Md. Akram Hossain

Chattogram-4331, Bangladesh
akram.hossain.cse.cu@gmail.com
🎓 Google Scholar 🌐 Website

Research Interests	Information Extraction, Multimodal AI, Causal Inference, Multilingual and Low-resource NLP, Lexical Semantics, Natural Language Processing.

Education

B.Sc. (Engg.) in Computer Science and Engineering   2023
University of Chittagong, Chattogram, Bangladesh
CGPA: 3.50 out of 4.0 (last 2-years GPA 3.76)
Thesis: Named Entity Recognition from Financial Text Using Graph Neural Network.
Advisor: Dr. Abu Nowshed Chy

Research Experience

CSECU-DSG Lab, University of Chittagong, Bangladesh; (Research Assistant)
Advisor: Dr. Abu Nowshed Chy
KDE Lab, Toyohashi University of Technology, Japan; (Collaboration)
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. 5, December 2023. (PDF) [* equal contribution]

Conference and Workshop Papers: [* equal contribution]

1. **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*, ECIR-2024 (Long Paper). (Submitted)

2. Nabila Ayman Nishat, **Md. Akram Hossain***, Abdul Aziz*, Rokan Uddin Faruqui, Abu Nowshed Chy. *BengaliLCP: A Dataset for Lexical Complexity Prediction in the Bengali Texts*, LREC-COLLING 2024 (Long Paper). **(Accepted)**

3. Abdul Aziz, **Md. Akram Hossain**, Abu Nowshed Chy, and, Md Zia Ullah. *Multimodal Complaint Detection Using Sentiment and Emotion-Aided Multitask Contrastive Learning Model*, NAACL-2024 (Long Paper). (Submitted)

4. Abdul Aziz, **Md. Akram Hossain**, Abu Nowshed Chy, and, Md Zia Ullah. *Sentiment and Emotion Analysis Using Transformer-based Multi-task Contrastive Learning Model on Code-mixed Tweets*, ECIR-2024 (Short Paper). (Submitted)

5. **Md. Akram Hossain**, Abdul Aziz, Abu Nowshed Chy. *CSECU-DSG@ Causal News Corpus 2023: Leveraging RoBERTa and DeBERTa Transformer Model with Contrastive Learning for Causal Event Classification*, CASE@RANLP-2023. (PDF)

6. Abdul Aziz, **Md. Akram Hossain**, Abu Nowshed Chy. *CSECU-DSG@ Multimodal Hate Speech Event Detection 2023: Transformer-based Multimodal Hierarchical Fusion Model For Multimodal Hate Speech Detection*, CASE@RANLP-2023. (PDF)

7. Abdul Aziz, **Md. Akram Hossain**, Abu Nowshed Chy. *CSECU-DSG at Check-That! 2023: Transformer-based Fusion Approach for Multimodal and Multi-genre Check-Worthiness*, CLEF 2023. (PDF) [**1st Place**]

8. **Md. Akram Hossain***, Abdul Aziz*, 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*, SemEval-2023. (PDF)

9. **Md. Akram Hossain***, Abdul Aziz*, Abu Nowshed Chy. *CSECU-DSG @ Causal News Corpus 2022: Fusion of RoBERTa Transformers Variants for Causal Event Classification*, CASE@EMNLP-2022. (PDF) [**1st Place**]

10. **Md. Akram Hossain***, Abdul Aziz*, Abu Nowshed Chy. *Enhancing the DeBERTa Transformers Model for Classifying Sentences from Biomedical Abstracts*, ALTA-2022. (PDF) [**2nd Place**]

11. **Md. Akram Hossain***, Abdul Aziz*, Abu Nowshed Chy. *CSECU-DSG at SemEval-2022 Task 3: Investigating the Taxonomic Relationship Between Two Arguments using Fusion of Multilingual Transformer Models*, SemEval-2022. (PDF) [**4th Place**]

12. **Md. Akram Hossain***, Abdul Aziz*, 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*, SemEval-2022. (PDF)

13. **Md. Akram Hossain***, Abdul Aziz*, Abu Nowshed Chy. *CSECU-DSG at SemEval-2021 Task 1: Fusion of Transformer Models for Lexical Complexity Prediction*, SemEval-2021. (PDF)

14. **Md. Akram Hossain***, Abdul Aziz*, Afrin Sultana*, Nabila Ayman*, Abu Nowshed Chy., *Feature Fusion with Hand-crafted and Transfer Learning Embeddings for Cause-Effect Relation Extraction*, CEREX@FIRE 2020. (PDF) [**1st Place**]

Conference Presentation	- **Md. Akram Hossain.** Enhancing the DeBERTa Transformers Model for Classifying Sentences from Biomedical Abstracts. Australasian Language Technology Association, Flinders University, Adelaide, December, 2022. - **Md. Akram Hossain.** Feature Fusion with Hand-crafted and Transfer Learning Embeddings for Cause-Effect Relation Extraction. Forum for Information Retrieval Evaluation, Hyderabad, December, 2020.
Technical Skills	**Languages:** Python, C, C++, Java, PHP **Libraries & Frameworks:** PyTorch, PyTorch Geometric, Tensorflow, Pandas, SpaCy, Jupyter, Scikit-Learn **Web & Visualization:** MatPlotLib, LIME, HTML, CSS **Data:** JSON, XML, SQL, MongoDB

Honors and Awards

University of Chittagong:
– 1st Place - CheckThat!@CLEF-2023 Subtask 1A Arabic   **Aug, 2023**
– 1st Place - CASE@EMNLP-2022 Subtask 1   **Dec, 2022**
– 1st Place - CEREX@FIRE2020 Task A   **Dec, 2020**
– 1st Place - Intra-departmental programming contest   **Sep, 2019**
– 2nd Place - ALTA-2022 Shared Task   **Dec, 2022**
– 4th Place - PreTENS@SemEval-2022 Subtask 1   **Jul, 2022**

Extra Curricular Activities

Teaching Assistant (Jan-July 2020)
- Course: C programming Lab (CSE 114)

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

Reviewer
- SemEval (2021-2023), AACL-IJCNLP* 2023, NAACL* 2024 [* Sub-reviewer]