

# Fahim Ahmed

## Sr. Software Engineer

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### Summary

Aspiring Sr. Software Engineer offering 3.5+ years of professional experience, currently working in solution architecture & back-end application development that serve 50M+ users on a daily basis. Interested in designing new systems, architectures, and building scalable products hands-on.

### Industry Experience

**Senior Software Engineer (Sr. Back-End Developer)** January, 2021 - Present  
**BKash, Dhaka, Bangladesh**

Largest Mobile-Financial-Service in Bangladesh with 56M+ registered subscribers and over \$300M in annual turnovers; which was declared as a Fortune Top-50 company (Change the World, 2017).

#### → bKash-Shop

- An e-commerce platform to host online stores. Provides easy automated setup of a full-featured online store for a merchant with integrated bKash-Payment-Gateway after online verification of national-id, bKash-wallet & email-address.
- Progressed through the entire lifecycle of software development where activities ranged from heavily contributing to ideas & designing high-level architectures to detailed design & implementation of business functionality.
  - Designed & Developed REST-based micro-services using Spring Boot; following Controller, Service, Repository pattern.
  - Leveraged Spring WebFlux framework to achieve reactivity, having proper concept of event-loop, reactor-core, reactive-programming, and java-concurrency.
  - Fine-tuned the solutions with the proper application of advanced algorithms and data-structures in core-implementations. This resulted in a 35% performance increase compared to the initial implementation.
  - Took ownership of back-end codebase, with coding around 50% of it by self.
  - Periodic code-review of 100% code-base (Backend).
  - End-to-end development support of the application till the final rollout.

#### → bKash-Payment-Gateway

- An integrative secure payment API that lets merchants collect online payments from bKash customers. <https://developer.bka.sh/reference>
- Refactored existing architecture of a high-traffic-backend-application, that serves over 50M+ users on a daily basis & modified source code accordingly. This resulted in a 20%+ performance improvement and 30%+ cost reduction.

#### → Tech Stack

- Java 11 (OOP, Collections, Streams, Functional Interfaces, Concurrency, Reactor-Core)
- Various 3rd Party Java libraries [Apache Commons Lang, GSON, Lettuce (Redis), etc.]
- Spring Boot, Spring WebFlux, Spring Security, Spring Data, etc.
- Docker, Docker-Compose
- AWS Services
  - EC2, DynamoDb, ElastiCache (Redis), SQS, SNS, S3, Cognito, Lambda, API Gateway
- Version Control: Git, Github
- Project Management: Jira

**Senior Software Engineer** March, 2020 - December, 2020  
**Software Engineer** April, 2018 – February, 2020  
**Samsung R&D Institute, Dhaka, Bangladesh**

- Awarded Icon Engineer of The Month (May, June 2019)
- Awarded Team of The Year, 2018 (as member of team iOS Gear 360 Manager)
- Achieved Certification from Samsung Electronics for passing Software Competency level of Professional. (June, 2018)  
(Globally 2<sup>nd</sup> Most Prestigious Competency in Samsung).
- Worked onsite in Samsung HQ, South Korea & Samsung Research Bangalore, India for 6+ months (R&D Collaboration)

#### → FirstNet (U.S.A) Push-To-Talk

- A “Mission Critical” emergency communication solution for FirstNet (USA) based on the public safety standards set by the Third Generation Partnership Project (3GPP). Provides various features for emergency communication including Audio-Video Communication, Emergency Alert & Positioning, etc. in various platform including iOS & android.
- Took ownership of native iOS Audio & Video Engine Module. Coded about 40% of Audio, 65% of Video Engine.
  - Hands on experienced with several video compression algorithms (i.e. H.264, H.265, etc.) and optimizations.
  - The developed Audio-Video engine achieves higher quality in lower bandwidth compared to market standards.
  - Feature development in other modules. Such as-
    - Network core for secured SIP & HTTP Communication
    - VoIP Push (APNS) Handling
    - Call Manager Module.
    - Various Service Subscription Module.
  - Remote work with SEA (U.S.A) & SR (S.Korea) for project development & deployment.
  - Periodic Code Reviews of 100% Codebase.
  - Arrangement of in-team knowledge transfer sessions for complete team synchronization regarding all updates.
  - Developed in: C++, Objective-C++ (Framework Development); Swift (Application Development).
  - Frameworks: AVFoundation, AudioToolbox, VideoToolbox, METAL, CURL, reSIProcate, OpenSSL, PushKit, CallKit, etc.
  - Database: SQLite (Application Side)
  - Version Control: Gerrit

- [Gear 360 Camera Manager \(iOS\)](#)
- Developed Image & Video Processing & Rendering Feature using Apple’s METAL GPU Library.

- Designed algorithms for image processing for Panorama, Infinite-Panorama, Fish-Eye, and 360 Views.

- Developed in VIPER architectural pattern, following proper object-oriented principals.

Education

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[Military Institute Of Science & Technology \(MIST\), Dhaka, Bangladesh](#)

Bachelor of Science, Computer Science & Engineering		2014-2018
<div><div>▪ CGPA: 3.36 (on a scale of 4.00)</div><div>▪ Recognitions:</div><div><div>- Runner Up – App Development, IUT ICT FEST, 2017</div><div>- MIST Best Coder of The Year 2015</div><div>- MIST Best Coder of The Year 2014</div></div></div>	<div><div>▪ Competitive Programming Highlights:</div><div><div>- Achieved <a href="#">above 97% percentile in HackerRank</a>.</div><div>- Globally ranked 364<sup>th</sup> in <a href="#">Google KickStart 2017 (Round C)</a></div><div>- Ranked 30<sup>th</sup> in <a href="#">ACM ICPC Asia Dhaka Regional 2015</a>. (MIST_Beginners, Out of 120+ teams.)</div><div>- Problem Setter &amp; Judge in <a href="#">Samsung Code Contest 2018</a></div></div></div>	