# Abdul Aziz

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## Research Interests

Multimodal 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; last three-years GPA: 3.81; major GPA: 3.78) Thesis: Multimodal Desire Understanding on Social Media Data

# **Teaching** Experience

2024 - Present Adjunct Lecturer at Computer Science and Engineering Department

International Islamic University Chittagong (IIUC), Chattogram, Bangladesh

# 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

- 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 Neurocomputing Journal, Vol. -, No. -, pp. -, 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, Vol. 05, No. 100039, 2023. (PDF)

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

- 1. 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)
- 2. 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)
- 3. 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 <u>Abdul Aziz</u> BiGCAT: An Integrated Graph Neural Network Model for Financial Named Entity Recognition, (In Progress)
- 5. <u>Abdul Aziz</u>, 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, <u>Abdul Aziz</u>, and Abu Nowshed Chy, <u>CSECU-DSG</u> @ 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. <u>Abdul Aziz\*</u>, Md. Akram Hossain\*, and Abu Nowshed Chy, *CSECU-DSG at SemEval-2023 Task 4: Fine-tuning DeBERTa Transformer Model with Crossfold 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. <u>Abdul Aziz\*</u>, 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. <u>Abdul Aziz\*</u>, 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)

#### **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.