Mahathir Mohammad Bishal

Backend Engineer — Java & Spring Boot Specialist

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Dhaka, Bangladesh | Open to Remote & On-site Roles

PROFESSIONAL SUMMARY

Backend Engineer with 2.5+ years building high-performance microservices and scalable systems. Developed enterprise caching library with crash recovery capabilities and production VoIP platform processing **1.5M+ calls/month**. Specialized in performance optimization, concurrent systems, and building reliable backend solutions with proven impact in fintech and telecom domains.

TECHNICAL SKILLS

Backend & Core: Java (Expert), Spring Boot, Spring Data JPA, Spring Security, Quarkus, Hibernate, REST APIs, Microservices

Database & Messaging: MySQL, MongoDB, Apache Kafka, Redis, Event-Driven Design, Transaction Management

Performance & Concurrency: Chronicle Queue, In-Memory Systems, WAL, Batch Processing, Multi-threading

Cloud & DevOps: AWS (EC2, RDS, S3, Auto Scaling), Docker, Jenkins CI/CD, GitHub Actions

Architecture & Design: System Design, OOP Design Patterns, Performance Optimization, API Design

Additional: C/C++, Python, JavaScript, React, Git, Maven, SQL Optimization

WORK EXPERIENCE

Software Engineer, Telcobright
May 2023 – Present
Dhaka, Bangladesh

MemLedger: *in-memory cache library with persistency.*

- Architected high-performance caching library with Write-Ahead Log (WAL) achieving microsecond-latency and automatic crash recovery for financial transactions
- Designed entity-level locking to safely handle multiple simultaneous updates to cached data
- Designed atomic multi-database transaction system enabling single transactions spanning multiple MySQL databases and built asynchronous WAL consumer achieving **30-40x** performance improvement (10,000 ops/sec)
- Implemented replay-on-startup mechanism to automatically sync failed database operations ensuring zero data loss
- *Tech Stack: Java 21, Quarkus, Chronicle Queue, MySQL, HikariCP, JPA*

RTC Manager: *Real-time VoIP billing platform processing **1.5M+** calls/month*

- Architected JWT-based authentication and core REST APIs serving high-volume production traffic with zero security incidents
- Integrated Java ESL with FreeSWITCH to process real-time call events (Park, Unpark, Answer, Hangup)
- Engineered smart billing engine with real-time balance validation, per-minute deduction, automated call release on insufficient balance, and fractional refunds
- Built event-driven architecture using Kafka for call event persistence and automated CDR generation
- *Tech Stack: Spring Boot, FreeSWITCH, Java ESL, Kafka, MySQL, Docker*

CDR Analyser System (CAS): *High-performance CDR processing platform*

- Built high-throughput Call Details Record (CDR) processing system handling **20M+** daily records from multiple ICX providers with partitioned MySQL databases
- Optimized decoder algorithms and SQL queries improving processing performance while ensuring **100%** billing accuracy
- Developed billing and reporting system for accurate revenue calculation and analytics
- *Tech Stack: C#, .NET, MySQL*

EDUCATION

Chittagong University of Engineering & Technology (CUET)
Chattogram, Bangladesh

Bachelor of Science in Computer Science & Engineering, CGPA: 3.24/4.00
2017 – 2022

ADDITIONAL INFORMATION

Publications: 2 peer-reviewed papers — Heliyon (Elsevier Q1, 2024) and ACL Workshop (2022)

Problem Solving: 600+ problems — LeetCode (300+), Codeforces (265+), HackerRank (55+)