Rayhan Ferdous Srejon

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Rayhan Ferdous Srejon
Tongi, Gazipur-1712, Bangladesh

CAREER OBJECTIVE

Highly motivated Computer Science & Engineering graduate seeking a position in the software, IT, or multinational companies. Eager to contribute strong problem-solving and teamwork skills while growing technical expertise and experience in a challenging professional environment.

EDUCATION

- **Ahsanullah University of Science & Technology** **December 2021 – Present**
  BSc in Computer Science & Engineering CGPA: 3.41 / 4.0

- **BAF Shaheen College, Dhaka** **2018 – 2020**
  Higher Secondary Education GPA: 5.0 / 5.0

- **Safiuddin Sarker Academy & College, Tongi, Gazipur** **2012 – 2018**
  Secondary School Certificate GPA: 5.0 / 5.0

TECHNICAL SKILLS

- **Programming Languages:** Python, C, C++, C#, Java, PHP, JavaScript, Solidity
- **Machine Learning:** Classification, Clustering, Regression, Decision Trees, Model Evaluation, Image processing, NLP
- **Machine Learning Frameworks:** Pytorch, Tensorflow, PySpark
- **Web Development:** HTML, CSS, Bootstrap, Tailwind, React.js, Node.js, Express.js, Three.js, ASP.NET, REST APIs
- **Databases:** Microsoft SQL, MySQL, Google Firebase
- **Tools:** Codeblocks, Netbeans, Android Studio, Postman, Visual Studio, VS Code, XAMPP, Google Colab, Kaggle, Jupyter Notebook, MS Office, Matlab, Github, Docker, Amazon AWS, LaTeX, Linux/Ubuntu, VirtualBox, CI/CD
- **Blockchain/Web3 Tools:** Hyperledger Fabric, Ethereum GETH, Ethereum Smart Contracts, IPFS, Ether.js, Three.js
- **Problem Solving, Algorithms and Data Structures**

PROJECTS

- **NexTrip** — React.js, JavaScript, Node.js, Ether.js, Ethereum Geth, IPFS — Developed a decentralized ride-sharing platform using a private Ethereum Geth blockchain and IPFS for distributed storage, achieving stable performance with $\approx$ 80 TPS and ensuring transparent, privacy-preserving ride coordination.
- **LearnEase** — HTML, CSS, PHP, MySQL — Created a web-based knowledge sharing platform for students, where they can enroll in skill-building courses, attend them, watch tutorial videos, and learn.
- **The Messiah** — C++, iGraphics.h— A fighting-type game featuring collision detection, enemy AI, player movement, level transitions, and music control.
- **Connect With Team** — HTML, CSS, PHP, MySQL, JavaScript — An employee management system that allows companies to create a sorted and well-defined management system for their employee-related details and information regarding their employees.

- **TravelBuddy** — Java, Android Studio, Firebase database — An innovative solution designed to simplify making a trip easier. This app is a user-friendly platform that can make the planning of your trip less stressful than usual.
- **DigitalRead** — ASP.NET MVC, HTML, CSS, C#, MS SQL — An E-Commerce book website where users can purchase books.
- **Couch and Lamp - A computer Graphics Project** — JavaScript, Node.js, Three.js — A 3D model of a couch and a lamp, along with a coffee table and rug in a room.

RESEARCH EXPERIENCE

- **From Data to Diagnosis: Leveraging Machine Learning for Intelligent Monkeypox Prediction and Surveillance.** — 1st Author —Published in QPAIN, 2025, IEEE — Contributed to a machine learning study on Monkeypox diagnosis, implementing advanced preprocessing (SMOTEENN, MinMaxScaler) and hyperparameter tuning to select the optimal model (ANN) with 97.24% accuracy.
- **A Privacy-Preserving Semi-Public Blockchain-Based Ride-Sharing Platform with Secure Distributed Data Storage Using IPFS.** — 1st Author —Published in QPAIN, 2025, IEEE — Designed a privacy-preserving, decentralized ride-sharing platform using a semi-public blockchain architecture, integrating Hyperledger Fabric, IPFS, and Ethereum smart contracts.
- **NexTrip: A Semi-Public Blockchain Architecture for Privacy-Preserving Ride-Sharing with RAFT Consensus and IPFS-Enabled Data Storage.** — 1st Author —Published in 28th ICCIT,2025, IEEE — Developed a secure and interoperable ride-sharing solution using a semi-public blockchain (Hyperledger Fabric/Ethereum), reducing CPU usage to a maximum of 48% and demonstrating cost-effectiveness for real-world deployment.
- **Design and Development of a Privacy-Preserving Semi-Public Blockchain-Based Ride-Sharing System using RAFT consensus with IPFS-Enabled Secure Distributed Storage** — 1st Author —Journal article in IJAIT 2025 — Designed a privacy-preserving semi-public blockchain platform for ride-sharing, integrating Hyperledger Fabric (RAFT), Ethereum smart contracts, IPFS for storage, and Cosmos SDK for cross-chain interoperability.
- **Decoding Depression: A Scalable Framework Using PySpark, Deep Learning, and Explainable AI.** — 2nd Author — Publication forthcoming — Designed a dual-phase predictive pipeline using PySpark (for ensembles/MLP) and PyTorch (for Tabular Deep Learning: TabNet, TabTransformer, TabResNet, FCNN, SAINT) to enhance the accuracy and scalability of mental health screening.
- **Predicting Agricultural Land Suitability and Soil Quality: A Deep Learning Approach for Precision Agriculture** — 1st Author — Lecture Notes in Networks and Systems, Springer International Publishing, BIM 2025 — Investigated six deep learning architectures (FCNN, CNN, Bi-LSTM, Bi-GRU, TabNet, TabTransformer) for precision agriculture prediction, confirming the efficacy of transformer-based models over conventional RNNs and CNNs.
- **Towards Explainable PCOS Prediction: An AI Framework Combining Ensemble Machine Learning, Deep Learning and Explainable AI for Clinical Use** — 1st Author — Published in 28th ICCIT,2025, IEEE — Developed an explainable AI framework for PCOS prediction by combining deep tabular models (TabResNet, TabTransformer) and ensemble methods with Gaussian-copula augmentation, achieving a peak accuracy/F1 of 98%.

EXTRACURRICULAR ACTIVITIES

- Society Representative of **AUST CSE SOCIETY.**
- Community Service – Led traffic police helping efforts, distributing food and medical supplies.
- AUST CSE Futsal Tournament 2025 (Champions).

REFERENCES

Md. Khairul Hasan
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