Mahmudul Haque

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Work Experience

Adjunct Lecturer *Dhaka, Bangladesh*
Department of Computer Science and Engineering *January 2023-Present*
Independent University, Bangladesh

Research Assistant *Dhaka, Bangladesh*
Department of Computer Science and Engineering *December 2022-Present*
Independent University, Bangladesh

IELTS Instructor *Dhaka, Bangladesh*
Mentors' Education Limited *July 2022-Present*

Academic Background

B.Sc. in Electrical, Electronic and Communication Engineering (EECE) *Dhaka, Bangladesh*
Military Institute of Science and Technology (MIST) *2017-2022*
CGPA: *3.47/4.00* (last 60 credits: 3.67/4/00)

Higher Secondary Certificate (HSC) *Dhaka, Bangladesh*
Notre Dame College *2017*
GPA: *5.00/5.00* (With Board Scholarship)

List of Publications *(Citations: 32, H-index: 3)*

Thesis:

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

Journal Papers:

a. **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:

a. **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)

b. 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.

c. 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.

d. **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/ICISET54810.2022.9775874.

e. 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/ICISET54810.2022.9775816.

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 *Gulshan, Dhaka, Bangladesh*
Internship (7 days) *2021*

Energypac Electronics Ltd. Factory *Gazipur, Bangladesh*
Internship (7 days) *2021*

Dhaka Electric Supply Company Limited (DESCO) *Mirpur, Dhaka, Bangladesh*
Internship (7 days) *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.