

# M. OMAR FARUQUE

Senior Engineering Manager — People, Performance, and Production Stability

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## Summary

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- Engineering Manager with 10+ years of experience in software development and team leadership.
- Champion of service performance, ensuring high reliability and excellent customer experience.
- Expertise in API design and development, including GraphQL, REST, and gRPC implementations.
- Strong advocate for software development best practices including TDD, Clean Code, and SOLID principles.
- Proven track record of transforming monolithic applications into scalable, microservice architectures.

**Key Skills:** Engineering Leadership — API Design — Go (Golang) — Java — TypeScript — Microservices — GraphQL — REST — gRPC — Pub/Sub — NoSQL — MongoDB — Elasticsearch — Production Health — Kubernetes — CI/CD — Multi-tenant Services — FFmpeg — CUDA

## Recent Activities

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- **tuneR (R):** Advanced hyperparameter optimization package for mixOmics, enhancing statistical rigor in omics model tuning. [tuneR \(GitHub\)](#)
- **mixOmicsIO (R):** Bioconductor integration for converting SummarizedExperiment to mixOmics formats, optimized for large datasets. [mixOmicsIO \(GitHub\)](#)
- **drpc (Go/TypeScript):** Decentralized RPC framework over libp2p with gRPC support for efficient peer-to-peer communication. [drpc \(GitHub\)](#)
- **taskpilot mcp (TypeScript):** AI-powered project management server with workflow-based feedback control. [taskpilot mcp \(GitHub\)](#)
- **gommons (Go):** Utility library for stream processing, map-reduce, file handling, and embedded key-value database utilities. [gommons \(GitHub\)](#)
- **Active Contributor:** Regular contributions to Go and blockchain projects. See portfolio at [github.com/omar391](#) and [github.com/omgolab](#).

## Recent Publications

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- "From Microservices to Microbiomes: A Software Architect's Guide to Conquering Omics Data" – Technical article demonstrating expertise in omics data architecture and computational biology applications.
- "tuneR: A Deep Dive into Hyperparameter Optimization with mixOmics" – In-depth technical analysis of statistical methods for multivariate omics analysis and hyperparameter optimization.

## Professional Experience

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Senior Engineering Manager  
[AstronLab](#), Dhaka, Bangladesh

*Apr 2024 – Present*

**Responsibilities and Achievements:**

- Lead multiple engineering teams, ensuring high success rates for continuous deployments and service reliability.
- Implement production health metrics and monitoring solutions to proactively address issues before affecting customers.
- Champion software development best practices (TDD, Clean Code, SOLID), improving code quality and maintainability.
- Mentor and coach team members, providing hands-on support while fostering a collaborative environment.
- Partner with stakeholders to understand business requirements and align engineering efforts accordingly.
- Manage sprint backlogs effectively, balancing support requests, bug fixes, and feature development.

**Skills:** Leadership, Team Management, Agile Methodologies, Production Health, System Architecture, Strategic Planning

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**Lead Backend Engineer (Golang)**

*Dec 2021 – Apr 2024*

[Zeals Co., Ltd.](#), Tokyo, Japan

**Responsibilities and Achievements:**

- Designed and implemented GraphQL and RESTful APIs for chatbot applications, focusing on scalability and performance.
- Developed high-concurrency microservices using Golang and gRPC, ensuring reliable message processing.
- Led code reviews and established coding standards, educating team members on best practices for API development.
- Implemented comprehensive CI/CD pipelines, reducing deployment time by 30% while maintaining high success rates.
- Integrated search capabilities using Elasticsearch, significantly improving content discovery within the application.
- Created testing frameworks with focus on TDD principles, increasing code reliability and reducing production issues.

**Skills:** Golang, Microservices, GraphQL, REST APIs, gRPC, Elasticsearch, CI/CD, TDD, High-Concurrency Systems

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**Founding Software Engineer**

*Jan 2020 – Dec 2021*

[AstronLab](#), Dhaka, Bangladesh

**Responsibilities and Achievements:**

- Led the foundational engineering efforts, designed the initial microservice architecture, and established the company’s software development best practices (TDD, Clean Code).
- Developed the core multi-tenant cloud services with a focus on production health and monitoring.
- Created ‘drpc’, a decentralized RPC framework over libp2p with gRPC support, to enable efficient peer-to-peer communication.

**Skills:** Golang, Performance Optimization, REST APIs, Microservices, Automated Testing, Multi-tenant Services

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**Senior Engineering Consultant (Rust/Go)**

*May 2021 – Nov 2021*

Independent, Contract/Remote

**Responsibilities and Achievements:**

- Provided backend and protocol engineering expertise for clients in the fintech and blockchain sectors.
- **ChainSafe Systems:** Ported the Polkadot blockchain protocol from Rust to Go for the Gossamer project, optimizing FFI calls.
- **Favorite Medium:** Developed low-latency Golang microservices and designed RESTful APIs for a multi-tenant finance application.

**Skills:** Go, Rust, Blockchain, Polkadot, FFI, Decentralized Systems, TDD  
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**Senior Engineering Team Lead**

*Feb 2012 – Aug 2018*

SEBPO, Dhaka, Bangladesh

**Responsibilities and Achievements:**

- Led multiple teams developing web services and API integrations for enterprise clients using Java and C#.
- Managed Agile development processes, effectively prioritizing features based on business impact.
- Designed scalable architectures for web services, focusing on API performance and reliability.
- Mentored junior engineers in TypeScript, JavaScript, Java, and C# development, fostering a culture of continuous learning.
- Partnered closely with stakeholders to translate business requirements into technical solutions.

**Skills:** Java, C#, JavaScript, Team Leadership, Technical Architecture, API Development, Mentorship, Stakeholder Engagement

**Awards**

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- **Top Performer of the Month** – SEBPO
- **Employee of the Month** – SEBPO
- Placed among top 3 positions in MIST Inter-University Programming Competition

**Education**

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**Ph.D. Candidate in Computer Science (Incomplete)**

*Sep 2018 – Aug 2020*

New Jersey Institute of Technology (NJIT), USA

*Focus: Artificial Intelligence, Computer Vision, ML fine tuning*

*Published Research: "Vehicle Classification in Video Using Deep Learning" - MLDM 2019 Conference*

**Bachelor of Science in Computer Science**

*Jan 2008 – Jan 2012*

Military Institute of Science and Technology (MIST), Dhaka, Bangladesh