

# MD. SABBIR HOSSEN

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## OBJECTIVE

I am looking for a PhD position in a competitive academic environment where I can solve challenges in Machine Learning algorithms, particularly in Natural Language Processing and Computer Vision, contribute to cutting-edge research, and prepare for a career in advanced research in academia or industry.

## EDUCATION

### Bangladesh University

Bachelor of Science

Department of Computer Science and Engineering

Mohammadpur, Dhaka-1207, Bangladesh

January 2020 - December 2023

CGPA: 3.66/4.00

**Thesis:** A Sophisticated Feature Vectorization-Based Machine Learning Model to Identify Fake News in Bangla and English Language.

## RESEARCH INTEREST

Machine Learning  
Natural Language Processing  
Computer Vision

Image Processing  
Generative AI  
Multimodal AI

## EXPERIENCE

### Research Assistant

NextGen AI Lab, Bangladesh University.

May 2023 - Present

Mohammadpur, Dhaka-1207, Bangladesh

- Designed and implemented machine learning models for several research projects.
- Collect, process, and analyze data to build machine learning models.
- Conducted Literature Reviews and wrote several Research Papers.
- Served as corresponding author for multiple research papers, handling reviewers' responses and revisions.
- Mentored and assisted three distinct groups of undergraduate students in their research methodologies, project execution, and manuscript preparation.
- Collaborated and coordinated with faculty, researchers, and fellow senior and junior graduate students from different universities and countries.

## PUBLICATIONS

**Md. Sabbir Hossen**, Fahim Al Farid, Pabon Shaha, Md. Mowahibur Rahman Twake et al. "A Sophisticated Feature Vectorization-Based Stacked Machine Learning Approach for Fake News Detection in Bangla and English." *Social Network Analysis and Mining*, 2025. [Accepted]

**Md. Sabbir Hossen**, Md. Saiduzzaman, and Pabon Saha. "Social Media Sentiments Analysis on the July Revolution in Bangladesh: A Hybrid Transformer Based Machine Learning Approach." *In Proceedings of the IEEE 17th International Conference on Electronics, Computers and Artificial Intelligence (ECAI)*, 2025

**Md. Sabbir Hossen**, Pabon Shaha, and Md. Saiduzzaman et al. "An Explainable AI Driven Machine Learning Approach for Maternal Health Risk Analysis." *In Proceedings of the IEEE 27th International Conference on Computer and Information Technology (ICCIT)*, 2024

**Md. Sabbir Hossen**, Md. Saiduzzaman, Pabon Shaha, and Mostofa Kamal Nasir. "Jellyfish Species Identification: A CNN Based Artificial Neural Network Approach." *In Proceedings of the IEEE 2nd International Conference on Quantum Photonics, Artificial Intelligence, and Networking (QPAIN)*, 2025

**Md. Sabbir Hossen**, Pabon Saha, and Md. Saiduzzaman. "A Hybrid Machine Learning Approach Utilizing CNN Feature Extraction with Traditional Classifiers to Identify Strawberry Leaf Diseases." *In Proceedings of the IEEE 4th International Conference on Electrical, Computer and Communication Engineering (ECCE)*, 2025

Eshat Ahmed Shuvo, Md Shuvon, Md. Nazmul Sarkar, and **Md. Sabbir Hossen** et. al. "Optimized Hybrid Cascaded Approach for Accurate Oral Cancer Detection in Histopathology Images Using Deep CNNs." *In Proceedings of the IEEE 2nd International Conference on Next-Generation Computing, IoT and Machine Learning (NCIM)*, 2025

**Md. Sabbir Hossen** and Md. Saiduzzaman. “TransCNN: A Hybrid CNN–Transformer Synergy for Reliable Deepfake Forensics” *In Proceedings of the IEEE 28th International Conference on Computer and Information Technology (ICCIT), 2025* [Accepted]

Pabon Saha, **Md. Sabbir Hossen**, Md. Ibrahim Hosen Sojib, and Sanjida Akter et al. “StackTrace-AI: Identifying Generative AI Text Origins using Ensemble Learning” *In Proceedings of the IEEE 2nd International Conference on Computing, Applications and Systems (COMPAS), 2025* [Accepted]

Md. Emon Akter Sourov, **Md. Sabbir Hossen**, and Pabon Shaha et al. “Explainable Machine Learning Framework for Cardiovascular Disease Diagnosis and Prognosis.” *In Proceedings of the IEEE International Conference on Quantum Photonics, Artificial Intelligence, and Networking (QPAIN), 2025* [Accepted]

SUBMITTED MANUSCRIPTS

**Md. Sabbir Hossen**, Eshat Ahmed Shuvo, Shibbir Ahmed Arif, Pabon Shaha, and Md. Saiduzzaman et al. “An Efficient Deep Learning Framework for Brain Stroke Diagnosis Using Computed Tomography (CT) Images” *[Manuscript under review for publication in a peer-reviewed Journal]*

Mohammad Shohel Parves, Pabon Saha, **Md. Sabbir Hossen**, and Bikash Kumar Paul et al. “ConvNet9: A Cutting-Edge Customized Convolutional Neural Network Model to Identify Potato Leaf Disease with Web Application.” *[Manuscript under review for publication in a peer-reviewed Journal]*

Eshat Ahmad Shuvo, Wahidur Rahman, Pabon Shaha, and **Md. Sabbir Hossen** et al. “Optimized Hybrid Approach for Early Detection of Alzheimer’s Disease Using Machine Learning and Deep Learning Techniques” *[Manuscript under review for publication in a peer-reviewed Journal]*

**Md. Sabbir Hossen**, Md. Saiduzzaman, Pabon Shaha, and Bikash Kumar Paul. “Attention-Guided Deep CNN for Robust Image-Based Weather Phenomena Classification” *In Proceedings of the IEEE 5th International Conference on Electrical, Computer & Telecommunication Engineering (ICECTE), 2025* [Under Review]

Pabon Saha, **Md. Sabbir Hossen**, Anichur Rahman, Mostofa Kamal Nasir et al. “Catching the Bots: A Transformer-Based Ensemble Learning for Machine-Generated Text Detection” *[Manuscript prepared for submission to a peer-reviewed journal]*

AWARDS & ACHIEVEMENTS

**Best Technical Presentation**, 27th International Conference on Computer and Information Technology, 2024  
**1st Runner Up in Project Showcasing**, Robo Carnival, BUET, 2023

CONFERENCE PRESENTATION

**Presented:** “An Explainable AI Driven Machine Learning Approach for Maternal Health Risk Analysis” at ICCIT  
**Presented:** “Jellyfish Species Identification: A CNN Based Artificial Neural Network Approach.” at QPAIN  
**Presented:** “Social Media Sentiments Analysis on the July Revolution in Bangladesh: A Hybrid Transformer Based Machine Learning Approach” at ECAI  
**Presented:** “A Hybrid Machine Learning Approach Utilizing CNN Feature Extraction with Traditional Classifiers to Identify Strawberry Leaf Diseases” at ECCE

EXTRA-CURRICULAR ACTIVITIES

**iTech Expo associated with Techfest IIT Bombay, IUBAT** November 2022  
Presented a project on Remote Control Fire Fighter Robot.  
**Robo Carnival, BUET** January 2023  
Presented a project on Green Energy E-Bike.  
**BEC Robo Mania, BUBT** January 2023  
Presented a project on an Integrated Smart Home.

PROFESSIONAL SKILLS

Programming Languages	Python Libraries	Software Tools
Python (Advanced)	Pandas, NumPy	Microsoft Office
C (Intermediate)	Matplotlib, Seaborn	Git & Github
C++ (Basic)	SciKit Learn, PyTorch	Adobe PS
Java (Basic)	TensorFlow/Keras	Mendeley
SQL (Basic)	HuggingFace Transformer	LaTeX