOps-focused developer with experience building scalable applications using React, Next.js, Node.js, Docker, AWS, and CI/CD with GitHub Actions. Skilled in backend systems using Redis, Kafka, BullMQ, gRPC, and WebSockets, and have built AI-powered services using Python (Flask), PostgreSQL, MongoDB vector store, and OpenAI embeddings/LLMs.

### Skills

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**Front-end:** HTML5, CSS3, JavaScript (ES6+), TypeScript, React.js, Next.js, Redux, Recoil

**Back-end:** Node.js, Express.js, REST APIs, WebSockets, WebRTC, gRPC, Microservices

**Databases & ORM:** PostgreSQL, MongoDB, Prisma ORM

**Caching/Queues/Streaming:** Redis, BullMQ, Pub/Sub, Apache Kafka, Event-Driven Architecture

**DevOps & Cloud:** Docker, GitHub Actions (CI/CD), AWS EC2, AWS Lambda, AWS S3, Auto Scaling Groups, Monorepo

**Monitoring & Testing:** Prometheus, Grafana, Logging/Monitoring, Unit Testing, Integration Testing

**Languages:** Java, C, JavaScript, TypeScript, Python

### Experience

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#### Full Stack / DevOps Developer (Hackathon Projects)

2024 – 2025

Netaji Subhash Engineering College (Hackathons)

Tools Used: Next.js, Node.js, AWS, Docker, Kafka, Redis

- Built cloud-ready full stack systems with **Dockerized services**, CI/CD automation, and event-driven backend components.
- Implemented **Redis caching**, **Kafka-based streaming**, BullMQ job queues, and WebSockets for real-time features and scalable processing.
- Applied DevOps best practices including **GitHub Actions CI/CD**, cloud deployment workflows, and observability using **Prometheus + Grafana**.

### Projects

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#### Anveshak — Multi-Agent Log Intelligence & Root Cause Analysis | Next.js, Node.js, Docker, Redis, Kafka, AWS, Prometheus

- Built an automated log monitoring platform to reduce manual debugging by converting raw logs into actionable insights.
- Implemented a **multi-agent architecture** to detect anomalies, correlate events across distributed services, and identify probable root causes.
- Solved cross-service correlation issues by developing a **log parsing/normalization layer** and shared-context correlation agent.
- Integrated alerting/automation workflows to trigger notifications and issue creation for faster incident response.

#### Student Grievance Management Platform — AI-Powered Backend | Python, Flask, PostgreSQL, MongoDB, OpenAI API, AWS

- Developed a grievance tracking backend with CRUD APIs, role-based workflows (student/admin), and ticket chat history storage.
- Designed relational schema in **PostgreSQL (SQLAlchemy ORM)** for status tracking, department assignment, and grievance lifecycle management.
- Implemented **embeddings-based tagging and clustering** using OpenAI API and stored vectors/conversations in **MongoDB vector store**.
- Built a **Google Drive knowledge base ingestion pipeline** with incremental sync using **changes.list + startPageToken** to keep embeddings updated.
- Integrated secure file uploads to **AWS S3** and developed analytics APIs for cluster trends and department loads.

### Awards & Certifications

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- **Winner — Hackathon, Technique Polytechnic Institute (2025):** Built **Anveshak**, a multi-agent log intelligence platform for anomaly detection and root cause analysis.
- **Winner — Hackathon, MCKVIE (2025):** Built an **AI-powered Student Grievance Management backend** using Flask, PostgreSQL, MongoDB vector store, OpenAI API, AWS S3, and Google Drive ingestion.
- **Campus Ambassador Certification — IIT Kharagpur (2025):** Represented Netaji Subhash Engineering College in campus outreach and event promotion.
- **2nd Position — AAVAHAN-ALGORITHMS Hackathon, NSEC (2024):** Secured runner-up position in a competitive hackathon.

## Education

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**B.Tech in Artificial Intelligence & Machine Learning**  
*Netaji Subhash Engineering College, Kolkata*

**2023 – Present**  
*(CGPA: X.XX / 10)*