

# ABDUL AZIZ

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## RESEARCH INTERESTS

Multimodal Generative AI, Time Series Modeling, Biomedical and Health Informatics, Multilingual and Low-resource NLP, Trustworthy ML, AI for Social Good, Natural Language Processing.

## EDUCATION

B.Sc. (Engg.) in Computer Science and Engineering *Jan 2018 - Sep 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)

Rank: 8th out of 61

Undergraduate Thesis: Multimodal Desire Understanding on Social Media Data

Advisor: Prof. Nihad Karim Chowdhury and Dr. Abu Nowshed Chy

## TEACHING EXPERIENCE

Adjunct Lecturer

*May 2024 - Present*

Department of Computer Science and Engineering

[International Islamic University Chittagong \(IIUC\)](#), Chattogram-4314, Bangladesh

## RESEARCH EXPERIENCE

Research Assistant

*Apr 2020 - Present*

- At [CSECU-DSG Lab](#), University of Chittagong, Bangladesh;
  - Advisor: [Dr. Abu Nowshed Chy](#)
  - Secured **first place at CLEF-2023, EMNLP-2022, and FIRE-2020** Conference's research track
  - Projects: Lexical Complexity Prediction (C3, J2, W9), Multimodal Vision-language Tasks (C1, J1, W1, W2), Causality Identification (W3, W5, W10), NER (C2, W8), Multilingual and Low-resource NLP Tasks (C2, J2, W7, W8), Health Informatics (W6), Human Value Identification (W4)

### Research Collaboration

- At [KDE Lab](#), Toyohashi University of Technology, Japan; *Jan 2021 - Dec, 2023*
  - Advisor: [Prof. Dr. Masaki Aono](#)
  - Projects: Lexical Complexity Prediction (J2)
- With [Prof. Dr. Md Zia Ullah](#), Edinburgh Napier University, UK; *Jan 2021 - Present*
  - Projects: Multimodal Complaint Detection (C1), NER (C2), Lexical Complexity Prediction (J2)

*C: Conference Paper, J: Journal Paper, W: Workshop/Technical Paper from Research Publication section*

## PUBLICATIONS

International Conference Papers (C) :

*\* implies equal contributions*

- C1. [Abdul Aziz](#), Md. Akram Hossain, Abu Nowshed Chy, and, Md Zia Ullah, *Multitask Contrastive Learning for Multimodal Complaint Detection: A Sentiment and Emotion-Driven Approach*, COLING 2025 (Long Paper). (Submitted)
- C2. [Abdul Aziz](#), Md. Akram Hossain, and Abu Nowshed Chy, *Can Contrastive Learning Enhance Code-mixed Text Understanding? A study on Multitask Sentiment and Emotion Analysis*, NAACL 2025 (Short Paper). (Submitted)

- C3. Md. Akram Hossain, **Abdul Aziz**, Muhammad Anwarul Azim, Abu Nowshed Chy, Md Zia Ullah, and Mohammad Khairul Islam, *BiGCAT: A Hybrid Graph Neural Network-Based Approach to Named Entity Recognition for Financial Text*, NAACL 2025 (Long Paper). (Submitted)
- C4. Nabila Ayman, Md. Akram Hossain\*, **Abdul Aziz\***, Rokan Uddin Farouqi, and Abu Nowshed Chy, *BengaliLCP: A Dataset for Lexical Complexity Prediction in the Bengali Texts*, LREC-COLING 2024, Torino, Italia ( Long Paper). ([PDF](#))

#### International Journal Papers (J):

\* implies equal contributions

- J1. **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. (Submitted) ([Arxiv PDF](#))
- J2. **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 Workshop/Technical Papers (W) :

\* implies equal contributions

- W1. **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, Thessaloniki, Greece. ([PDF](#)) [**Winning Team**]
- W2. **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*, CASE@RANLP 2023, Varna, Bulgaria. ([PDF](#)) [**5th out of 13 teams**]
- W3. 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*, CASE@RANLP 2023, Varna, Bulgaria. ([PDF](#)) [**4th out of 10 teams**]
- W4. **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*, SemEval@ACL 2023, Toronto, Canada. ([PDF](#)) [**8th out of 20 teams**]
- W5. **Abdul Aziz\***, Md. Akram Hossain\*, and Abu Nowshed Chy, *CSECU-DSG @ Causal News Corpus 2022: Fusion of RoBERTa Transformers Variants for Causal Event Classification*, CASE@EMNLP 2022, Abu Dhabi, United Arab Emirates. ([PDF](#)) [**Winning Team**]
- W6. **Abdul Aziz\***, Md. Akram Hossain\*, and Abu Nowshed Chy, *Enhancing the DeBERTa Transformers Model for Classifying Sentences from Biomedical Abstracts*, ALTA 2022, Adelaide, Australia. ([PDF](#)) [**2nd out of 5 teams**]
- W7. **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*, SemEval@NAACL 2022, Washington, USA. ([PDF](#)) [**4th out of 21 teams**]
- W8. **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*, SemEval@NAACL 2022, Washington, USA. ([PDF](#)) [**9th out of 20 teams**]
- W9. **Abdul Aziz\***, Md. Akram Hossain\*, and Abu Nowshed Chy, *CSECU-DSG at SemEval-2021 Task 1: Fusion of Transformer Models for Lexical Complexity Prediction*, SemEval@ACL-IJCNLP 2021, Bangkok, Thailand. ([PDF](#)) [**9th out of 55 teams**]
- W10. **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, Hyderabad, India. ([PDF](#)) [**Winning Team**]

## MOBILE APP PROJECTS

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- Online Hospital Management System** [Project URL: [HMS](#)] *Jan, 2022 - Aug, 2022*  
- A project of Mobile App Development Lab Course (CSE 618), University of Chittagong  
- Features: Online Appointment, Telemeeting, Digital Prescription, Online Payment Gateway, Plot Generation from Data, and Encryption.  
- Deliverables: High Level Architectural Design and Software Requirement Specification (SRS).

## ACHIEVEMENTS

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**1st Place (Winning Team) in CheckThat!@CLEF-2023 Subtask 1A Arabic** *Aug 2023*  
Task: Check-Worthiness in Multimodal and Multigenre Content ([Task Website](#))  
Paper Title: 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** *Dec, 2022*  
Task: Event Causality Identification ([Task Website](#))  
Paper Title: 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** *Dec, 2020*  
Task: Automatic Cause-effect Relation Extraction from Text ([Task Website](#))  
Paper Title: Feature Fusion with Hand-crafted and Transfer Learning Embeddings for Cause-Effect Relation Extraction ([PDF](#))

**2nd Place in ALTA-2022 Shared Task** *Dec, 2022*  
Task: Biomedical Abstracts Classification for Evidence-Based Medicine ([Task Website](#))  
Paper Title: Enhancing the DeBERTa Transformers Model for Classifying Sentences from Biomedical Abstracts ([PDF](#))

**4th Place in PreTENS-SemEval@NAACL-2022 Subtask 1** *Jul, 2022*  
Task: Presupposed Taxonomies: Evaluating Neural Network Semantics (PreTENS) ([Task Website](#))  
Paper Title: CSECU-DSG at SemEval-2022 Task 3: Investigating the Taxonomic Relationship Between Arguments using Fusion of Multilingual Transformer Models ([PDF](#))

## ONLINE CERTIFICATIONS

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**DeepLearning.AI TensorFlow Developer Specialization in Coursera** (Contains 4 Courses)  
-Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning  
-Convolutional Neural Networks in TensorFlow  
-Natural Language Processing in TensorFlow  
-Sequences, Time Series and Prediction

**Deep Learning Specialization in Coursera** (Contains 5 Courses)  
-Neural Networks and Deep Learning  
-Convolutional Neural Networks  
-Sequence Models  
-Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization  
-Structuring Machine Learning Projects

**Natural Language Processing Specialization in Coursera** (Contains 4 Courses)  
-Natural Language Processing with Classification and Vector Spaces  
-Natural Language Processing with Probabilistic Models  
-Natural Language Processing with Sequence Models  
-Natural Language Processing with Attention Models

All Courses Certifications: [Certification's PDF](#)

## EXTRA CURRICULAR ACTIVITIES

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### 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\*, NAACL\*

*\* implies Sub-reviewer*

## LANGUAGES AND IT SKILLS SET

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**Human Languages:** Bengali (*Native*), English (*Proficient in all aspects*)

**Programming Languages:** Python, C, C++, JAVA.

**Machine Learning Libraries:** PyTorch (*implement most of the projects using it*), TensorFlow, Huggingface, Scikit-learn, Keras, NLTK, Gensim, Simple Transformers, Flair, Pandas.

**IDE Experiences:** Colaboratory, PyCharm, Code Blocks, Visual Studio, Turbo C, Notepad++, LaTeX.

## PERSONAL DETAILS

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*Full Name:* Abdul Aziz

*Father's Name:* Abul Kasem

*Mother's Name:* Farida Yasmin

*Date of Birth:* 01-01-1999

*Place of Birth:* Chattagram, Bangladesh.

*Civil Status:* Unmarried

*Nationality:* Bangladeshi (By Birth)

*Present Address:* Sadi Villa, West Khulshi R/A, Khulshi, Chattagram, Bangladesh

*Permanent Address:* Vill: Kayarbil, P.O.: Kutubdia, Upazilla: Kutubdia, Cox's Bazar, Chattagram, Bangladesh.

## REFEREES

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