

Sabbir Ahmed

Email: sabbirahmed@iut-dhaka.edu | **Phone:** (880) 1754221481 | **Website:** ggck43.github.io

Google Scholar: https://scholar.google.com/citations?user=I_Dk4ZoAAAAJ

About Me

I am an Assistant Professor in the Dept of CSE at Islamic University of Technology (IUT). I am in the Computer Vision lab, advised by Prof. Hasanul Kabir. Before that, I received a M.Sc. and B.Sc. (Gold medalist) in CSE from IUT, respectively, in the year 2022 and 2017. My current research is in improving few-shot learning algorithms for image classification tasks. Besides, I've worked with different applications of deep learning in the field of computer vision, such as leaf disease classification, gait analysis, traffic sign detection, handwritten digit recognition, etc.

Education

- **M.Sc. in Computer Science and Engineering** 2018 - 2021
Department of Computer Science and Engineering, Islamic University of Technology
CGPA: 4.00/4.00
Thesis: Classification of Plant Disease from Leaf images using Few-shot Learning
Supervisor: Dr. Md. Hasanul Kabir, Professor, IUT
- **B.Sc. in Computer Science and Engineering** 2014 - 2017
Department of Computer Science and Engineering, Islamic University of Technology
CGPA: 3.93/4.00 (First Class First - IUT Gold Medalist)
Thesis: Image Classification using Deep Learning and Convolutional Neural Network
Supervisor: Dr. Md. Hasanul Kabir, Professor, IUT
- **Higher Secondary School Certificate (HSC)** 2011 - 2012
Chittagong College
GPA: 5.00/5.00

Experience

- **Assistant Professor** September 2022 - Present
Department of Computer Science and Engineering, Islamic University of Technology
Courses conducted: Pattern Recognition, Data Structures, Algorithms, Big Data Analysis, Linear Algebra, Digital Logic Design, Web Programming
Other responsibilities: Moderator- IUT Computer Society (IUTCS), Advisor- IUT Programming Community (IUTPC), Online exam coordination, Course load distribution, Student advisor for Third year.
- **Lecturer** 2018 - August 2022
Department of Computer Science and Engineering, Islamic University of Technology
- **Intern** November 2016
XeonBD, Bangladesh
Responsibilities: WordPress based projects

Publications

Journals (3)

1. ABM Ashikur Rahman, Md Bakhtiar Hasan, **Sabbir Ahmed**, Tasnim Ahmed, Md Hamjajul Ashmafee, Mohammad Ridwan Kabir, and Md Hasanul Kabir. "Two decades of bengali handwritten digit recognition: A survey." *IEEE Access* 10 (2022)
2. **Sabbir Ahmed**, Md Bakhtiar Hasan, Tasnim Ahmed, Md Redwan Karim Sony, and Md Hasanul Kabir. "Less is more: lighter and faster deep neural architecture for tomato leaf disease classification." *IEEE Access* 10 (2022)
3. Mohammed A. Alanezi, Mohammad S. Shahriar, Md Bakhtiar Hasan, **Sabbir Ahmed**, Yusuf A. Sha'aban, and Houssein REH Bouchekara. "Livestock management with unmanned aerial vehicles: A review." *IEEE Access* (2022)

Conferences (9)

1. Tasnim Ahmed, Ahnaf Munir, **Sabbir Ahmed**, Md. Bakhtiar Hasan, Md. Taslim Reza, Md. Hasanul Kabir, "Structure-Enhanced Translation from PET to CT Modality with Paired GANs", 6th *ICMVA (2023)*, Singapore.
2. Md. Hamjajul Ashmafee, Tasnim Ahmed, **Sabbir Ahmed**, Md. Bakhtiar Hasan, Mst Nura Jahan, A.B.M. Ashikur Rahman, "An Efficient Transfer Learning-based Approach for Apple Leaf Disease Classification", 3rd *ECCE (2023)*, Chittagong, Bangladesh.
3. Ahmed Nusayer Ashik, Md Saimul Haque Shanto, Rizwanul Haque Khan, Md. Hasanul Kabir, and **Sabbir Ahmed**, "Recognizing Bangladeshi Traffic Signs in the Wild", 25th *ICCIT (2022)*, Cox's Bazar, Bangladesh.
4. Minhaz Kamal, Fairuz Shaiara, Chowdhury Mohammad Abdullah, **Sabbir Ahmed**, Tasnim Ahmed, and Md. Hasanul Kabir, "Huruf: An Application for Arabic Handwritten Character Recognition Using Deep Learning", 25th *ICCIT (2022)*, Cox's Bazar, Bangladesh.
5. Akib Mohammed Khan, Alif Ashrafee, Reeshoon Sayera, Shahriar Ivan, and **Sabbir Ahmed**, "Rethinking Cooking State Recognition with Vision Transformers", 25th *ICCIT (2022)*, Cox's Bazar, Bangladesh.
6. Refaat Mohammad Alamgir, Ali Abir Shuvro, Mueeze Al Mushabbir, Mohammed Ashfaq Raiyan, Nusrat Jahan Rani, Md Rahman, Md Kabir, and **Sabbir Ahmed**, "Performance Analysis of YOLO-based Architectures for Vehicle Detection from Traffic Images in Bangladesh", 25th *ICCIT (2022)*, Cox's Bazar, Bangladesh.
7. Md. Samin Morshed, **Sabbir Ahmed**, Tasnim Ahmed, Muhammad Usama Islam, and A. B. M. Rahman, "Fruit quality assessment with densely connected convolutional neural network", 12th *ICECE (2022)*, Dhaka, Bangladesh.
8. Arowa Yasmeen, Fariha Ishrat Rahman, **Sabbir Ahmed**, and Md Hasanul Kabir, "CSVC-Net: Code-switched voice command classification using deep CNN-LSTM network", 10th *ICIEV (2021)*, Kitakyushu, Japan.
9. Ayesha Khatun, Mohammad Sajid Shahriar, Md Hasibul Hasan, Krishna Das, **Sabbir Ahmed**, and Md Sakibul Islam, "A systematic review on the chronological development of Bangla sign language recognition systems", 10th *ICIEV (2021)*, Kitakyushu, Japan.

Ongoing Research Projects

- **Leaf Disease Detection with Limited Data**
Exploring different Deep Learning techniques to achieve high performance with limited amount of data.
- **Pest Detection from images taken in the wild**
Investigating the use of Deep learning techniques to effectively detect and segment pests from real-life images.
- **Bangladeshi Traffic Sign Detection Benchmark**
Curating a dataset containing traffic sign images representing real-life challenges from road of Bangladesh.

Training and Workshop

- **Day long workshop on Outcome Based Education (OBE)** 2021
Location: Gazipur, Bangladesh
Content: Detailed introduction of the terminologies regarding OBE to apply in course curriculum
- **Software Quality Assurance for Web Development** 2018
Islamic University of Technology
Location: Gazipur, Bangladesh
Content: Quality assurance and cyber security
Workshop: Project management and software testing tools

Other Experiences

- **Reviewer** 2022 - Present
Journal: IEEE Access
- **Advisor** 2018 - Present
IUT Programming Community (IUTPC), IUT Computer Society (IUTCS)
- **Regional Mentor** 2021 - Present
Smart Agro-Technology Innovation Youth Network (SAIYN)
Bangladesh Agricultural University (BAU)

Honors and Awards

- **Best Presentation Award** 2021
2021 10th International Conference on Informatics, Electronics & Vision (ICIEV)
- **IUT Gold Medal** 2018
Islamic University of Technology
- **Champion** 2016
App Development, AUW Tech Fest
- **Runner Up** 2016
Project Showcasing, 8th National ICT Fest, Islamic University of Technology
- **OIC Full Free Scholarship** 2015
Islamic University of Technology
- **4 years Govt. Scholarship** 2014
Bangladesh Education Board for Higher Secondary Certificate
- **2 years Govt. Scholarship** 2012
Bangladesh Education Board for Secondary School Certificate

Extra-Curricular Activities

- **Vice President** 2016 - 2017
IUT Computer Society (IUTCS)
- **Organizer** 2017
9th National ICT Fest, IUT

Links

- **ORCID:** orcid.org/my-orcid?orcid=0000-0001-5928-4886
- **LinkedIn:** [linkedin.com/in/sabbirahmediut](https://www.linkedin.com/in/sabbirahmediut)

References

- **Dr. Md. Hasanul Kabir**
Professor
Department of Computer Science and Engineering
Islamic University of Technology
Email: hasanul@iut-dhaka.edu
- **Dr. Abu Raihan Mostafa Kamal**
Head of the Department
Department of Computer Science and Engineering
Islamic University of Technology
Email: raihan.kamal@iut-dhaka.edu