

Mahmudul Haque

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Work Experience

Adjunct Lecturer

Department of Computer Science and Engineering
Independent University, Bangladesh

Dhaka, Bangladesh
January 2023-Present

Research Assistant

Department of Computer Science and Engineering
Independent University, Bangladesh

Dhaka, Bangladesh
December 2022-Present

IELTS Instructor

Mentors' Education Limited

Dhaka, Bangladesh
July 2022-Present

Academic Background

B.Sc. in Electrical, Electronic and Communication Engineering (EECE)

Military Institute of Science and Technology (MIST)
CGPA: 3.47/4.00 (last 60 credits: 3.67/4.00)

Dhaka, Bangladesh
2017-2022

Higher Secondary Certificate (HSC)

Notre Dame College

GPA: 5.00/5.00 (With Board Scholarship)

Dhaka, Bangladesh
2017

List of Publications

(Citations: 33, H-index: 3)

Thesis:

- M. Haque and S. Afsha, "Detection and Classification of Sensitive Audio-Visual Content for Automated Film Censorship and Rating".

Journal Papers:

- M. Haque, H. Nyeem and S. Afsha, "BrutNet: A Novel Approach for Violence Detection and Classification using DCNN with GRU", *The Journal of Engineering*, 2024, e12375 (2024), doi: <https://doi.org/10.1049/tje2.12375>.

Conference Papers:

- M. Haque, H. Nyeem, T. B. Ovi, A. Nahid, M. S. H. Molla, M. T. M. Tuhin, F. Shahab, A. S. Alam, and S. B. Alam, "Generalising Violence Detection with a New Near-Real-World Violence Dataset", *3rd International Conference on Advancement in Electrical and Electronic Engineering (ICAEEE)*, 2024. (Accepted)
- S. A. U. Alam, S. B. Alam, S. Saha, M. Haque, R. Rahman and S. Kobashi, "Pelvic bone region segmentation (PBRS) from X-ray image using convolutional neural network (CNN)", *26th International Conference on Computer and Information Technology (ICCIT)*, 2023, pp. 1-6, doi: 10.1109/ICCIT60459.2023.10441155.
- M. A. Ali, M. Haque, S. B. Alam, R. Rahman, M. A. Amin and S. Kobashi, "Medical Personal Protective Equipment detection using YOLOv7", *22nd International Conference on Machine Learning and Cybernetics (ICMLC)*, 2023, pp. 242-247, doi: 10.1109/ICMLC58545.2023.10327939.
- M. Haque, S. Afsha and H. Nyeem, "Developing BrutNet: A New Deep CNN Model with GRU for Realtime Violence Detection", *2022 International Conference on Innovations in Science, Engineering and Technology*, 2022, pp. 390-395, doi: 10.1109/ICISSET54810.2022.9775874.
- S. Afsha, M. Haque and H. Nyeem, "Machine Learning Models for Content Classification in Film Censorship and Rating", *2022 International Conference on Innovations in Science, Engineering and Technology*, 2022, pp. 396-401, doi: 10.1109/ICISSET54810.2022.9775816.

- f. **M. Haque**, S. Afsha, T. B. Ovi and H. Nyeem, “**Improving Automatic Sign Language Translation with Image Binarisation and Deep Learning**”, *2021 5th International Conference on Electrical Engineering and Information Communication Technology (ICEEICT)*, 2021, pp. 1-5, doi: 10.1109/ICEEICT53905.2021.9667804.
- g. M. S. H. Onim, M. I. Akash, **M. Haque** and R. I. Hafiz, “**Traffic Surveillance using Vehicle License Plate Detection and Recognition in Bangladesh**”, *2020 11th International Conference on Electrical and Computer Engineering (ICECE)*, 2020, pp. 121-124, doi: 10.1109/ICECE51571.2020.9393109.

Projects

- Pelvic bone segmentation and fracture detection using radiographic images at IUB in collaboration with the University of Hyogo, Japan. (2022-Present)
- Automatic Sign Language Translation, Violence Detection and Film Censorship and Rating. (2021-Present)
- Remote sensing using IoT for a research group at the University of New Hampshire, New Hampshire, United States. (2022)
- Demonstration of Frequency Handoff and Call Drop for 2G and 3G networks at MIST. (2021)
- Website for the 5th International Conference on Electrical Engineering and Information & Communication Technology (ICEEICT) for MIST. (2021)
- A Bulk SMS sending app using Flutter named the Postmaster App. (2020)
- Real-time OCR and Text Detection with TensorFlow, OpenCV and Tesseract. (2020)

Technical Skills

Programming Languages (Python, C, C++, MATLAB, Dart, JavaScript), **Image Processing** (OpenCV), **Machine Learning** (TensorFlow, Scikit-learn), **Visualisation** (Matplotlib, Seaborn), **App Development** (Flutter), **Web Development** (Django, Flask), **Cloud Services** (AWS), **Hardware** (Arduino), **Design & Simulation** (Simulink, Proteus, AutoCAD, Adobe Illustrator, Adobe Photoshop), **Video Editing** (Adobe Premier Pro, DaVinci Resolve), **Platforms** (Windows, Linux), **Version Control** (Git).

Awards & Achievements

- Received incentive for **scopus-indexed publication** from R&D Wing, MIST.
- Won the Championship in Bangabandhu Inter-Department Cultural Competition 2021 leading my team.
- Achieved 2nd Runner-up position at Hult Prize 2020 (On-campus round, MIST).
- Became 2nd Runners-up in the Line Following Robot Segment in a national **robotics** competition in 2019.
- Awarded a Government **Board Scholarship** for my undergraduate education in 2017.
- Became 2nd Runners-up in a national **Math Olympiad** in 2016.

Courses and Certificates

- Course on **Neural Networks and Deep Learning, CNN, and Sequential Models** by *deeplearning.ai* at Coursera.
- Course on **Machine Learning** by *Stanford University* at Coursera.
- Course on **Introduction to AI, Python for Data Science, AI & Development, Data Analysis with Python, and Data Visualisation with Python** by *IBM* at Coursera.
- Course on **Programming for Everybody and Python Data Structures** by *Michigan University* at Coursera.

Co-curricular Activities

Department Representative Department of EECE, MIST	March 2021- May 2022
General Secretary IEEE MIST Student Branch	February 2021- May 2022
Vice President MIST Innovation Club	February 2021- May 2022
Vice President MIST Literature and Cultural Club	February 2021- June 2022

Internships and Training

Teletalk Bangladesh Ltd

Internship (7 days)

Gulshan, Dhaka, Bangladesh

2021

Energypac Electronics Ltd. Factory

Internship (7 days)

Gazipur, Bangladesh

2021

Dhaka Electric Supply Company Limited (DESCO)

Internship (7 days)

Mirpur, Dhaka, Bangladesh

2021

Volunteer Activities

- Volunteered as a session host at the International Conference on 4th Industrial Revolution and Beyond (IC4IR), 2021.
- Volunteered as a session host at the 5th International Conference on Electrical Engineering and Information Communication Technology (ICEEICT), 2021.
- Conducted a week-long workshop on Python at MIST Innovation Club.

References

Available on request.