

Md Tanvir Alam

Senior Software Engineer | Senior Backend Java | Agentic AI Platform

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GitHub: github.com/tanvir-ux | Portfolio: tanvir-ux.github.io | LinkedIn: linkedin.com/in/mdtanviralam

Open to: Remote from Bangladesh, or APAC (Singapore EP, Jakarta, India)

SUMMARY

Chief Technology Officer and hands-on Senior Software Engineer with 5+ years designing distributed systems, high-concurrency banking backends, and production Agentic AI platforms. Expert in Java, Spring Boot, Microservices, REST, Kafka, Kubernetes, Docker, AWS, PostgreSQL, Oracle, CI/CD, System Design, and Distributed Systems. Builds Agentic AI services with LangChain, RAG, and MCP. Delivers core banking work on Oracle FLEXCUBE, Oracle Banking Payments (OBPM), and SWIFT for clients including Bank Danamon and SMBC. Recent merged patches in Google Gson, Facebook Infer, Apache Maven, Apache Commons IO, and Netflix DGS.

SKILLS

Core: Java, Spring Boot, Microservices, REST, Kafka, Kubernetes, Docker, AWS, PostgreSQL, Oracle, CI/CD, System Design, Distributed Systems, Agentic AI, LangChain, RAG, MCP

Backend: JVM, Grails, Node.js, Python, FastAPI, OpenAPI, Event Driven Architecture, DDD, CQRS, Clean Architecture, SOLID, TDD, Agile, GitHub Actions

AI / data: MCP, FastMCP, OpenAI API, Anthropic Claude, Ollama, Qwen, Gemini, pgvector, ChromaDB, FAISS, Keras, TensorFlow, PyTorch

Infra: GCP, Azure, EKS, ECS, Lambda, S3, Redis, Oracle PL/SQL, MySQL, Flyway, Nginx

Banking: Oracle FLEXCUBE, Oracle Banking Payments (OBPM), SWIFT, OAuth2, JWT

EXPERIENCE

Chief Technology Officer and Senior Software Engineer

Nov 2025 – Present

Jonlab LLC

- Define long-term technical vision and strategic roadmaps, and orchestrate cross-functional engineering teams to scale backend systems.
- Direct the design and production integration of enterprise Agentic AI pipelines and custom LLM interfaces using LangChain, RAG, and MCP.
- Spearhead modernization of legacy business layers into high-availability Microservices on Java, Spring Boot, Kubernetes, Kafka, and cloud infrastructure.
- Optimize system stability and server performance across distributed services.

Lead Software Engineer / Application Developer

Aug 2025 – Oct 2025

MehvozSoft

- Designed and developed self-executing AI agents with LangChain, orchestrating multi-step reasoning to reduce manual oversight by 40%.
- Engineered RAG architectures so private language models can query internal document repositories and call external APIs via tool-calling.
- Integrated resilient messaging pipelines with Kafka and Redis to streamline background processing and improve Java / Spring Boot performance.

Senior Software Engineer (Java)

Mar 2023 – Aug 2025

Midas Software Solutions Ltd.

- Bank Danamon (Indonesia) — Architected and executed migration of a core digital banking monolith to a distributed Spring Boot Microservices structure, delivering 70% faster deployment cycles for high-concurrency instances.
- Designed, optimized, and maintained over 100 microservice REST endpoints using OAuth2 and JWT, supporting 50k+ concurrent users.
- SMBC (Singapore) and Oracle — Customized and deployed banking modules inside Oracle FLEXCUBE and Oracle Banking Payments (OBPM) using JavaScript, XML, and Oracle PL/SQL to execute cross-border SWIFT transactions.
- Applied System Design and Distributed Systems practices (Kafka, Kubernetes, Docker, CI/CD) on production banking workloads with PostgreSQL and Oracle.

Application Developer

Sep 2021 – Feb 2023

MehvozSoft

- Developed and deployed cross-platform mobile utilities (including Express Entry Calculator and Adhaan applications) on iOS and Android using Ionic and Angular.
- Crafted database schemas and optimized SQL queries, indexing, and procedures on PostgreSQL and MySQL to accelerate transactional execution.

PROJECTS

Public original demos (not employer IP). Repos: <https://github.com/tanvir-ux>

agentic-mcp-gateway

<https://github.com/tanvir-ux/agentic-mcp-gateway>

- MCP server plus HTTP agent (FastAPI) with one tool registry for retrieve_docs (RAG over local markdown), search_payments, and create_ticket.
- ReAct agent loop with a FakeLLM stub for CI; hashed n-gram embeddings with cosine similarity. Docker Compose, pytest, MCP stdio. Stack: Python, FastAPI, MCP, RAG, Docker.

banking-payments-spring

<https://github.com/tanvir-ux/banking-payments-spring>

- Spring Boot 3.3 / Java 17 credit-transfer REST service with JWT, idempotent POST, JPA/PostgreSQL, AML stub, and Kafka domain events.
- OpenAPI / Swagger UI, Actuator health, Maven unit and MockMvc tests. ISO 20022 / SWIFT-inspired message shapes. Docker Compose for API, PostgreSQL, Kafka.

kafka-spring-microservices

<https://github.com/tanvir-ux/kafka-spring-microservices>

- Three Spring Boot services (transfer-api, ledger-service, notification-service): JWT REST initiation, Kafka topics, PostgreSQL double-entry ledger.
- Idempotent consumers, Kubernetes manifests under k8s/. Runnable via Docker Compose; Maven tests use H2 and mocked KafkaTemplate.

OPEN SOURCE (MERGED, 2026)

- Google Gson — Update JSON path after promoteNameToValue. <https://github.com/google/gson/pull/3098>
- Facebook Infer — Fix BufferOverrun false positive on String.split with a non-positive limit. <https://github.com/facebook/infer/pull/2094>
- Apache Maven — Fix ArtifactCoordinates.getId() double colon when classifier is empty. <https://github.com/apache/maven/pull/12813>
- Apache Commons IO — Do not discard CharsetEncoder errors in ReaderInputStream (IO-780). <https://github.com/apache/commons-io/pull/874>
- Netflix DGS — Preserve user spring.autoconfigure.exclude lists. <https://github.com/Netflix/dgs-framework/pull/2339>
- Checkstyle — Quote UnusedLocalVariable examples. PRs #21362 and #21363.

EDUCATION

Stamford University Bangladesh

Aug 2021

B.Sc. in Electrical and Electronic Engineering (EEE) | CGPA 3.25

Machine Learning Specialization — Stanford / DeepLearning.AI (Coursera)

Credential ID: 4UGJY8KESNCZ | coursera.org/account/accomplishments/verify/4UGJY8KESNCZ