

# Abdul Aziz

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**Research Interests** Large-scale Language Models, Generative AI, Multimodal Information Processing, Multilingual and Low-resource NLP, Information Extraction, and Natural Language Processing.

**Education** *B.Sc. (Engg.) in Computer Science and Engineering* October 2023  
**University of Chittagong**, Chattogram-4331, Bangladesh  
CGPA: 3.64/4.0 (3.88 in last 60 credits; major GPA: 3.78)  
Thesis: Multimodal Desire Understanding on Social Media Data

**Research Experience** Research Assistant at **CSECU-DSG Lab**, University of Chittagong, Bangladesh;  
Advisor: [Dr. Abu Nowshed Chy](#)  
Research Collaboration with **KDE Lab**, Toyohashi University of Technology, Japan;  
Advisor: [Dr. Masaki Aono](#)  
Research Collaboration with **Md Zia Ullah's Lab**, Edinburgh Napier University, UK;  
Advisor: [Dr. Md Zia Ullah](#)  
Research Collaboration with **Ashad Kabir's Lab**, Charles Sturt University, Australia;  
Advisor: [Dr. Muhammad Ashad Kabir](#)

**Research Publications** **International Journals (J):** \* implies equal contributions

- 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 Neurocomputing Journal, Vol. -, No. -, pp. -, 2023. (On Review) ([Arxiv PDF](#))
- 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, Vol. 05, No. 100039, 2023. ([PDF](#))

**International Conference and Workshop (C/W) :** \* implies equal contributions

- Nabila Ayman, Md. Akram Hossain\*, **Abdul Aziz\***, Rokan Uddin Faroqui, and Abu Nowshed Chy *BengaliLCP: A Dataset for Lexical Complexity Prediction in the Bengali Texts*, Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING-2024). ([PDF](#))
- Abdul Aziz**, Md. Akram Hossain, Abu Nowshed Chy, and, Md Zia Ullah *Multimodal Complaint Detection Using Sentiment and Emotion-Aided Multitask Contrastive Learning Model*, Association for Computational Linguistics (ACL Rolling Review focusing on EMNLP '24) ( Long Paper). (Submitted)
- Abdul Aziz**, Md. Akram Hossain, and Abu Nowshed Chy, *Sentiment and Emotion Analysis Using Transformer-based Multi-task Contrastive Learning Model on Code-mixed Tweets*, (ACL Rolling Review focusing on EMNLP '24) ( Short Paper). (Submitted)

4. Md. Akram Hossain, Muhammad Anwarul Azim, Abu Nowshed Chy, Mohammad Khairul Islam, Md Zia Ullah, and **Abdul Aziz** *BiGCAT: An Integrated Graph Neural Network Model for Financial Named Entity Recognition*, (In Progress, focusing on EMNLP '24)
5. **Abdul Aziz**, Md. Akram Hossain, and Abu Nowshed Chy, *CSECU-DSG at CheckThat! 2023: Transformer-based Fusion Approach for Multimodal and Multigenre Check-Worthiness*, CLEF 2023: Conference and Labs of the Evaluation Forum, September 18–21, 2023, Thessaloniki, Greece. ([PDF](#))
6. **Abdul Aziz**, Md. Akram Hossain, and Abu Nowshed Chy, *CSECU-DSG@Multimodal Hate Speech Event Detection 2023: Transformer-based Multimodal Hierarchical Fusion Model For Multimodal Hate Speech Detection*, Proceedings of the 6th Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text (CASE), CASE@RANLP-2023 ([PDF](#))
7. Md. Akram Hossain, **Abdul Aziz**, and Abu Nowshed Chy, *CSECU-DSG @ Causal News Corpus 2023: Leveraging RoBERTa and DeBERTa Transformer Model with Contrastive Learning for Causal Event Classification*, Proceedings of the 6th Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text (CASE), CASE@RANLP-2023 ([PDF](#))
8. **Abdul Aziz\***, Md. Akram Hossain\*, and Abu Nowshed Chy, *CSECU-DSG at SemEval-2023 Task 4: Fine-tuning DeBERTa Transformer Model with Cross-fold Training and Multi-sample Dropout for Human Values Identification*, Proceedings of the The 17th International Workshop on Semantic Evaluation (SemEval-2023), pages 1988–1994. ([PDF](#))
9. **Abdul Aziz\***, Md. Akram Hossain\*, and Abu Nowshed Chy, *CSECU-DSG @ Causal News Corpus 2022: Fusion of RoBERTa Transformers Variants for Causal Event Classification*, Proceedings of the 5th Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text (CASE), CASE@EMNLP-2022, pages 138–142. ([PDF](#))
10. **Abdul Aziz\***, Md. Akram Hossain\*, and Abu Nowshed Chy, *Enhancing the DeBERTa Transformers Model for Classifying Sentences from Biomedical Abstracts*, Proceedings of the The 20th Annual Workshop of the Australasian Language Technology Association (ALTA-2022), pages 156–160. ([PDF](#))
11. **Abdul Aziz\***, Md. Akram Hossain\*, and Abu Nowshed Chy, *CSECU-DSG at SemEval-2022 Task 3: Investigating the Taxonomic Relationship Between Two Arguments using Fusion of Multilingual Transformer Models*, Proceedings of the 16th International Workshops on Semantic Evaluation (SemEval-2022), Pages 255–259. ([PDF](#))
12. **Abdul Aziz\***, Md. Akram Hossain\*, and Abu Nowshed Chy, *CSECU-DSG at SemEval-2022 Task 11: Identifying the Multilingual Complex Named Entity in Text Using Stacked Embeddings and Transformer based Approach*, Proceedings of the 16th International Workshops on Semantic Evaluation (SemEval-2022), Pages 255–259. ([PDF](#))
13. **Abdul Aziz\***, Md. Akram Hossain\*, and Abu Nowshed Chy, *CSECU-DSG at SemEval-2021 Task 1: Fusion of Transformer Models for Lexical Complexity Prediction*, In Proceedings of the 15th International Workshop on Semantic Evaluation (SemEval-2021), pages 627–631. ([PDF](#))

14. **Abdul Aziz\***, Md. Akram Hossain\*, and Abu Nowshed Chy, *Feature Fusion with Hand-crafted and Transfer Learning Embeddings for Cause-Effect Relation Extraction*, CEREX@FIRE 2020, Forum for Information Retrieval Evaluation (FIRE 2020), Pages 756 - 764. ([PDF](#))

## Selected Research Projects

- Multimodal Information Processing** [January 2022 - Present]  
- Multimodal Complaint Detection [EMNLP '24] (Submitted)  
- Multimodal Desire Understanding [ Neurocomputing Journal '23] (On Review)  
- Multimodal Hate Speech Detection [CASE@RANLP '23]  
- Multimodal and Multigenre Check-Worthiness [CheckThat!@CLEF '23]
- Multilingual and Low-resources NLP** [December 2021 - Present]  
- Code-mixed Sentiment and Emotion Analysis [EMNLP '24] (Submitted)  
- Multilingual Taxonomic Relationship of Arguments [SemEval '22]  
- Multilingual and Code-mixed Complex NER [SemEval '22]
- Lexical Simplification** [December 2020 - November 2023]  
- Multilingual Lexical Complexity Prediction [LREC-COLING '24]  
- Lexical Complexity Prediction [Elsevier NLP Journal '23, SemEval '21]
- Information Extraction** [June 2020 - December 2023]  
- Financial NER [In Progress]  
- Event Causality Identification [CASE@RANLP '23, CASE@EMNLP '22]  
- Cause-Effect Relation Extraction [CEREX@FIRE '20]

## Achievements:

- 1st Place (Winning Team) in CheckThat!@CLEF-2023 Subtask 1A Arabic**  
Paper: CSECU-DSG at CheckThat! 2023: Transformer-based Fusion Approach for Multimodal and Multigenre Check-Worthiness ([PDF](#))
- 1st Place (Winning Team) in CASE@EMNLP-2022 Subtask 1**  
Paper: CSECU-DSG@Causal News Corpus 2022: Fusion of RoBERTa Transformers Variants for Causal Event Classification ([PDF](#))
- 1st Place (Winning Team) in CEREX@FIRE2020 Task A**  
Paper: Feature Fusion with Hand-crafted and Transfer Learning Embeddings for Cause-Effect Relation Extraction ([PDF](#))
- 2nd Place in ALTA-2022 Shared Task**  
Paper: Enhancing the DeBERTa Transformers Model for Classifying Sentences from Biomedical Abstracts ([PDF](#))
- 4th Place in PreTENS@SemEval-2022 Subtask 1**  
Paper: CSECU-DSG at SemEval-2022 Task 3: Investigating the Taxonomic Relationship Between Arguments using Fusion of Multilingual Transformer Models ([PDF](#))

## 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)

## IT Skills Set:

- Libraries and Tools :** PyTorch, TensorFlow, Huggingface, Scikit-learn, Keras, NLTK, Gensim, Simple Transformers, Flair, BeautifulSoup, Pandas.
- Programming Languages:** Python, C, C++, JAVA.