

Eftekhar Hossain

PhD Student, University of Central Florida

✉ eftekhar@ucf.edu [🌐 eftekhar-hossain.github.io](https://github.com/eftekhar-hossain) [🌐 eftekhar-hossain](https://www.linkedin.com/in/eftekhar-hossain)

Research Interest

My broad research interests are *Natural Language Processing* and *Multimodal Learning*. My work focuses on leveraging *Large Language Models* to understand how AI interprets complex information from multi-perspective narratives, aiming to enhance AI-driven comprehension across diverse viewpoints and modalities to support better decision-making in various applications.

Education

2024– **PhD., Computer Science**, University of Central Florida, USA.

2021–2023 **MSc., Electronics and Telecommunication Engineering**.

Chittagong University of Engineering and Technology, Bangladesh

Thesis : Investigating Multimodal Features to Identify Multilingual Offense from Social Media Memes

[📖 Thesis](#) | [📄 Slide](#)

2014–2018 **B.Sc., Electronics and Telecommunication Engineering**.

Chittagong University of Engineering and Technology, Bangladesh

CGPA : 3.88/4.00

Publications

Conference Proceedings

- C7 [Eftekhar Hossain](#), Sanjeev Kumar Sinha, Santu Karmaker *et al.*. “LLMs as Meta-Reviewers’ Assistants: A Case Study”. **NAACL**. 2025. [Paper](#)
- C6 [Eftekhar Hossain](#), Omar Sharif, Mohammed Moshikul Hoque, and Sarah M Preum. “Deciphering Hate: Identifying Hateful Memes and Their Targets”. **ACL**. 2024. [Paper](#)
- C5 Shawly Ahsan*, [Eftekhar Hossain*](#), Omar Sharif, Mohammed Moshikul Hoque *et al.*. “A Multimodal Framework to Detect Target Aware Aggression in Memes”. **EACL**. 2024. [Paper](#)
- C4 [Eftekhar Hossain*](#), Omar Sharif*, Mohammed Moshikul Hoque, and Sarah M Preum. “Align before Attend: Aligning Visual and Textual Features for Multimodal Hateful Content Detection”. **EACL-SRW**. 2024. [Paper](#)
- C3 [Eftekhar Hossain](#), Omar Sharif, Mohammed Moshikul Hoque. “MUTE: A Multimodal Dataset for Detecting Hateful Memes”. **AACL-SRW**. 2022. [Paper](#)
- C2 [Eftekhar Hossain](#), Omar Sharif, Mohammed Moshikul Hoque. “MemoSen: A Multimodal Dataset for Sentiment Analysis of Memes”. **Language Resources and Evaluation Conference (LREC)**. 2022. [Paper](#)
- C1 Omar Sharif, [Eftekhar Hossain](#), Mohammed Moshikul Hoque. “M-BAD: A Multilabel Dataset for Detecting Aggressive Texts and Their Targets”. **CONSTRAINT @ACL**). 2022. [Paper](#)

Journal Articles

- J4 Md Shalha Mucha Bhuyan, [Eftekhar Hossain](#), Khaleda Akhter Sathi, Md Azad Hossain, M Ali Akber Dewan. "BVQA: Connecting Language and Vision Through Multimodal Attention for Open-Ended Question Answering". *IEEE Access*. IEEE, 2025. (**Impact Factor: 3.367**). [Paper](#)
- J3 Ahatesham Bhuiyan, [Eftekhar Hossain](#), Mohammed Moshiul Hoque, M Ali Akber Dewan. "Enhancing Image Caption Generation Through Context-Aware Attention Mechanism". *Journal of Heliyon*. Elsevier, 2024. (**Impact Factor: 3.4**). [Paper](#)
- J2 [Eftekhar Hossain](#), Omar Sharif, Mohammed Moshiul Hoque, Md Azad Hossain *et al.*. "Identification of Multilingual Offense and Troll from Social Media Memes Using Weighted Ensemble of Multimodal Features". *Journal of King Saud University - Computer and Information Sciences*. Elsevier, 2022. [Paper](#)
- J1 [Eftekhar Hossain](#), Mohammed Moshiul Hoque, Enamul Hoque, Md Saiful Islam. "A Deep Attentive Multimodal Learning Approach for Disaster Identification From Social Media Posts". *IEEE Access*. IEEE, 2022. (**Impact Factor: 3.367**). [Paper](#)

Shared Task

- S3 [Eftekhar Hossain](#), Omar Sharif, and Mohammed Moshiul Hoque. "Multilingual Code-Mixed Hope Speech Detection using Cross-lingual Representation Learner". *LT-EDI @EACL*. 2021. [Paper](#)
- S2 [Eftekhar Hossain](#), Omar Sharif, and Mohammed Moshiul Hoque. "Investigating Visual and Textual Features to Identify Trolls from Multimodal Social Media Memes". *DravidianLangTech @EACL*. 2021. [Paper](#)
- S1 Omar Sharif, [Eftekhar Hossain](#), and Mohammed Moshiul Hoque. "Offensive Language Detection from Multilingual Code-Mixed Text using Transformers". *DravidianLangTech @EACL*. 2021. [Paper](#)

Research Experience

Research Assistant, University of Central Florida

Aug 2024 – **Multi-Perspective Narrative Understanding using LLMs.**

- present (1) Developing a method for retrieving narratives that are similar with respect to a specific criterion.
(2) Developing a framework to identify the overlap, unique, and conflicting information from pairs of alternative narratives.

Advisor: **Prof. Dr. Santu Karmaker**, *Bridge-AI Lab*, University of Central Florida ([Personal Web-page](#))

Visiting Student (Remote), University of Texas at Dallas

Jan'24 – **Evaluating Fine-grained Hallucination in Large Vision Language Models.**

May'24 Proposed an LLM- and annotation-free fine-grained evaluation framework for assessing object, attribute, and relationship hallucinations in LVLMS. [Submitted Paper](#)

Advisor: **Prof. Dr. Xinya Du**, *DuLab*, University of Texas at Dallas ([Personal Web-page](#))

Visiting Student (Remote), Dartmouth College

May'23 – **Multimodal Hateful Content Detection in Social Media.**

Dec'23 Proposed a context-aware and dual co-attention framework to meaningfully align the visual and textual features for multimodal hateful content detection. [EACL](#) | [ACL](#)

Advisor: **Prof. Dr. Sarah M. Preum**, *Persist Lab*, Dartmouth College ([Personal Web-page](#))

Researcher, CUET NLP Lab, Bangladesh

July'19 – **Multimodal Meme Understanding.**

July'24 Developed several benchmarks including MemoSen, MUTE, MIMOSA for Multimodal research in Bangla Language. [LREC](#) | [AAACL](#) | [EACL](#)

Advisor: **Prof. Dr. Mohammed Moshui Hoque**, Chittagong University of Engineering and Technology, Bangladesh ([Personal Web-page](#))

Professional Experience

Dec'22–July'24 **Assistant Professor, Dept. of Electronics and Telecommunication Engineering.**
Chittagong University of Engineering and Technology, Bangladesh

July'19–Dec'22 **Lecturer, Dept. of Electronics and Telecommunication Engineering.**
Chittagong University of Engineering and Technology, Bangladesh

Oct'18–June'19 **Lecturer, Dept. of Electrical and Electronic Engineering.**
Premier University, Chittagong, Bangladesh

Technical skills

Languages Python, C, C++, Shell

ML/DL PyTorch, TensorFlow, Keras, Scikit-Learn, Numpy, Pandas

LLM Libraries Huggingface, LangChain, vLLM, Ollama

Web Dev. Flask, Bootstrap, PHP, MySQL

IDE & Tools Jupyter, Spyder, VS Code, Git, L^AT_EX

Academic Achievements & Awards

2023 **Best Research Award** among Faculty of ECE at Chittagong University of Engineering and Technology (CUET), Bangladesh

2021 **Winner** in **Hope Speech Detection Shared Task** at EACL conference.

2nd Runner-up in **Multimodal Troll Meme Detection and Offense classification Shared Task** at EACL conference.

2017 **1st Prize** at the **Project Show competition** at CUET.

1st Prize at the **Web Development Project Design Course** at CUET.

2016 **Merit Award** for **Obtaining Highest CGPA in an Undergraduate Academic Year** at CUET.

Invited Training [Github Repo](#)

Feb 2024 **Trainer** of the short training on **"Machine Learning with Python"** Organized by *IT Bussiness Incubator at CUET.*

Feb 2023 **Instructor** of the course **"Hands on Training on Bangla Language Processing"** Organized under **2nd International Workshop on Computational Linguistics and Bangla Language Processing (CLBLP)**, Bangladesh.

Oct 2022 **Trainer** of the short training on **"Machine Learning with Python"** Organized by *IT Bussiness Incubator at CUET.*

June 2022 **Instructor** of the one week long training on **"AI and Machine Learning with Python"** Organized by *IT Bussiness Incubator at CUET.*

Teaching

- 2022 **CSE 181: Fundamentals of Computer Programming**, CUET.
CSE 284: Object Oriented Programming, CUET.
- 2021 **ETE 455: Neural and Fuzzy Systems**, CUET.
ETE 407: Multimedia Communication, CUET.
- 2020 **CSE 281: Data Structure and Algorithms**, CUET.
ETE 311: Information Theory and Coding, CUET.
ETE 317: Antenna and Wave Propagation, CUET.
- 2019 **EEE 201: Signal and System**, Premier University..
EEE 101: Electrical Circuits-I, Premier University.
- 2018 **EEE 435: Cellular Mobile Communication**, Premier University.

Certification

- June 2020* **Natural Language Processing Nanodegree**, Udacity. [↗](#)
- April 2020* **IBM AI Engineering Professional Certificate**, Coursera. [↗](#)
- March 2020* **TensorFlow: Data and Deployment Specialization**, Coursera. [↗](#)
- Oct 2019* **DeepLearning.AI TensorFlow Developer Specialization**, Coursera. [↗](#)
- Sep 2019* **Deep Learning Specialization**, Coursera. [↗](#)

April 6, 2025