Muhammad Shamsul Maruf
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Professional Summary

Results-driven Principal Software Engineer with over 15 years of experience in designing, developing, testing, and deploying complex, scalable software systems. Deep expertise in backend development, cloud-native architecture, automation, and resilient system design. Proficient in Java, C#, Python, Go, Spring Boot, Kafka, Redis, AngularJS, ReactJS, NodeJS, and core AWS services including Lambda, S3, RDS, EC2, DynamoDB, API Gateway, and CloudWatch.

Successfully led R&D initiatives at EcoSoftBD Ltd., including the implementation of FIX/ITCH engines, achieving the first FIX certification with DSE, and contributing to FAST protocol R&D for CSE. Played a key role in designing and implementing the OMS backend, FIX session/message handling.

Specialized in secure, mission-critical applications for banking, government, and healthcare sectors (HL7, HIPAA), including biometric ID, e-money, and federal SaaS solutions. Experienced in containerization (Docker), CI/CD (Jenkins, TeamCity), and DevOps practices. Strong analytical and leadership skills, with a passion for scalable impact, innovation, and automation in agile environments.

Work Experience

EPAM Systems Sp. z o.o, Gdańsk, Poland
Senior Software Engineer | March 2023 – March 2025

- Designed and developed scalable back-end APIs using Java 17, Spring Boot, and AWS services (Lambda, DynamoDB, Kafka, Open-Search, RDS, API Gateway) for the Cigna Healthcare, significantly enhancing data processing capabilities for a large-scale platform with maintaining HL7 standard.

- Implemented server-less AWS Lambda functions in Python for automating critical data tasks and background processing, contributing to operational efficiency and cost optimization.

- Built comprehensive monitoring dashboards with Splunk and AWS CloudWatch to enable real-time system health tracking and proactive issue resolution, reducing mean time to detection. Additionally, use NodeJS and TypeScript for UI/UX.

- Refactored legacy back-end systems into scalable RESTful APIs and established automated CI/CD pipelines (Jenkins, GitHub), accelerating development cycles and improving system reliability for Vanguard Property Management. Also implement successful E2E testing during CI/CD processing of different micro-services on AWS EC3 and content checking with Python lambda.

- Cigna Team (SM, PM, TL, 3 Back-end, 3 Front-end) Vanguard Team (PM, TL, 3 Back-end, 2 Front-end)

EcoSoftBD Ltd, Dhaka, Bangladesh
Principal Software Engineer | *April 2022 – April 2023*

- Led R&D and implementation of **FIX and ITCH engines** using **QuickFIX/n** (.NET), delivering robust FIX session management and achieving the **first-ever FIX certification with Dhaka Stock Exchange (DSE)**.

- Developed a **custom ITCH-to-FIX translation layer**, enabling normalized market data integration with trading systems.

- Contributed in a **high-performance FAST protocol engine** for Chittagong Stock Exchange (CSE), ensuring low-latency processing of compressed market data.

- Utilized technologies including **.NET/C#**, **MongoDB**, **RESTful services**, **SSL**, and containerized deployment.

- Collaborated closely with frontend engineers to define API contracts and streamline order and trade workflows.

TigerIT Bangladesh Ltd, Dhaka, Bangladesh
Senior Software Engineer | June 2021 – February 2023

- Led R&D and development of secure, government-critical systems including National ID (NID) and passport platforms for [insert population scale/impact, e.g., supporting a large population] using Java, Spring Boot, Python, Groovy, and Go, ensuring high reliability and data security and Runtime tracking of vehicle for NTMC sites with fault tolerance of data processing.

- Contributed to the development of vehicle tracking and secure communication projects using Java, Kafka, Oracle, PostgreSQL, Redis, focusing on system resilience and performance.

- Team (PM, TL, 3 Back-end, 4 Front-End, Ops)

Kona Software Lab Ltd, Dhaka, Bangladesh
Senior Software Engineer L-2 | August 2019 – June 2021

- Developed and maintained critical banking and e-money systems including VISA spec card integration, supporting platforms like NAGAD and NEXUS Pay.

- Designed and implemented scalable back-end solutions using Java, Spring Boot, Kafka, Oracle, and Redis to handle high transaction volumes, ensuring system reliability. Ensured large scale of ticket management using Kafka streaming and winning calculation using Oracle parallel query and Java parallel streaming considering possible 100 million tickets can be purchased in weekend. Also, implemented standard banking guidelines with Bank or wallet transactions according to Central Bank Authority. And worked as project lead. Also manage ReactJS interception between UI/UX to backend API with secure channel and encryption for central banking standard. Additionally, use NodeJS, TypeScript and AngularJS for Mobile wallet system.

- Contributed to the development of international lottery software, demonstrating ability to deliver solutions for diverse domains and requirements.

- Laototo Team (PM, 5 TL, 30 Developers, 10 SQA), Wallet Team (PM, 3 TL, 20 Developers, 10 SQA)

IdeaScale Ltd, Dhaka, Bangladesh
Senior Software Engineer | December 2015 – August 2019

- Led development efforts for mission-critical idea management platforms adopted by high-profile government and defense organizations (DARPA, NASA, US Navy).

- Designed and implemented scalable back-end services using Java, Spring, MySQL, and Elasticsearch to support diverse user bases and data volumes. Also optimized reporting task management and migration of data to ensure non-blocking system. Additionally, optimized text searching using Elasticsearch n-gram partial search with JS caching for browser/front-end. For UI/UX, used JavaScript and jQuery with AJAX calling with REST API.

- Automated deployment pipelines using TeamCity CI/CD and Docker and managed API gateway infrastructure (nginx), enhancing development efficiency and system resilience.

- Team (PW, 2 PM, 7 Back-end, 5 Front-end, 4 SQA)

Therap Services, LLC (Therap BD Ltd), Dhaka, Bangladesh
Senior Software Engineer | January 2008 – December 2015

- Developed and maintained web applications for disability support services and clinical data management, ensuring strict HIPAA and HL7 compliance with performance tuning for state applications and vendor applications. Also, manage annual reporting frameworks. Created template library and customized form to prototype users' need on system and help understanding future feature development. And performed as technical lead of North Dakota state system implementation and maintaining. Additionally, use jQuery and AJAX for UI/UX.

- Built back-end systems using Java, Spring MVC, Spring Webflow, J2EE, Oracle DB, MySQL, and AWS RDS to manage sensitive data at scale.

- ISP Team (PM, TL, 5 Developers, 5 SQA) ND State Team (PM, TL, 4 Developers, 2 SQA)

IICT, BUET, Dhaka, Bangladesh
Programmer | August 2006 – July 2007

- Developed applications using Java, C#, and Visual Basic for clients including BUET, DESCO, and Bakhrabaad Gas.

- Gained experience with multiple database systems including Oracle DB, MySQL, and MS-SQL.

Skills

- **Programming Languages:** Java, Python, Go, Groovy, JavaScript, TypeScript, SQL, C#

- **Frameworks:** Spring, Spring Boot, Hibernate, NodeJS, AngularJS, ReactJS, Flask, Eco

- **Cloud & DevOps:** AWS (S3, Lambda, RDS, EC2, DynamoDB, API Gateway, CloudWatch, IAM), Docker, Jenkins, TeamCity, Terraform, CI/CD, Automation, Infrastructure as Code (AWS CDK)

- **Databases:** MySQL, Oracle DB, PostgreSQL, Elasticsearch, DynamoDB, RDS, NoSQL

- **Monitoring/Logging:** Splunk, Kibana, Prometheus, Grafana, CloudWatch

- **Other Tools:** Maven, Gradle, Webpack, Babel, JUnit, Cucumber, JMeter, Sunfire

- **Concepts:** System Design, Architecture (Design Patterns), Reliability Engineering, Scaling, Problem Solving, Debugging, Operational Excellence, Secure Systems, Microservices, Agile Methodologies

Education

Bachelor of Science in Engineering | June 2000 – January 2005 | 3.21/4
Computer Science & Engineering, Rajshahi University of Engineering & Technology (RUET), Bangladesh

Languages

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