Md. Akram Hossain

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🎓 Google Scholar 🌐 Website

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
CGPA: 3.50 out of 4.0 (last 2-years GPA 3.76)
Thesis: Named Entity Recognition from Financial Text Using Graph Neural Network.

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** et al., *Leveraging Contextual Representations with BiLSTM-based Regressor for Lexical Complexity Prediction*, Natural Language Processing Journal, Vol. 5, December 2023. (PDF)

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, **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, **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. (PDF)

5. Abdul Aziz, **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. (PDF)

6. Abdul Aziz, **Md. Akram Hossain** et al. *CSECU-DSG at CheckThat! 2023: Transformer-based Fusion Approach for Multimodal and Multigenre Check-Worthiness*, CLEF 2023. (PDF) [**1st 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) [**1ˢᵗ Place**]

9. **Md. Akram Hossain** et al., *Enhancing the DeBERTa Transformers Model for Classifying Sentences from Biomedical Abstracts*, ALTA-2022. (PDF) [**2ⁿᵈ 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) [**4ᵗʰ 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) [**1ˢᵗ Place**]

Selected Research Projects

Information Extraction [June 2020 - Present]
- Event Causality Identification [CASE@RANLP '23, CASE@EMNLP '22]
- Cause-Effect Relation Extraction [CEREX@FIRE '20]
- Financial NER using GNN [ECIR '24] (In-progress)

Mutilingual and Code-mixed Task Understanding [December 2020 - 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]
- Multilingual Lexical complexity Prediction [LREC-COLING '24] (In-progress)
- Lexical Complexity Prediction [Elsevier NLP Journal '23 , 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

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)

Presentation
- FIRE '20, ALTA '22

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