

MD. SHAMIM MOLLA

Senior Software Engineer (Backend)

Java • Spring Boot • Microservices • Kafka • AWS • Spring AI / RAG

Dhaka, Bangladesh • Open to remote / relocation

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CORE STRENGTHS

- **Microservices & APIs:** 10+ services, REST, OpenAPI
- **Event-driven:** Kafka, RabbitMQ, outbox pattern
- **DB performance:** 10–20M+ rows, indexing, N+1 fixes
- **Security:** pentest-certified; Keycloak SSO (10K+ users)
- **Multi-tenant SaaS:** data isolation and RBAC
- **AI / RAG:** hybrid vector + full-text search, cited answers
- **Quality:** full unit & integration tests, TDD, CI/CD
- **Leadership:** led 6–10 engineers; global clients

TECHNICAL SKILLS

Languages

Java, SQL, JavaScript, TypeScript

Backend

Spring Boot, MVC, Data JPA / Hibernate, Security, Cloud (Gateway, Config), Node.js

APIs & messaging

REST, OpenAPI/Swagger, Kafka, RabbitMQ, outbox pattern

Security

OAuth 2.0, JWT, Keycloak SSO, RBAC, TOTP 2FA, tenant isolation

Databases

MySQL, PostgreSQL (pgvector), MariaDB, MongoDB, AWS Redshift, Redis, Flyway, Liquibase

Cloud & CI/CD

AWS (ECS, Lambda, S3, RDS, SQS), Docker, Docker Compose, Jenkins, GitHub Actions, GitLab CI, TeamCity, Bamboo

Testing & tools

JUnit, TDD, integration testing, Postman, Git, Maven, Gradle, Jira, Confluence, Agile/Scrum

AI / RAG

Spring AI, OpenAI models, hybrid search (RRF), Apache Tika

Frontend

React, Next.js (SSR), Thymeleaf

PROBLEM SOLVING

LeetCode | HackerRank | UVa

HackerRank skill certificates; data structures & algorithms focus.

EDUCATION

B.Sc. in Computer Science and Engineering

[Southeast University](#), Dhaka
2019 • CGPA 3.56 / 4.00

Languages

Bangla (native), English, Hindi

SUMMARY

Backend-focused Senior Software Engineer with 7+ years building production Java/Spring Boot systems for AdTech, cloud billing, pharmacy ERP, e-commerce and fintech. I own 7+ microservices on Improve Digital's marketplace (Azerion), led its pentest remediation to certification and built Azerion's multi-cloud billing backend; earlier I led a 6–10 engineer ERP team.

EXPERIENCE

Senior Software Engineer (L-I → L-II)

Mar 2022 – Present

[Vivasoft Limited](#), Dhaka • Client: [Azerion](#) • L-II since Jan 2025

Marketplace — Improve Digital's DSP

- Own **7+ of 15+ microservices** (deal management, reporting, security) in a 10+ engineer team with Azerion, Europe.
- Tuned reporting on **10–20M+ row Redshift tables** (JOIN vs CTE vs view, indexing), fixed N+1 queries to milliseconds, and built async reports on Kafka.
- Implemented **Keycloak SSO for 10K+ users** and AWS MediaConvert; keep both products fully covered by unit and integration tests.

Multicloud — Azerion's multi-cloud billing portal (2025)

- Built the **full backend**: a batch service fetching and normalizing **AWS, GCP and Huawei Cloud** billing, and an API with per-account views and cost forecasts.
- Multi-tenant with RBAC and data isolation; auth moved from JWT to company SSO.
Tech: Java, Spring Boot, Spring Security, MariaDB, Redshift, MongoDB, Kafka

Software Engineer → Senior Software Engineer

Dec 2019 – Feb 2022

[Zaag Systems Ltd.](#), Dhaka

- **Team lead for 6–10 engineers:** hired, mentored and reviewed code.
- Built Spring Boot ERP services for **OS Pharmacy** (~1M requests/day, real-time inventory sync across 200+ branches, now **700+ branches, 3,000+ users**): inventory and expiry, POS, accounting, offline mode, online orders, drug-combination alerts, secure patient data.
- Built backend for **Oushod Sheba**, an online medicine delivery platform with GPS tracking, route planning and secure payments.
- Led the team that built a **Restaurant Management System** and handed it over to the client (Spring Boot, MySQL, React, Docker on AWS).
- Built **Alisha's World** (custom-clothing marketplace) end to end with two engineers, and **Eignert** (German shop-promotion app).
Tech: Java, Spring Boot, MySQL, MongoDB, Redis, React, Next.js, Docker, AWS

Junior Software Engineer

Jan 2019 – Nov 2019

[Vivasoft Limited](#), Dhaka

- Fixed P2P transfer, statement and account bugs in a fintech client's mobile banking backend, and redesigned its Thymeleaf portal.
- Built SSR Next.js frontends: **Instorage** (storage booking), **PI-CMS** (React CMS).

KEY PROBLEMS SOLVED • Marketplace

- **TPI third-party sync: 20 → 6 min (~70%).** Redesigned priority-field indexes, rewrote queries (CTEs, range filters), parallelized API calls and cached tokens/config; bulk sync from the third party (requested) is next.
- **Bulk writes on a 2M+ row table: slow → sub-second.** 100K–250K-row inserts/deletes and searches were slow; batching barely helped → MongoDB with targeted indexes and per-operation collections; writes never conflict.
- **Security pentest → certified platform.** A well-known firm's pentest found security and data-isolation issues; I fixed every finding, incl. tenant isolation and hardening.

PROJECTS

Enterprise RAG Platform • Personal • MVP built, ongoing

- Multi-tenant RAG on Spring microservices (gateway, config, user, document, ingestion, chat); outbox + RabbitMQ ingestion embeds versioned docs in pgvector.
- Hybrid vector + full-text search (RRF); grounded, cited answers behind JWT/RBAC.
Tech: Java 25, Spring Boot 4.1, Spring AI 2.0, pgvector, RabbitMQ, MinIO, React 19