

MD. AWINUL HOQUE UTSHA

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Google Scholar: scholar.google.com/awinulhoque

Portfolio: awinulportfolio.com

Education

B.Sc (Engineering) in Computer Science and Engineering

United International University, Madani Ave, Dhaka 1212

June 2020 - February 2025

CGPA: 3.52/4.0

Higher Secondary Certificate

Gurudayal Govt. College, Kishoreganj 2300

June 2016 - June 2018

GPA: 4.58/5.0

Selected Research Publications

1. **Md. Awinul Hoque Utsha**, Farshid Rafiq, Yeasir Ramim, Ezaz Mahmud Jim, Anuradha Choudhury and Mohammad Akidul Hoque, "A Unified Adversarially-Robust and Privacy-Preserving Federated Learning Framework for Multimodal Healthcare IoT," 4th International Conference on Robotics, Automation, Artificial-Intelligence and Internet-of-Things (RAAICON), IEEE, 2025 , Accepted.
2. **Md. Awinul Hoque Utsha**, Farshid Rafiq, Fabiha Nawal Aurna, Mynuddin Patwary, Sohel Tangila Richi, Ezaz Mahmud Jim, "Sparse Transformer Variants with Provable Expressivity: Theoretical Limits and Scalable Architectures," IEEE International Conference on Signal Processing, Information, Communication and Systems(SPICSICON), IEEE, 2025. Accepted.
3. Ezaz Mahmud Jim, **Md. Awinul Hoque Utsha**, Fabiha Nawal Aurna, Anuradha Choudhury and Mohammad Akidul Hoque, "Towards Safer Aging: A Comprehensive Edge Computing Approach to Unconsciousness and Fall Detection," 4th International Conference on Electrical, Computer and Communication Engineering (ECCE), IEEE, 2025, pp. 1-6.
4. Jurayak Kader, Md Abu Rayhan Abir, S.M. Tarikil Islam, **Md. Awinul Hoque Utsha**, Nowsad Islam Shuvo, Ezaz Mahmud Jim and Salekul Islam, "Comparative Analysis between Monolithic and Microservices Architecture Based on Web Streaming Applications," 4th International Conference on Electrical, Computer and Communication Engineering(ECCE), IEEE, 2025, pp. 1-6.
5. **Md. Awinul Hoque Utsha**, Rakibul Islam, Ovie Rahaman Sheikh, Nuren Akter and Mohammad Akidul Hoque, "Smart Grid Stability Prediction for Efficient Power Management using Machine Learning," International Conference on Computer and Information Technology(ICCIT), IEEE, 2024, pp. 1-6.
6. Rakibul Islam, **Md. Awinul Hoque Utsha**, Md. Mansurul Haque, Ezaz Mahmud Jim, Yeasir Ramim and Md. Mehedi Hasan Hridoy, "Correlation-based Feature Extraction to Improve Classification Accuracy," International Conference on Computer and Information Technology(ICCIT), IEEE, 2024, pp. 1-6.
7. **Md. Awinul Hoque Utsha**, Md. Farnas Utsho, Bushra Jannat and Md. Shojib Talukder, "High School Students' Performance Analyzer using Machine Learning Approach," International Conference on Computer and Information Technology(ICCIT), IEEE, 2024, pp. 1-6.
8. Neamul Islam Fahim, **Md. Awinul Hoque Utsha**, Raj Shekhar Karmaker, Md Oli Ullah and Dewan Md. Farid, "Decision Tree using Feature Grouping," International Conference on Computer and Information Technology(ICCIT), IEEE, 2023, pp. 1-5.

Skills

Programming: Python, C/C++, Java, HTML, CSS, JavaScript, Git

Machine Learning: CNN, RNN, Transfer Learning, Scikit-learn, TensorFlow, PyTorch, Image Processing

Area of Interest: Machine Learning for Security, Federated Learning, IoT and Embedded System Security, Image Processing, Software Engineering, Edge AI

Achievements

- Champion, ICCIT AI Application Competition (2024)
- Scholarship, Awarded by United International University (Fall 2022)
- Scholarship, Awarded by United International University (Fall 2021)
- Scholarship, Awarded by United International University (Summer 2021)
- Scholarship, Awarded by United International University (Fall 2020)

Leadership & Voluntary Activities

1. **IEEE UIU Student Branch**
Chairperson (2024 - 2025), Member (2021 - 2023)
2. **UIU Entrepreneur Development Forum**
President (2023 - 2024), Head Of PR (2022-2023), Executive (2021- 2022), Member (2020-2021)
3. **UIU Cultural Club**
General Member (2020 -2023)
4. **UIU HR Forum**
General Member (2020 - 2023)
5. **UIU App Forum**
General Member (2020 - 2023)
6. **Amnesty International**
General Member (2019 - Present)

Personal Projects

1. **Orange - A simple social media platform for United International University.**
Developed a user-friendly platform for students and faculty with profiles, posts, and notifications.
2. **BrainBoost - An educational platform with diverse features**
Built a platform with interactive learning and performance tracking.
3. **UMOS - An extended version of the ELMS system for educational purposes**
Developed an advanced learning management system with extended features for education.