# Md Fakhrul Islam

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## WORK EXPERIENCE

**Software Engineer**                                                                      Mar 2023 – Present
*Therap Services LLC (HQ: Connecticut, USA)*                                       *Dhaka, Bangladesh*

- Engineered a fault-tolerant, asynchronous file exchange system (Spring, SFTP) to orchestrate secure data transmission for **320,000+** monthly invoices, reducing manual workload by **110+** hours.
- Spearheaded the architectural migration of a legacy batch monolith into a distributed system, guiding a **4-engineer** squad to drive a **3x** throughput increase while maintaining **99.9%** uptime.
- Developed a full-stack **Self-Service Test Automation Portal** (Spring Boot, React) for independent test execution, eliminating release bottlenecks and **automating ~21%** of manual test cases.
- Secured the software supply chain for a **150+ developer** platform, achieving **100% audit compliance** by orchestrating critical library upgrades and enforcing dependency governance.

   **Technology Stack**: Java (Spring Boot, MVC), React, Playwright, Nginx, Docker, Oracle, Git.

## TECHNICAL SKILLS

**Languages**: Java, C++, Python, JavaScript
**Databases**: Oracle, PostgreSQL, MySQL, Redis, ChromaDB
**Development**: Spring Boot, Spring MVC, FastAPI, React, Redux Toolkit, jQuery, RESTful APIs, JWT, WebSockets
**Applied AI**: RAG Systems (ChromaDB, SBERT), LLM Integration (Ollama), Unsupervised Anomaly Detection
**DevOps & Cloud**: Docker, Amazon Web Services (AWS), Nginx, Kafka
**Testing & Automation**: Playwright, JUnit, Selenium, Pytest
**Version Control & CI/CD**: Git, GitHub Actions

## ACHIEVEMENTS

- Codeforces: Max Rating **1955 (Candidate Master) - top 2.56%** — Handle: fakhrulsojib
- Codechef: Max Rating **2282 (6*) - top 0.2%** — Username: fakhrulsojib
- Ranked **21st** in 2021 & 2022 ICPC Asia Dhaka Regional Online Preliminary Contest (ICPCID)

## PROJECT EXPERIENCE

**Pulse AI** | *FastAPI, Kafka, Postgres, Docker, Redis, ChromaDB (RAG), Ollama (local LLM), SBERT embeddings*
Built a real-time log analytics pipeline (Kafka, FastAPI) with unsupervised anomaly detection and behavior tracking; RAG-based NL queries via ChromaDB + local LLM (Ollama), Docker, Redis, PostgreSQL.

**Expenalyzer** | *Spring Boot, REST API, Docker, JUnit, Git, Amazon RDS*
RESTful financial backend with JWT auth and Amazon RDS; Dockerized, tested with JUnit.

## EDUCATION

**Shahjalal University of Science and Technology**                                    Sylhet, Bangladesh
*Bachelor of Science in Mathematics*                                               *Feb 2018 – Mar 2023*

- Relevant Courses: C Language (4.00), Data Structures (4.00), Algorithm Design (3.75)
- Extracurricular: **Vice President** and **Programming Mentor** at Euclid Programming Club