Mostafizur Rahman Fahim

Graduated B.Sc. in Computer Science & Engineering AUST (2025)

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GitHub | LinkedIn | Portfolio Website

Summary

Passionate software developer with expertise in full-stack development, blockchain systems, and cloud technologies. Strong foundation in building scalable applications using React.js, Node.js, and modern web technologies. Experience in developing decentralized applications with hybrid blockchain architectures and deploying solutions on cloud platforms. Seeking software development roles to create innovative solutions and contribute to cutting-edge projects in the tech industry.

Education

Ahsanullah University of Science and Technology (AUST) — Dhaka, Bangladesh
Bachelor of Science in Computer Science and Engineering — *Dec 2021–Dec 2025*
CGPA: 3.072/4.00

BAF Shaheen College — Dhaka, Bangladesh
Higher Secondary Certificate (HSC), Science — *2018–2020*
GPA: 5.00/5.00

Rani Bilashmony Govt. Boys' High School — Gazipur, Bangladesh
Secondary School Certificate (SSC), Science — *2016–2018*
GPA: 5.00/5.00 (Scholarship)
Junior School Certificate (JSC) — *2016*
GPA: 5.00/5.00 (Scholarship)

Technical Skills

Programming Languages
Python | Java | JavaScript | C | C++ | C# | SQL | PHP | HTML/CSS | SOLIDITY

Web & Mobile Development
React.js | Node.js | ASP.NET | Android SDK | REST APIs | Express.js

Blockchain & Web3
Ethereum | Hyperledger Fabric | Smart Contracts | IPFS | Web3.js | Cosmos SDK

AI/ML & Data Science
TensorFlow | PyTorch | scikit-learn | Pandas | NumPy | Matplotlib | Seaborn

Databases
MySQL | PostgreSQL | MongoDB | MS SQL Server | SQLite | Firebase

Cloud & DevOps
AWS (EC2, S3) | Docker | Linux/Ubuntu | CI/CD | Google Cloud Platform

IoT & Embedded Systems
Arduino | ESP32 | Raspberry Pi | Sensors | Proteus | Tinkercad

Tools & Software
Git | VS Code | Android Studio | Visual Studio | Postman | MATLAB | LaTeX

Projects

NexTrip: Hybrid Blockchain Ride-Sharing Platform *Thesis Project*

Web App | Mobile App

- Engineered a full-stack, decentralized application (DApp) with a React.js frontend and a novel **hybrid blockchain backend**.
- Architected the system using **Ethereum** and smart contracts for public, immutable transaction logging and **Hyperledger Fabric** for private, high-speed data processing.
- Developed a cross-platform mobile application using **React Native (Expo)** to provide a native user experience.
- Addressed key challenges in DApp development: wallet integration, gas optimization, and secure on-chain/off-chain data synchronization.

Cloud Restaurant: Full-Stack Web Application

Repository

- Developed a dynamic restaurant management system using **ASP.NET, C#,** and **MS SQL Server**.
- Designed a normalized database schema and implemented CRUD operations for menu, orders, and user management.
- Created a responsive frontend with Razor pages, enhancing user experience and administrative efficiency.

Better Life Hospital: Management Systems

Java Desktop | PHP Web

- Built two full-featured hospital management systems to manage patients, staff, appointments, and records.
- **Java Version:** Implemented an object-oriented design using **Java, JavaFX** for the UI, and **MySQL**.
- **PHP Version:** Constructed a web-based solution with **PHP, HTML, CSS,** and **MySQL** via **phpMyAdmin**.
- Demonstrated ability to implement the same functional requirements with different technology stacks.

Embedded Systems & IoT Solutions

Automated Toll System | IoT Health Monitor (Repo Pending)

- **Automated Toll System:** Designed a system using **Arduino Uno**, **RFID** sensors, and a servo motor to simulate automatic toll deduction and gate control, reducing manual intervention.
- **Smart Patient Health Monitor:** Developed a real-time vital signs (heart rate, temperature, ECG) monitoring system using **ESP32** and **Raspberry Pi** with multiple sensors, enabling remote patient data analysis.

Exam Enrollment System: Android Application

Repository

- Created a native Android app with **Java** in **Android Studio** to streamline the course exam enrollment process for students.
- Implemented intuitive user interfaces and local data persistence for a seamless user experience.

Zombie Attack: 2D Game

Repository

- Designed and developed an interactive 2D game using **C** and the **igraphics.h** library, featuring player movement, scoring, and enemy AI.
- Applied core programming concepts including graphics rendering, event handling, and game loop logic.

Experience

Peer Tutor & Academic Assistant *2021–2025*
Department of CSE, AUST

- Tutored students in Data Structures, Algorithms, and Java programming
- Assisted with debugging code and explaining complex programming concepts

IT Support Volunteer *2022–2023*
AUST Computer Club

- Provided technical support for university events and workshops
- Set up and maintained computer systems and audio-visual equipment
- Assisted faculty and students with software installation and troubleshooting

Freelance Web Developer *2023 – Present*
Personal Projects & Community Work

- Developed simple websites and web applications for local small businesses and student organizations.
- Provided basic IT consultation and troubleshooting services to friends and community members.
- Used technologies including HTML, CSS, JavaScript, and PHP to create functional solutions.

Publications

Design and Development of a Privacy-Preserving Semi-Public Blockchain-Based Ride-Sharing System using RAFT consensus with IPFS-Enabled Secure Distributed Storage
2nd Author | *International Journal of Advanced Information Technology (IJAIT)*

- Architected a hybrid blockchain solution for ride-sharing, implementing a **RAFT consensus** mechanism for the private network to ensure fault tolerance and leader election.
- Integrated **IPFS** for decentralized file storage to securely manage user data and transaction records, enhancing privacy and scalability beyond traditional databases.
- The proposed system addressed key challenges in DApps: mitigating high gas fees, ensuring data privacy, and maintaining transaction efficiency.

A Privacy-Preserving Semi-Public Blockchain-Based Ride-Sharing Platform with Secure Distributed Data Storage Using IPFS
2nd Author | *2025 IEEE QPAIN Conference*
Certificate

- Presented the core blockchain architecture of the NexTrip project, focusing on the smart contract design for ride matching and payment settlement on the Ethereum testnet.

From Data to Diagnosis: Leveraging Machine Learning for Intelligent Monkeypox Prediction and Surveillance
2nd Author | *2025 IEEE QPAIN Conference*
Certificate

- Developed and compared multiple machine learning models (e.g., **CNN, SVM**) on clinical datasets for early detection of Monkeypox, achieving high predictive accuracy.
- Contributed to feature engineering and analysis, demonstrating the application of AI for proactive public health surveillance.

NexTrip: A Semi-Public Blockchain Architecture for Privacy-Preserving Ride-Sharing with RAFT Consensus and IPFS-Enabled Data Storage
2nd Author | *International Conference on Multidisciplinary Computer Science, Electrical, Business &*

Literature (ICMCEL)

Certifications & Training

Web Development Bootcamp *2025*
FreeCodeCamp & Scrimba (YouTube)
Skills: JavaScript, React.js, Frontend Development

Advanced Graphics Design *2016*
Universe Computer Training Centre, Gazipur
Skills: Adobe Photoshop, Adobe Illustrator

Office Productivity Suite *2014*
Universe Computer Training Centre, Gazipur
Skills: MS Word, MS Excel, MS PowerPoint, Touch Typing

Activities

- Member of AUST Computer Club : Participated in programming workshops and tech seminars
- Volunteer at university tech festivals : Assisted in event coordination and participant guidance
- Regular participant in inter-department football tournaments
- Contributed to open-source projects on GitHub in spare time

Additional Information

Languages: Bangla (Native), English (Professional Proficiency)
Interests: Open-source development, hackathons, robotics, football, cricket
References: Available upon request