

FABIHA TASNEEM

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PROFESSIONAL SUMMARY

Software engineer with hands-on experience designing and scaling real-time communication platforms. Built and operated distributed, event-driven systems using microservices, Kafka-based messaging, and horizontally scalable persistence. Comfortable working across frontend and backend, with a strong focus on reliability, observability, and production readiness.

EXPERIENCE

- Software Engineer I**, *Synesis IT PLC* — Dhaka, Bangladesh June 2024 – Present
- Core contributor to a webinar-scale real-time communication platform, expanding system capacity from **300 users** to **50K+ participants** via a distributed, event-driven, real-time architecture.
 - Implemented a dual-panel meeting model (speaker panel + webinar panel) using **React** and **JavaScript/TypeScript**, supporting controlled promotion of audience members to speakers.
 - Designed and built scalable backend workflows using **Java Spring Boot** across multiple services, coordinated via **Kafka**, with service discovery (**Eureka**) and routing through an **API Gateway**.
 - Enabled horizontal scalability and fault tolerance through multiple backend and chat service replicas backed by **Apache Cassandra**, asynchronous processing, and **Dockerized** deployments.
- Trainee Software Developer**, *BYDO Engineering Ltd.* — Remote Sept 2020 – Sept 2021
- Built backend services (**Java**, **Hibernate**, **MySQL**) and web interfaces (**JSP**, **JavaScript**) for education, healthcare, and corporate platforms.

EDUCATION

- B.Sc in Computer Science & Engineering** CGPA: 3.35/4.00
Bangladesh University of Engineering & Technology (BUET) April 2019 - June 2024
Relevant Courses: Data Structures and Algorithms, Object Oriented Programming, Database, Operating Systems, Computer Security, Information System Design, Software Development, Artificial Intelligence, Machine Learning

SKILLS & INTERESTS

- Languages:** Java, JavaScript, TypeScript, C/C++, Python
- Frontend:** React, Next.js, Redux, Tailwind CSS
- Backend:** Spring Boot, Node.js, Express.js, REST APIs, WebSockets, Kafka
- Security:** JWT, Spring Security, OAuth2
- DevOps/Monitoring:** Git, Docker, OpenTelemetry
- Databases:** Cassandra, MySQL, PostgreSQL, Oracle
- Cloud & Others:** AWS, Firebase, WebRTC

KEY PROJECTS

- CommuniCreate**, (*NodeJS, ReactJS, Sequelize, AWS S3, SSLCommerz*) 2023
Ranked among the Top 5 Academic Projects. Built a centralized platform to manage creative content workflows that include client onboarding, task assignment, payment tracking, and team collaboration.
- The Great Ink Society**, (*Java Spring Boot, Hibernate JPA, MySQL*) 2022
Ranked among the top 10 from 500+ Projects at *Therap Java Fest 2022*. Developed an interactive platform for storytelling and audio podcasts that enabled users to upload their content, vote and comment on chapters, and bookmark favorites.

MAJOR ACHIEVEMENTS

- BUET CSE Fest Hackathon** — First Runner Up (API & Cloud) 2022
Built *HocusPocus*, a cloud-based smart home assistant with voice control and real-time automation.
- NASA Space Apps Challenge** — Global Winner (Honorable Mention) 2020
Developed *Satellight*, a real-time satellite visualization app; selected among **26K+** participants.
- BASIS National ICT Awards** — Winner (Tertiary Student Category) 2020
Proposed an e-waste management platform focused on reuse and recycling.

PUBLICATIONS

- EmoBot: Artificial emotion generation through an emotional chatbot during general-purpose conversations**
Md Ehtesham-Ul-Haque, Jacob D'Rozario, Rudaiba Adnin, Farhan Tanvir Utshaw, Fabiha Tasneem, Israt Jahan Shefa, A.B.M. Alim Al Islam
Cognitive Systems Research, Volume 83, 2024, ISSN 1389-0417. DOI: 10.1016/j.cogsys.2023.101168

- Transfer Learning in Bone Morphology Study for Better Hip Fracture Assessment**
Sanjana Siraj and Fabiha Tasneem; Tanvir R. Faisal; Mahmuda Naznin
IEEE 16th Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON), Oct 2025.
DOI: 10.1109/UEMCON67449.2025.11267735

EXTRA-CURRICULAR ACTIVITIES

- Chairperson, IEEE Computer Society BUET Student Branch Chapter** Mar 2023 – Mar 2024
Led a **92%** committee expansion and orchestrated **10+** technical events, including workshops, seminars, and competitions; driving unprecedented student engagement. Built strategic collaborations with clubs and national fests, while overcoming logistical and budgetary challenges to ensure consistent delivery of hands-on learning experiences.