

SWADESH CHATTERJEE

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SUMMARY

Backend-first software engineer building **Java** and **Spring Boot** services, focused on REST API design, security, data modeling, and cloud deployment. Built an **API gateway from scratch**, a **5-service** event-driven platform on **Kafka** and **Kubernetes**, and a role-based backend deployed on **AWS EC2** with **GitHub Actions** CI/CD.

TECHNICAL SKILLS

Languages: Java, SQL, Bash, Cypher

Backend: Spring Boot, Spring Security, Spring Data JPA, Hibernate, REST APIs, OAuth2, JWT, RBAC

System Design: Microservices, API Gateway, Apache Kafka, Event-Driven Architecture, Rate Limiting, Caching

Databases: PostgreSQL, MySQL, Redis, MongoDB, Neo4j, Elasticsearch

DevOps & Cloud: Docker, Kubernetes, AWS (EC2, S3), Nginx, GitHub Actions, CI/CD, Linux, Git

AI / LLM: Spring AI, OpenAI API, RAG, pgvector

Testing & Tools: JUnit 5, Mockito, Postman, Swagger/OpenAPI

Frontend: React, JavaScript, TypeScript, HTML, CSS, Tailwind CSS

PROJECTS

Orion Gateway | [Live Demo](#) | [Source Code](#)

Jun 2026 – Aug 2026

- **Engineered a reverse-proxy API gateway** in Spring Boot without Spring Cloud Gateway, routing **5+ downstream services** with centralized JWT validation.
- **Implemented distributed rate limiting** in Redis per client and route, enforcing consistent limits across gateway instances under **200+ concurrent requests**.
- **Reduced repeat-request latency by 45% to 18 ms** with Redis response caching; stored routes in PostgreSQL and request logs in MongoDB.
- **Tech Stack:** Java, Spring Boot, Redis, PostgreSQL, MongoDB, JWT, Docker

Proxima | [Live Demo](#) | [Source Code](#)

Nov 2025 – Apr 2026

- **Architected 5 Spring Boot microservices** (user, posts, connections, notification, uploader) behind an API gateway with **4 service-owned databases**.
- **Modeled the social graph in Neo4j** and indexed **10K+ documents** in Elasticsearch, serving 2nd-degree suggestions and full-text search in **under 80 ms**.
- **Decoupled notifications via Kafka** events (post, like, connection) and deployed on **Kubernetes** with **12 manifests** for services, databases, and Ingress.
- **Tech Stack:** Java, Spring Boot, Spring Security, Apache Kafka, Neo4j, Elasticsearch, PostgreSQL, Docker, Kubernetes

Food Delivery App | [Live Demo](#) | [Source Code](#)

Jun 2025 – Sep 2025

- **Engineered 25+ REST APIs** for menus, carts, orders, and delivery with method-level RBAC across **3 user roles** (Customer, Admin, Delivery Partner).
- **Secured the API** with Spring Security, OAuth2 login, and stateless JWT; designed **12 JPA entities** on Neon PostgreSQL holding **5K+ records**.
- **Deployed on AWS EC2** with Docker, Nginx, and GitHub Actions CI/CD, shipping each merge in **under 4 min**; offloaded image handling to ImageKit.
- **Tech Stack:** Java, Spring Boot, Spring Security, JWT, PostgreSQL, MapStruct, ImageKit, Docker, AWS EC2, Nginx

CERTIFICATIONS & ACHIEVEMENTS

- **Software Development Internship, CodSoft** (May 2026): built REST APIs with Stripe Checkout and webhooks.
- **Hack Your Own Server, Security Hackathon** (2026): hardened a Linux server with Nginx TLS and rate limiting.
- **Backend Engineering Simulation, Forage** (2025): built a Spring Boot and Kafka event-processing microservice.
- **Problem Solving:** **400+** data structures and algorithms problems solved on LeetCode in Java.

EDUCATION

Lovely Professional University

Bachelor of Technology, Computer Engineering

Aug 2020 – Jun 2024

Jalandhar, Punjab