

# Abdul Aziz

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## Research Interests

Multimodal NLP, Multilingual and Low-resource NLP, Lexical Semantics, Information Extraction, Large-scale LMs, Natural Language Processing.

## Education

*B.Sc. (Engg.) in Computer Science and Engineering* 2023  
**University of Chittagong**, Chattogram-4331, Bangladesh  
CGPA: 3.64/4.0 (3.88 in last 60 credits; 8th out of 61)  
Thesis: Multimodal Desire Understanding on Social Media Data  
Advisor: Professor Nihad Karim Chowdhury

## Research Experience

**CSECU-DSG Lab**, University of Chittagong, Bangladesh; Advisor: Dr. Abu Nowshed Chy (Undergraduate Research Assistant)  
**KDE Lab**, Toyohashi University of Technology, Japan; Advisor: Dr. Masaki Aono (Research collaboration)  
**Zia Ullah's Lab**, Edinburgh Napier University, UK; Advisor: Dr. Md Zia Ullah (Research collaboration)

## Research Publications

### International Journals:

1. **Abdul Aziz**, Nihad Karim Chowdhury, Muhammad Ashad Kabir, Abu Nowshed Chy, and Md. Jawad Siddique, *MMTF-DES: A Fusion of Multimodal Transformer Models for Desire, Emotion, and Sentiment Analysis of Social Media Data*, Elsevier Information Fusion Journal, 2023. (On Review) ([Arxiv PDF](#))
2. **Abdul Aziz\***, Md. Akram Hossain\*, Abu Nowshed Chy, Md Zia Ullah, and Masaki Aono, *Leveraging Contextual Representations with BiLSTM-based Regressor for Lexical Complexity Prediction*, Elsevier Natural Language Processing Journal, 2023. (Accepted) (\* equal contributions)

### Conference and Workshop Papers

1. **Abdul Aziz** et al. *Multimodal Complaint Detection Using Sentiment and Emotion-Aided Multitask Contrastive Learning Model*, ECIR-2024. (Submitted)
2. **Abdul Aziz** et al. *Sentiment and Emotion Analysis Using Transformer-based Multi-task Contrastive Learning Model on Code-mixed Tweets*, ECIR-2024. (Submitted)
3. Nabila Ayman, **Abdul Aziz** et al. *BengaliLCP: A Dataset for Lexical Complexity Prediction in the Bengali Texts*, LREC-COLLING-2024. (Submitted)
4. Md. Akram Hossain, **Abdul Aziz** et al. *BiGCAT: An Integrated Graph Neural Network Model for Financial Named Entity Recognition*, ECIR-2024. (Submitted)
5. **Abdul Aziz** et al. *CSECU-DSG@ Multimodal Hate Speech Event Detection 2023: Transformer-based Multimodal Hierarchical Fusion Model For Multimodal Hate Speech Detection*, CASE@RANLP-2023. (Accepted)
6. Md. Akram Hossain, **Abdul Aziz** et al. *CSECU-DSG@ Causal News Corpus 2023: Leveraging RoBERTa and DeBERTa Transformer Model with Contrastive Learning for Causal Event Classification*, CASE@RANLP-2023. (Accepted)

7. **Abdul Aziz** et al. *CSECU-DSG at CheckThat! 2023: Transformer-based Fusion Approach for Multimodal and Multigenre Check-Worthiness*, CLEF-2023. [1st place] ([PDF](#))
8. **Abdul Aziz** 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](#))
9. **Abdul Aziz** et al. *CSECU-DSG@ Causal News Corpus 2022: Fusion of RoBERTa Transformers Variants for Causal Event Classification*, CASE@EMNLP-2022. [1st place] ([PDF](#))
10. **Abdul Aziz** et al. *Enhancing the DeBERTa Transformers Model for Classifying Sentences from Biomedical Abstracts*, ALTA-2022. [2nd place] ([PDF](#))
11. **Abdul Aziz** et al. *CSECU-DSG at SemEval-2022 Task 3: Investigating the Taxonomic Relationship Between Two Arguments using Fusion of Multilingual Transformer Models*, SemEval-2022. [4th place] ([PDF](#))
12. **Abdul Aziz** 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](#))
13. **Abdul Aziz** et al. *CSECU-DSG at SemEval-2021 Task 1: Fusion of Transformer Models for Lexical Complexity Prediction*, SemEval-2021. ([PDF](#))
14. **Abdul Aziz** et al. *Feature Fusion with Hand-crafted and Transfer Learning Embeddings for Cause-Effect Relation Extraction*, CEREX@FIRE-2020. [1st place] ([PDF](#))

## Selected Research Projects

### 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]

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

- Multimodal Complaint Detection [ECIR '24] (Submitted)
- Multimodal Desire Understanding [Information Fusion Journal '23] (On Review)
- Multimodal Hate Speech Detection [CASE@RANLP '23]
- Multimodal and Multigenre Check-Worthiness [CheckThat!@CLEF '23]

### Lexical Simplification [December 2020 - Present]

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

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

- Event Causality Identification [CASE@RANLP '23, CASE@EMNLP '22]
- Cause-Effect Relation Extraction [CEREX@FIRE '20]

## Extra Curricular Activities

### Student Volunteer (Virtual)

- The 61st Annual Meeting of the ACL (ACL 2023)
- The 44th International ACM SIGIR Conference (SIGIR 2021)

### Reviewer

- SemEval, CLEF, AACL-IJCNLP (Sub-reviewer)