Fahim Ahmed
Sr. Software Engineer

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Summary

Aspiring **Sr. Software Engineer** offering **3+ years of professional experience**, currently working in <u>solution architecture & back-end application development that serve 50M+ users on a daily basis</u>. 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

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

→ **bKash-Shop**

An <u>e-commerce platform to host online stores</u>. Provides easy <u>automated setup of a full-featured online store</u> for a merchant <u>with integrated bKash-Payment-Gateway</u> 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 <u>resulted in a 35% performance increase</u> 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 <u>integrative secure payment API</u> that lets merchants <u>collect online payments from bKash customers</u>.
https://developer.bka.sh/reference

- Refactored existing architecture of a <u>high-traffic-backend-application, that serves over 50M+ users on a daily basis</u> & modified source code accordingly. This resulted in a <u>20%+ performance improvement</u> and <u>30%+ cost reduction</u>.

→ **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 <u>Icon Engineer</u> of The Month (<u>May, June 2019</u>)
- Awarded <u>Team of The Year, 2018</u> (as member of team iOS Gear 360 Manager)
- Achieved <u>Certification from Samsung Electronics for passing Software Competency level of Professional</u>. (June, 2018) (Globally <u>2nd Most Prestigious Competency</u> in Samsung).
- Worked <u>onsite in Samsung HQ, South Korea & Samsung Research Bangalore, India for 6+ months</u> (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 <u>ownership of native iOS Audio & Video Engine Module</u>. Coded about **40% of Audio, 65% of Video Engine.**
- Hands on <u>experienced with</u> several <u>video compression algorithms</u> (i.e. H.264, H.265, etc.) and optimizations.
- The developed Audio-Video engine <u>achieves higher quality in lower bandwidth</u> 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.
- <u>Remote work with SEA (U.S.A) & SR (S.Korea)</u> for project development & deployment.
- Periodic Code Reviews of 100% Codebase.
- Arrangement of **in-team knowledge transfer sessions for complete team synchronization** regarding all updates.
- <u>Developed in</u>: C++, Objective-C++ (Framework Development); Swift (Application Development).
- <u>Frameworks</u>: **AVFoundation, AudioToolbox, VideoToolbox**, METAL, CURL, reSIProcate, OpenSSL, PushKit, CallKit, etc.
- <u>Database</u>: SQLite (Application Side)
- <u>Version Control</u>: 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
  - MIST Best Coder of The Year 2014

- Competitive Programming Highlights:
  - Achieved above 97% percentile in HackerRank.
  - Globally ranked 364th in Google KickStart 2017 (Round C)
  - Ranked 30th in ACM ICPC Asia Dhaka Regional 2015. (MIST_Beginners, Out of 120+ teams.)
  - Problem Setter & Judge in Samsung Code Contest 2018