

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	<i>CGPA: 3.35/4.00</i>
Bangladesh University of Engineering & Technology (BUET)	<i>April 2019 - June 2024</i>
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 <i>Therap Java Fest 2022</i> . 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 <i>HocusPocus</i> , a cloud-based smart home assistant with voice control and real-time automation.	
NASA Space Apps Challenge — Global Winner (Honorable Mention)	2020
Developed <i>Satellight</i> , 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 Admin, Farhan Tanvir Utshaw, Fabiha Tasneem, Israt Jahan Shefa, A.B.M. Alim Al Islam	
<i>Cognitive Systems Research</i> , 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	
<i>IEEE 16th Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON)</i> , 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.	