

Ratul Hasan

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EXPERIENCE

ELITE Research Lab LLC | *Research Intern (Remote)*

Queens, NY, USA
May 2026 - Present

- Researching on LLM regarding its bias, hallucination
- Ongoing research on LLM's performance in mental health and depression

Lab AR | *Software Engineering Intern*

Dhaka, Bangladesh
July 2025 - August 2025

- Led a team project to develop a web-based Property Management System.
- Contributed to backend development using Laravel (PHP) and collaborated on feature implementation.

EDUCATION

Bangladesh Army University of Engineering & Technology (BAUET)

Natore, Bangladesh
2022 - Present

B.Sc in Computer Science and Engineering | CGPA: 3.80/4.0

- Thesis Title:** Biology-Informed Recurrent Neural Networks for Longitudinal Hippocampal Atrophy Forecasting in Alzheimer's Disease

Govt. Majid Memorial City College

Khulna, Bangladesh
2019 - 2021

Higher Secondary School Certificate | GPA: 5.0/5.0

PUBLICATIONS

Conference Publications

Ratul Hasan, Md. Momenul Haque, Redoanul Haque, Yousuf Oley, and Ruhani Akter.

December 2025

Quantum-Resistant FOTA: End-to-End Decentralized Firmware Updates for IoT Using Blockchain and CRYSTALS-Dilithium. In *Proceedings of the 12th International Conference on Next Generation Computing, Communication, Systems and Security (NSysS '25)*. Association for Computing Machinery, New York, NY, USA, 110–114. <https://doi.org/10.1145/3777555.3777569>

Ratul Hasan, Samiha Farjana, Yousuf Oley, Md. Ohiduzaman Pranto, and Md Arik Rayhan.

Expected 2026

A Gas-Optimized Blockchain Framework for Scalable Document Verification Using Dynamic Access Control and IPFS. Accepted to the *International Conference on Power, Electronics, Communications, Computing, and Intelligent Infrastructure (PECCII 2026)*. To be published in IEEE Proceedings.

Journal Publications

Ratul Hasan, Md. Momenul Haque, Ananya Sarker

Under Review

BI-RNN: Biology-Informed Recurrent Neural Networks for Longitudinal Hippocampal Atrophy Forecasting in Alzheimer's Disease. Under review in *Nature Scientific Reports*.

PROJECTS

LedgerSeal: A Blockchain Based Document Verification Framework using Dynamic Access Control and IPFS

[Github](#) 

- Developed a decentralized application (DApp) for constant-time document verification with dynamic access control on IPFS using a public blockchain.
- Tools Used: React JS, Anvil EVM, Foundry, Metamask, Pinata IPFS

BAUET Project & Thesis Archive

[Github](#) 

- Developed a repository website using Django(Both MVT & REST) where theses and projects of BAUET are represented
- Tools Used: HTML, Tailwind CSS, JavaScript, Django, PostgreSQL

ACHIEVEMENTS & CO-CURRICULAR ACTIVITIES

Programming Contests

- 1X ICPC Regionalist (Team: BAUET_Rong_Answer)
- 1X National Collegiate Programming Contest by JU (Rank: 149, Team: BAUET_PARADIGM)
- 2X Inter University Programming Contest (Best Rank: 45 at IUT, Team: BAUET_Twisted_Minds)
- Ranked 10th in Independence Day Programming Contest by Military Institute of Science & Technology
- 1X Champion, 1X 2nd runners-up in Intra University Programming Contest (Team)
- 1X Runners-up in Intra University Programming Contest (Solo)

Others

- 1X 1st Runners Up in Intra University Three Minutes Thesis Presentation

Online Judges

- Codeforces: Max Rating 1650 (Expert)
- Codechef: Max Rating 1676 (3 Star)
- Leetcode: Solved more than 50+ problems
- Solved more than 1000+ problems across various online judges

[Ratul_Hasan](#) 
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TECHNICAL SKILLS

Languages: C, C++, Python, JavaScript, SQL || **Frameworks:** Django, REST, Foundry, Laravel
Project Management: Git, Github || **Database:** MySQL, PostgreSQL
Technologies: Machine Learning, Computer Vision, Backend Development, Blockchain

VOLUNTEERING & LEADERSHIP EXPERIENCE

- President at BAUET Computer Society
- Problem Setter of Intra University Programming Contest at BAUET
- Trainer of Competitive Programming at BAUET Computer Society
- Officer of Documentation at HULT Prize at BAUET