

# S. M. Faisal Rahman

Software Engineer

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## Summary

Aspiring Software Engineer with 6 years of professional experience of building customer focused mobile & web applications to large scale distributed systems ingesting requests per second well into billions.

- **Java** (J2EE backend, Spring boot, Android)
- **C++** (Clang, GCC, Android rendering)
- **Web** (HTML5, CSS3, JS, Python, React & Vue)
- **Swift** (iOS)
- **Cloud** (AWS; specialising in event streaming)
- **DBMS** (MySQL, Mongo, Oracle, DynamoDB)

## Industry Experience

### Software Development Engineer

July 2021 - Now

[Amazon \(AWS S3\), Cambridge, UK](#)

- Working for s3-eventbus team:
  - Lead the creation of a brand new type of event flow encompassing 4 different AWS services.
  - Created canary infrastructure from scratch for S3 & EventBridge integration.
  - Delivered high TPS (Billions/sec) failure mode infrastructure to ensure 99.99% durability of events.
- Optimized event streaming infrastructure cost by 50% with targeted implementation of customized real time compression and encoding.
- Reduced org wide deployment time ~5% by optimizing integration test execution from 3.5 hours to 12mins.
- Leading campaign to achieve 99.99% archive durability and 99.999% auditing accuracy for real time event streaming in billions scale.

### Full-stack Software Developer

February 2020 - April 2021

[European Bioinformatics Institute \(EMBL- EBI\), Cambridge, UK](#)

- Worked on Europe PMC ([Europe PubMed Central - europepmc.org](https://europepubmedcentral.org))
  - Took ownership of system wide ORCID integrations (Java, Vue)
  - Solo introduced new article claim feature (Vue, Java)
  - Took over development & maintenance of THOR project ([www.ebi.ac.uk/europepmc/thor](http://www.ebi.ac.uk/europepmc/thor))
- Solo implemented article storage microservice (Java, RabbitMQ)
- Contributed to complete reimplement of UI (Vue).
- Introduced smart worker thread scaling in data consumer microservices to work regardless of underlying VM features (Java)

### Software Engineer

April 2018 - December 2019

[Samsung R&D Institute Bangladesh \(SRBD\), Dhaka, Bangladesh](#)

- Awarded *Icon Engineer Certificate*, Achieved *SWC Professional Certificate* for programming competency
- **Social media app - iOS (Swift):**
  - Took ownership of feed and post modules
  - Flexible SDK architecture design for Samsung Cloud interfacing
  - Periodic code reviews & design reviews (100% of codebase)
  - 80% unit test coverage in SDK
- **Arctecture (drawing app) - Android (Java, C++):**
  - Retained a rating 4.3 with 1M+ users
  - Written a custom build system for Native C++ codebase
  - Adapted complete legacy GNU C++ codebase for Clang
  - Continuous improvement of C++ POSIX thread management
- Designed content Feed engine optimized for to network activity
- Optimized Gif player (not present in iOS natively)
- App cache design & implementation
- Coded about 30% of the complete codebase
- Designed & implemented Permission Controller module
- Ported legacy code to Android Studio
- Optimized C++ codebase to introduce ARM64 compilation
- Developed internal tools for proper dependency updates

### Remote Software Engineer

November 2017 - April 2018

[Far-East IT Solutions Limited, Dhaka, Bangladesh](#)

- **Flight booking system - Laravel backend (Designed 100% of the product):**
  - Designed REST API backend following MVC design pattern from scratch
  - Designed & deployed full MySQL database
- **Flight booking system - ReactJS admin panel (Coded 50% & Released):**
  - Implemented Client side search & filter
  - Bulk SMS and email dashboard
- **Flight booking system - ReactJS user site (Released & handled 30% issues):**
  - User verification
- Designed search cache (Redis)
- Docker orchestration (unreleased)
- Bulk SMS/Email message queue
- Integrated payment gateway (BKash)
- Landing page

## Education

### Bachelor of science, Computer Science and Engineering

2014 - 2018

[Military Institute of Science and Technology, Dhaka](#)

- **Club affiliations:** MIST Robotics Club, MIST Computer Club; *increased 30% budget savings automating event management and payment tracking gaining much smoother user experience. OpenCV based image processing for initial screening of receipts.*
- **Thesis:** A proposed transport layer security mechanism for IoT multicast protocol suite and simulated performance comparison (key: DTLS for multicast)



