

Dhaka, Bangladesh

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**Fahim Ahmed**



Sr. Software Engineer

Aspiring software engineer, currently lead developer of Audio & Video Engine for iOS [FirstNet-PTT](https://www.firstnet.com/mission-critical/firstnet-push-to-talk.html) solution. Proficient in algorithms, data-structures, and design-patterns. Experienced in Competitive Programming [(Top 3% in HackerRank)](https://www.hackerrank.com/fahim_ahmed). Interested in designing new systems, architectures and building scalable products hands on. Open to explore new opportunities that align with the vision to expand my skillset.

Summary

Software Engineer

Senior Software Engineer

Industry Experience

[Samsung Research](https://research.samsung.com/), 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 2ndMost Prestigious Competency in Samsung).
* Worked onsite in Samsung HQ, South Korea & Samsung Research Bangalore, India for 6+ months (R&D Collaboration)
* Regular arrangement of in-team mentoring for best practices, usage of algorithm & DS, software system design, etc.
* [FirstNet (U.S.A) Push-To-Talk](https://www.firstnet.com/mission-critical/firstnet-push-to-talk.html)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.

April, 2018 – March, 2020

April, 2020 - Present

* 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, AV1, 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-
* Remote work with SEA (U.S.A) & SR (S.Korea) for project development & deployment.
* Periodic Code Reviews & Design 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
* Network core for secured SIP & HTTP Communication
* Call Manager Module.
* VoIP Push (APNS) Handling
* Various Service Subscription Module.

* [Gear 360 Camera Manager (iOS)](https://apps.apple.com/us/app/samsung-gear-360/id1214791825)
* 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.
* [Other](https://apps.apple.com/us/app/samsung-gear-360/id1214791825) Languages & Frameworks
* (Language) JAVA, Python, JS; (Framework) ReactJS, (Database) MySQL, Oracle, (Version-Control) Git, Gerrit
* Competitive Programming Highlights:
* Qualified for [ACM ICPC Asia Dhaka Regional 2015](https://algo.codemarshal.org/contests/icpcdhaka2015/standings), ranked 30th.  
  (MIST\_Beginners, Out of 120+ teams.)
* Personally achieved above 97% percentile in HackerRank.
* Problem Setter & Judge in [Samsung Code Contest 2018](https://research.samsung.com/news/Code-Contest-2018)

Education

[Military Institute Of Science & Technology (MIST), Dhaka, Bangladesh](https://en.wikipedia.org/wiki/Military_Institute_of_Science_and_Technology)

Bachelor of Science, Computer Science & Engineering

* 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

2014-2018

* Publications:
  + [A New Algorithm to Compute Single Source Shortest Path in a Real Edge Weighted Graph to Optimize Time Complexity](https://ieeexplore.ieee.org/document/8466444/)  
    *1st Author,* 17th ICIS/IEEE, Singapore, 2018, ~400 Reads, 2 Citations.
  + [Smart Self Position Aligning Chair for a Modern Conference Room](https://ieeexplore.ieee.org/document/8466430/)  
    *2nd Author*, 17th ICIS/IEEE, Singapore, 2018; ~200 Reads, 4 Citations