Fahim Ahmed
Sr. Software Engineer

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Summary

Aspiring **Sr. Software Engineer** offering 3+ 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 reactiveness, 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)
- Various 3rd Party Java libraries [Apache Commons Lang, GSON, Lettuce (Redis), etc.]
- Spring Boot, Spring WebFlux, Spring-Data, Spring Boot Actuator, etc.
- Docker, Docker-Compose
- AWS Services
  - EC2, DynamoDb, ElastiCache (Redis), SQS, SES, Lambda, API-Gateway, Cloud-Front, SNS, S3
- 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 2nd 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
  - Call Manager Module.
  - VoIP Push (APNS) Handling
  - 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

Military Institute Of Science & Technology (MIST), Dhaka, Bangladesh

Bachelor of Science, Computer Science & Engineering   2014-2018

- CGPA: 3.36 (on a scale of 4.00)
- Recognitions:
  - Runner Up – App Development, IUT ICT FEST, 2017
  - MIST Best Coder of The Year 2015, 2014

- Competitive Programming Highlights:
  - Ranked 30th in ACM ICPC Asia Dhaka Regional 2015. (MIST_Beginners, Out of 120+ teams.)
  - Personally achieved above 97% percentile in HackerRank.
  - Problem Setter & Judge in Samsung Code Contest 2018