



# Md. Akram Hossain

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 Google Scholar  Website

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**Research Interests** Information Extraction, Multilingual and Low-resource NLP, Lexical Semantics, Multimodal NLP, Computational Linguistics, Natural Language Processing.

**Education** *B.Sc. (Engg.) in Computer Science and Engineering* 2023  
**University of Chittagong**, Chattogram, Bangladesh  
Thesis: Named Entity Recognition from Financial Text Using Graph Neural Network.  
Advisor: Dr. Abu Nowshed Chy

**Research Experience** **CSECU-DSG Lab**, Chattogram, Bangladesh; Advisor: Dr. Abu Nowshed Chy  
**KDE Lab**, Toyohashi, Japan; Advisor: Dr. Masaki Aono

**Publications** **International Journals:**

1. **Md. Akram Hossain\***, Abdul Aziz\*, Abu Nowshed Chy, Md Zia Ullah, and Masaki Aono, *Leveraging Contextual Representations with BiLSTM-based Regressor for Lexical Complexity Prediction*, Natural Language Processing Journal, Vol. -, No. -, pp. -, 2023. (On Review) [\* equal contributions]

**Conference and Workshop Papers:**

1. **Md. Akram Hossain** et al., *BiGCAT: An Integrated Graph Neural Network Model for Financial Named Entity Recognition*, ECIR-2024 (Long Paper). (In Progress)
2. Abdul Aziz and **Md. Akram Hossain** et al. *Multimodal Complaint Detection Using Sentiment and Emotion-Aided Multitask Contrastive Learning Model*, ECIR-2024 (Long Paper). (In Progress)
3. Abdul Aziz and **Md. Akram Hossain** et al. *Sentiment and Emotion Analysis Using Transformer-based Multi-task Contrastive Learning Model on Code-mixed Tweets*, ECIR-2024 (Short Paper). (In Progress)
4. **Md. Akram Hossain** et al. *CSECU-DSG@ Causal News Corpus 2023: Leveraging RoBERTa and DeBERTa Transformer Model with Contrastive Learning for Causal Event Classification*, CASE@RANLP-2023.
5. Abdul Aziz and **Md. Akram Hossain** et al. *CSECU-DSG@ Multimodal Hate Speech Event Detection 2023: Transformer-based Multimodal Hierarchical Fusion Model For Multimodal Hate Speech Detection*, CASE@RANLP-2023.
6. Abdul Aziz and **Md. Akram Hossain** et al. *CSECU-DSG at CheckThat! 2023: Transformer-based Fusion Approach for Multimodal and Multigenre Check-Worthiness*, CLEF 2023. ([PDF](#)) [1<sup>st</sup> Place]
7. **Md. Akram Hossain** et al., *CSECU-DSG at SemEval-2023 Task 4: Fine-tuning DeBERTa Transformer Model with Cross-fold Training and Multi-sample Dropout for Human Values Identification*, SemEval-2023. ([PDF](#))

8. **Md. Akram Hossain** et al., *CSECU-DSG @ Causal News Corpus 2022: Fusion of RoBERTa Transformers Variants for Causal Event Classification*, CASE@EMNLP-2022. ([PDF](#)) [**1<sup>st</sup> Place**]
9. **Md. Akram Hossain** et al., *Enhancing the DeBERTa Transformers Model for Classifying Sentences from Biomedical Abstracts*, ALTA-2022. ([PDF](#)) [**2<sup>nd</sup> Place**]
10. **Md. Akram Hossain** et al., *CSECU-DSG at SemEval-2022 Task 3: Investigating the Taxonomic Relationship Between Two Arguments using Fusion of Multilingual Transformer Models*, SemEval-2022. ([PDF](#)) [**4<sup>th</sup> Place**]
11. **Md. Akram Hossain** et al., *CSECU-DSG at SemEval-2022 Task 11: Identifying the Multilingual Complex Named Entity in Text Using Stacked Embeddings and Transformer based Approach*, SemEval-2022. ([PDF](#))
12. **Md. Akram Hossain** et al., *CSECU-DSG at SemEval-2021 Task 1: Fusion of Transformer Models for Lexical Complexity Prediction*, SemEval-2021. ([PDF](#))
13. **Md. Akram Hossain** et al., *Feature Fusion with Hand-crafted and Transfer Learning Embeddings for Cause-Effect Relation Extraction*, CEREX@FIRE 2020. ([PDF](#)) [**1<sup>st</sup> Place**]

## Selected Research Projects

### Information Extraction [June 2020 - August 2023]

- Event Causality Identification [CASE@RANLP '23, CASE@EMNLP '22]
- Cause-Effect Relation Extraction [CEREX@FIRE '20]
- Financial NER using GNN [ECIR '24] (In-progress)

### Multilingual and Code-mixed Task Understanding [December 2021 - Present]

- Code-mixed Sentiment and Emotion Analysis [ECIR '24] (In-progress)
- Multilingual Taxonomic Relationship of Arguments [SemEval '22]
- Multilingual and Code-mixed Complex NER [SemEval '22]

### Lexical Simplification [December 2020 - Present]

- Multilingual Lexical complexity Prediction [LREC-COLING '24] (In-progress)
- Lexical Complexity Prediction [Elsevier NLP Journal '23 (On Review), SemEval '21]

### Multimodal NLP for Social Good [January 2022 - Present]

- Multimodal Complaint Detection [ECIR '24] (In-progress)
- Multimodal Hate Speech Detection [CASE@RANLP '23]
- Multimodal and Multigenre Check-Worthiness [CheckThat!@CLEF '23]

## Extra Curricular Activities

### Student Volunteer

- The 44th International ACM SIGIR Conference (SIGIR-2021)
- Intra-departmental competitive programming contest (2022 and 2023)

### Presentation

- FIRE '20, ALTA '22

### Reviewer

- SemEval, ACL-IJCNLP (Sub-reviewer)