

## Muhammad Shamsul Maruf

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## Professional Summary

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Accomplished Principal Software Engineer with 15+ years of experience designing and delivering robust, secure, and scalable software systems for finance, healthcare, government, and enterprise. Expert in backend development, cloud-native architecture, automation, DevOps, and financial market protocols including **FIX, FAST, and ITCH**. Renowned for technical leadership, innovative problem-solving, and driving high-impact R&D projects. Proficient in Java, C#, Python, Go, AWS, Kafka, and ReactJS. Demonstrated success in leading cross-functional teams, pioneering industry-first solutions, and ensuring operational excellence.

## Professional Experience

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### EPAM Systems Sp. z o.o, Gdańsk, Poland

**Senior Software Engineer** | Mar 2023 – Mar 2025

- Designed and deployed scalable APIs with Java 17, Spring Boot, and AWS (Lambda, DynamoDB, Kafka, OpenSearch, RDS, API Gateway) for Cigna Healthcare, improving data throughput and HL7 compliance.
- Automated critical data workflows using AWS Lambda (Python), driving operational efficiency and cost reduction.
- Developed live monitoring solutions with Splunk and CloudWatch, reducing incident response time and improving system uptime.
- Refactored legacy monoliths into modular RESTful microservices; optimized CI/CD with Jenkins and GitHub, accelerating release cycles.
- Led successful E2E testing and cloud deployment for Vanguard Property Management, improving reliability across distributed microservices.
- **Teams:** Cigna (SM, PM, TL, 3 BE, 3 FE); Vanguard (PM, TL, 3 BE, 2 FE)

## **EcoSoftBD Ltd, Dhaka, Bangladesh**

### **Principal Software Engineer | Apr 2022 – Apr 2025**

- Directed R&D for market-leading FIX/ITCH engines using QuickFIX/n (.NET), achieving first-ever Dhaka Stock Exchange (DSE) FIX certification.
- Engineered a custom ITCH-to-FIX translation layer, unifying market data integration for trading systems.
- Developed a high-performance FAST protocol engine for CSE, enabling low-latency market data processing.
- Championed adoption of .NET/C#, MongoDB, RESTful services, SSL, and Dockerized deployments.
- Collaborated with frontend teams to define API contracts and streamline trading workflows.

## **TigerIT Bangladesh Ltd, Dhaka, Bangladesh**

### **Senior Software Engineer | Jun 2021 – Feb 2023**

- Led secure government-critical systems (National ID, passports) using Java, Spring Boot, Python, Groovy, and Go, supporting millions of users and ensuring data security.
- Built real-time vehicle tracking for NTMC using resilient, fault-tolerant data pipelines.
- Engineered secure communication and tracking solutions with Java, Kafka, Oracle, PostgreSQL, Redis.
- **Team:** PM, TL, 3 BE, 4 FE, Ops

## **Kona Software Lab Ltd, Dhaka, Bangladesh**

### **Senior Software Engineer L-2 | Aug 2019 – Jun 2021**

- Developed critical banking and e-money systems (VISA integration, NAGAD, NEXUS Pay) with Java, Spring Boot, Kafka, Oracle, Redis.
- Designed high-throughput backend for lottery platforms, processing up to 100 million tickets/weekend.
- Enforced compliance with Central Bank Authority standards; led project teams and mentored developers.

- Orchestrated ReactJS, NodeJS, TypeScript, and AngularJS solutions for mobile wallets and secure UI/API integration.

- **Teams:** Laototo (PM, 5 TL, 30 Dev, 10 SQA); Wallet (PM, 3 TL, 20 Dev, 10 SQA)

### **IdeaScale Ltd, Dhaka, Bangladesh**

**Senior Software Engineer** | Dec 2015 – Aug 2019

- Pioneered idea management platforms used by DARPA, NASA, US Navy—delivering mission-critical, secure, and scalable solutions.
- Optimized reporting, search (Elasticsearch n-gram), and data migration for high-volume, non-blocking systems.
- Automated deployment and managed API gateways (nginx) using TeamCity CI/CD and Docker.
- **Team:** PW, 2 PM, 7 BE, 5 FE, 4 SQA

### **Therap Services, LLC (Therap BD Ltd), Dhaka, Bangladesh**

**Senior Software Engineer** | Jan 2008 – Dec 2015

- Built and maintained HIPAA/HL7-compliant clinical and disability support web applications for US state agencies.
- Led North Dakota state system implementation; created reusable template library and custom forms.
- Delivered large-scale backend using Java, Spring MVC, J2EE, Oracle, MySQL, AWS RDS.
- **Teams:** ISP (PM, TL, 5 Dev, 5 SQA); ND State (PM, TL, 4 Dev, 2 SQA)

### **IICT, BUET, Dhaka, Bangladesh**

**Programmer** | Aug 2006 – Jul 2007

- Delivered Java, C#, and Visual Basic solutions for institutional clients (BUET, DESCO, Bakhraabad Gas).
- Gained experience with Oracle, MySQL, MS-SQL databases.

## Education

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### B.Sc. in Computer Science & Engineering

Rajshahi University of Engineering & Technology (RUET), Bangladesh

June 2000 – January 2005 | CGPA: 3.21/4

## Certifications

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- **Software Architecture: Patterns for Developers**

LinkedIn | Issued Aug 2024

Skills: Software Design Patterns

- **Getting Started with the AWS Well-Architected Framework**

LinkedIn | Issued Jun 2024

Skills: Application Frameworks, Amazon Web Services (AWS)

- **Terraform: Managing Network Infrastructure**

LinkedIn | Issued Jan 2024

## Selected Project Highlights

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- **Dhaka Stock Exchange FIX Certification:** Architected and delivered Bangladesh's first FIX-certified trading engine.

- **FIX/FAST/ITCH Market Integration:** Led design and deployment of high-performance financial protocols for market data processing and trading.

- **Healthcare Data Platform (Cigna):** Scaled cloud-native HL7-compliant APIs for millions of patient records.

- **National ID System:** Led secure, fault-tolerant system development for government identity and passport services.

- **Global Lottery Platform:** Engineered a transaction system for 100M+ concurrent ticket sales.

## Languages

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- **English:** Upper-Intermediate/B2+ (Everyday and Professional Use)

- **Bengali:** Native

## Key Skills

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- **Programming:** Java, C#, Python, Go, Groovy, JavaScript, TypeScript, SQL
- **Frameworks:** Spring Boot, Hibernate, NodeJS, ReactJS, AngularJS, Flask, .NET
- **Cloud/DevOps:** AWS (Lambda, S3, EC2, RDS, DynamoDB, API Gateway, CloudWatch, IAM), Docker, Jenkins, TeamCity, Terraform, AWS CDK, CI/CD
- **Databases:** MySQL, Oracle, PostgreSQL, MongoDB, Elasticsearch, DynamoDB
- **Messaging/Streaming:** Kafka, RabbitMQ
- **Monitoring:** Splunk, Kibana, Prometheus, Grafana, CloudWatch
- **Other Tools:** Maven, Gradle, Webpack, Babel, JUnit, Cucumber, JMeter, Sunfire
- **Concepts:** System Design, Microservices, Secure Systems, Architecture Patterns, Scalability, Reliability Engineering, Agile, Operational Excellence