S. M. Faisal Rahman
Software Engineer

⚲ Cambridge, United Kingdom
☎ +4407377872865
✉ smfaisal1648@gmail.com
in linkedin.com/in/faisal-rahman-88174512a
○ github.com/Frank-en-stein/

Summary

Aspiring stack agnostic Software Engineer with about 7 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)
- *Backend* (JS, Python, Rust, Go)
- *Front-end* (HTML5, CSS3, JS, React & Vue)
- *Cloud* (AWS; specialising in event streaming)
- *DBMS* (MySQL, Mongo, Postgres, DynamoDB)

Industry Experience

Software Engineer   November 2023 - Now
Trilitech - Tezos Blockchain, London, UK

- Working for the revolutionary jstz(Build web3 apps in JavaScript | Tezos) team:

- Leading the finsys-grade infra development for the upcoming JS driven verifiable compute on blockchain (jstz) runtime, currently in beta.

- Designed & shipped beta jstz indexer capable of jstz exploration within sub-second latency, still in active development - Jstz Dashboard

- Working on Tezos L1 indexers:

- Primary infra maintainer of layer-1 indexer tzstats across fast paced protocol upgrades (3 so far) native to tezos blockchain. *(Go, React, .NET)*

- Migrated 2 major blockchain indexers to GCP achieving 90% reduction in developer hours per quarterly protocol upgrade. *(Terraform)*

Software Development Engineer   July 2021 - November 2023
Amazon (AWS S3), Cambridge, UK

- Working for s3-eventbus team:
  - Led the creation of a brand new type of event flow encompassing 4 different AWS services at billions events/sec global scale.

  - Optimized event streaming infrastructure cost by 50% with targeted implementation of customized real time compression and encoding.

  - Created canary test infrastructure from scratch for S3 & EventBridge integration for automated correctness detection.

  - Reduced S3 wide deployment time ~5% by optimizing critical integration test execution from 3.5 hours to 12mins.

  - Delivered high TPS (Billions/sec) failure mode reingestion infrastructure to ensure 99.99% durability of events.

  - Led the 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)
  - E2E designed and shipped ORCID integrations & article claiming
  - Implemented the shift to event driven microservices (RabbitMQ)

  - Integrated pyTorch based AI workflows to event-driven backend
  - Drove the completion of UI migration to Vue (europepmc.org)

  - Took over the development & maintenance of THOR project (www.ebi.ac.uk/europepmc/thor)
  - Introduced VM architecture independent smart thread scaling for zero-config deployment (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):***
  - Designed & led development of social media feed and post modules
  - Designed app level smart activity caching & network call caching

  - Cross app SDK architecture design for Samsung Cloud interfacing
  - Implemented own Gif player (not present in iOS natively)

  - Implemented the entire testing framework, pipelines and processes
  - Solo implemented about 20% of the million line scale codebase

- **Artecture (drawing app) - *Android (Java, C++):***
  - Led maintenance retaining a rating 4.3 with 1M+ users
  - Created ~50% faster native C++ build toolchain for the project family

  - Migrated complete legacy GNU C++ codebase for Clang
  - Optimized for newer ARM64 chips gaining -5% power draw per day

Remote Software Engineer   November 2017 - April 2018
Far-East IT Solutions Limited, Dhaka, Bangladesh

- Solo developed a flight booking system end to end
  - Designed & implemented performant RESTful backend with NodeJS
  - Created React frontend with partial server-side rendering.

  - Deployed full data layer to Postgres and Redis caching
  - AI integration: Tesseract based OCR integration for ticket/documents

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; *~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)