

# FAHIM AHMED

## Sr. Software Engineer

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### SUMMARY

Aspiring software engineer, currently lead developer of Audio & Video Engine for iOS [FirstNet-PTT](#) Project. Proficient in algorithms, data-structures, and design-patterns. Experienced in Competitive Programming ([Top 3% in HackerRank](#)). 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.

### INDUSTRY EXPERIENCE

#### SAMSUNG RESEARCH, DHAKA, BANGLADESH

##### SENIOR SOFTWARE ENGINEER

April, 2020 - Present

##### SOFTWARE ENGINEER

April, 2018 – March, 2020

- 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 in Samsung HQ, South Korea & Samsung Research Bangalore, India (Onsite) 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](#)  
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, 60% of Video Engine.
  - Developed Audio-Video Engine achieves higher throughput 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 & 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); Swift (Application).
  - [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.
- [OTHER LANGUAGES & FRAMEWORKS](#)
  - (Language) JAVA, Python, JS; (Framework) ReactJS, (Database) MySQL, Oracle, (Version-Control) Git, Gerrit

### 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)
- Competitive Programming Highlights:
  - Qualified for [ACM ICPC Asia Dhaka Regional 2015](#), ranked 30<sup>th</sup>. (MIST\_Beginners, Out of 120+ teams.)
  - Personally achieved above 97% percentile in HackerRank.
  - Problem Setter & Judge in various Intra & Inter University Contest
- Recognitions:
  - Runner Up – App Development, IUT ICT FEST, 2017
  - MIST Best Coder of The Year 2015, 2014
- Publications:
  - [A New Algorithm to Compute Single Source Shortest Path in a Real Edge Weighted Graph to Optimize Time Complexity](#)  
1<sup>st</sup> Author, 17<sup>th</sup> ICIS/IEEE, Singapore, 2018, ~400 Reads, 2 Citations.
  - [Smart Self Position Aligning Chair for a Modern Conference Room](#)  
2<sup>nd</sup> Author, 17<sup>th</sup> ICIS/IEEE, Singapore, 2018; ~200 Reads, 4 Citations