

Md. Ayon Mia

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EDUCATION

• Chittagong University of Engineering & Technology

Bachelor of Science

Feb 2019 - June 2024
Chattogram, Bangladesh

- GPA: 3.83 (Honors)/4.00 (7th position)
- Coursework: OOP, DBMS, OS, Computer Network, Computer Architecture, System Design and Analysis, Compiler Design, AI, ML, etc.
- **Thesis:** *Code-Mixed Romanized Bengali to English Translation with Sequence-to-Sequence Deep Learning Model*

RESEARCH INTEREST

Natural Language Processing (NLP), Large Language Models (LLMs), Multimodal Learning, Trustworthy AI and Low-Resource Language

EXPERIENCE

- **Southeast University** 🌐 Feb 2026 – Present
Dhaka, Bangladesh
Lecturer, Dept. of Computer Science and Engineering
 - * Conducting undergraduate-level courses in Computer Science and Engineering
 - * Supervising student projects and mentoring research activities
- **Dhaka International University** 🌐 Jul 2024 – Jan 2026
Dhaka, Bangladesh
Lecturer, Dept. of Computer Science and Engineering
 - * Conducted undergraduate-level courses in core Computer Science subjects
 - * Mentored students in academic projects and introductory research work
- **Spectrum Engineering Consortium Ltd** 🌐 Sep 2023 – Oct 2023
Dhaka, Bangladesh
Software Engineer Intern
 - * Designed and implemented a vehicle scheduling algorithm to optimize resource allocation
 - * Developed backend services and structured database schemas for efficient data management
 - * Built and integrated a full-stack application using the MERN stack

PUBLICATIONS

C=CONFERENCE, J=JOURNAL, W=WORKSHOP

- [J.1] **Enhanced Semantic Relatedness Prediction using XLM-RoBERTa and CNNs with K-Fold Cross-Validation**
M.A. Mia, F.S. Tamim, Z.S. Taheri, M.A Talukder
The Journal of Engineering (JoE), Wiley and The Institution of Engineering and Technology, 2025
- [J.2] **BanCyB : A Hybrid Transformer-LSTM Framework for Explainable Multi-Label Cyberbullying Detection in Low-Resource Setting**
M.M. Hasan, M.S. Arefin, M.A. Mia, P.K. Dhar
Discover Applied Sciences
- [C.10] **BANMIME: Misogyny Detection with Metaphor Explanation on Bangla Memes**
M.A. Mia, A.M.R. Mazumder, K.S. Sayma, M. Fahim, M.T.H. Fuad, A.M.M. Rahman, M.I. Khan
Proceedings of the 2025 Conference on Empirical Methods in Natural Language Processing (EMNLP 2025)
- [C.9] **BANHATEME : Understanding Hate in Bangla Memes through Detection, Categorization, and Target Profiling**
M.A. Mia, M. Fahim
Second Bangla Language Processing Workshop (BLP 2025), co-located with ICJNLP-AAACL 2025
- [C.8] **BANGLABULLY: Label-Aware Cross-Attention for Multilabel Cyberbullying Detection in Bangla with Interpretability**
M.A. Mia, A. N. M. Z. H. Milkan, G.S.M. Mursalin, M.M. Hasan
International Conference on Electrical, Computer and Communication Technologies (ECCT 2026) Accepted [Preprint]

- [C.7] **BANGLAMEMO: A Transformer-Based Multimodal Framework for Bengali Emotion Recognition**
M.S. Mowla, M.A. Mia, H. Murad, M.I. Khan
3rd International Conference on Machine Intelligence and Emerging Technologies (MIET 2026) Accepted [Preprint]
- [C.6] **BanINT: A Bengali Dataset for Multiclass Intent Classification with BanglaSeqNet**
M.T.A. Shawon, F. Haq, M.A. Mia, M.I. Khan, M.S. Arefin, M.M. Hussain
In 5th International Conference on Sentiment Analysis and Deep Learning (ICSADL 2026)
- [C.5] **Prompting vs Fine-Tuning for Bengali Violence Detection in Low-Resource Settings**
M.A. Mia, A. Hasan, A. Rahman, G.S.M. Mursalin, M.I. Khan
28th International Conference on Computer and Information Technology (ICCIT 2025)
- [C.4] **SETBoost: An Interpretable Machine Learning Approach for Predicting Software Employee Turnover Tendency**
A. Rahman, M.I. Hossain, M.A. Mia, M.I. Khan
28th International Conference on Computer and Information Technology (ICCIT 2025)
- [C.3] **Vision Transformers for Multi-Class Eye Disease Classification: Enhancing Early Detection in Resource-Constrained Healthcare Settings**
A. Rahman, M. Hasan, M.A. Mia, M.I. Khan
3rd International Conference on Big Data, IoT and Machine Learning (BIM 2025)
- [C.2] **Fraud Detection with DistilBERT: A Transformer-Based Approach to Behavioral Banking Sequences**
M.M. Hasan, A.A. Mahin, S. Chakraborty, M. Afrose, M.A. Mia, M.A. Based
3rd International Conference on Big Data, IoT and Machine Learning (BIM 2025) Accepted [Preprint]
- [C.1] **Explainable Self-Attentive Transformer Model for Bangla Mental Health Disorder Detection**
A.S.H. Hridoy, N.S. Shohan, M.S. Alif, N.M.A. Mahin, M.A. Mia
International Conference on Intelligent Data Analysis and Applications (IDAA 2025)
- [W.9] **KCRL@DravidianLangTech 2025: Multi-View Feature Fusion with XLM-R for Tamil Political Sentiment Analysis**
M.A. Mia, F. Haq, M.T.A. Shawon, G.S.M. Mursalin, M.I. Khan
In The Fifth Workshop on Speech and Language Technologies for Dravidian Languages at NAACL 2025*
- [W.8] **KCRL@DravidianLangTech 2025: Multi-Pooling Feature Fusion with XLM-RoBERTa for Malayalam Fake News Detection and Classification**
F. Haq, M.T.A. Shawon, M.A. Mia, G.S.M. Mursalin, M.I. Khan
In The Fifth Workshop on Speech and Language Technologies for Dravidian Languages at NAACL 2025*
- [W.7] **PhantomTroupe@CASE 2025: Multimodal Hate Speech Detection in Text-Embedded Memes using Instruction-Tuned LLMs**
Amin, M.A. Horaira, M.T.A. Shawon, M.A. Mia, M.I. Khan
The 8th Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text
- [W.6] **CUET NOOB@CASE 2025: Multimodal Hate Speech Detection in Text-Embedded Memes using Late Fusion with Attention Mechanism**
T. P. Joy, A. Islam, S. Islam, M.T.A. Shawon, M.A. Mia, M.I. Khan
The 8th Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text
- [W.5] **ID4Fusion@CASE 2025: A Multimodal Approach to Hate Speech Detection in Text-Embedded Memes Using ensemble Transformer based approach**
T.B. Rashfi, M.T.A. Shawon, M.A. Mia, M.I. Khan
The 8th Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text
- [W.4] **CUET_KCRL at CheckThat! 2025: EnsembleNet with RoBERTa-Large for Subjectivity Detection in News Articles**
M.T.A. Shawon, F. Haq, M.A. Mia, G.S.M. Mursalin, M.I. Khan
CLEF 2025 Conference and Labs of the Evaluation Forum
- [W.3] **Golden_Duck at #SMM4H 2024: A Transformer-based Approach to Social Media Text Classification**
M.A. Mia, M. Yahan, H. Murad, M.I. Khan
In the 9th Social Media Mining for Health Applications (SMM4H) Workshop at ACL 2024
- [W.2] **EmptyMind at BLP-2023 Task 1: A Transformer-based Hierarchical-BERT Model for Bangla Violence-Inciting Text Detection**
U Das, K Fatema, MA Mia, M Yahan, MS Mowla, M.F. Ullah, A Sarker, H Murad
In Bangla Language Processing(BLP) Workshop at EMNLP 2023
- [W.1] **EmptyMind at BLP-2023 Task 2: Sentiment Analysis of Bangla Social Media Posts using Transformer-Based Models**
K Fatema, U Das, MA Mia, MS Mowla, M Yahan, M.F. Ullah, A Sarker, H Murad
In Bangla Language Processing(BLP) Workshop at EMNLP 2023

- [C] **Multi-Backbone Ensemble with Patient-Level Aggregation for Gastric Precancerous Staging**
F. Amin, T.B. Rashfi, M.I. Khan, M.A. Mia
12th IEEE International Women in Engineering (WIE) Conference on Electrical and Computer Engineering 2026 (WIECON-ECE 2026)
- [C] **Weighted Transformer Ensemble for Bengali Depression Detection with Explainability**
M. Morsalin, S. Akter, S.N. Choity, M. Hasan, M.A. Mia
2026 International Conference on Innovations in Science, Engineering and Technology
- [J] **BANMis: Fine-Grained Bangla Multimodal Misinformation Detection with Patch-Aware Gated Fusion**
T.B. Rashfi, M.A. Mia, A. Rahman, G.S.M. Mursalin, M.I. Khan
Natural Language Processing Journal
- [J] **BANTEN: A human-annotated Banglish–English parallel dataset for machine translation**
M.A. Mia, M. Fahim, M.I. Khan
Data in Brief
- [J] **Addressing Rating-Review Discrepancy in a Novel Dataset: An Explainable Pharmaceutical Product Evaluation using Multi-Stream Attention Transformer**
A. Rahman, M.A. Mia, M.I. Khan, I.H. Sarker
The Journal of Engineering (First Revision Completed) [\[Preprint\]](#)
- [J] **Triple-Pooling Feature Fusion for Transformer-Based Text Classification: A Low-Resource Language Approach with Explainable AI**
A. Rahman, M.A. Mia, M.I. Khan
AIUB Journal of Science and Engineering

PROJECTS

- **DocuMind-RAG – Intelligent PDF Assistant** Apr 2025 - May 2025
Tools: Python, Streamlit, LangChain, LLMs, FAISS, Sentence-Transformers [\[G\]](#)
 - * Built a conversational PDF assistant using Retrieval-Augmented Generation (RAG) for natural language querying
 - * Integrated LLMa for answer generation and FAISS for efficient semantic search over embedded document chunks
 - * Developed a clean, interactive UI with Streamlit for real-time PDF analysis and question answering
- **CUET Hall Service: Hall management system** Sep 2023 - Jan 2024
Tools: Laravel, MySQL, Bootstrap, CSS, PHP etc. [\[G\]](#)
 - * Architected three-panel system (Admin, Student, Service Provider) using Laravel for streamlined hall service management
 - * Implemented comprehensive admin panel with user management and request approval workflow features
 - * Developed student portal for service requests with priority levels and real-time status tracking notifications
 - * Created service provider interface with task management and automated report generation capabilities
- **T20 Score Predictor: A cricket score prediction system** Oct 2022 - Jan 2023
Tools: Python, NumPy, Pandas, Matplotlib, XGBoost, Flask, HTML/CSS etc. [\[G\]](#)
 - * Built interactive web interface using Flask and implemented XGBoost regression model for cricket score predictions
 - * Designed feature engineering pipeline and created user-friendly interface for real-time score forecasting
- **Fruit And Vegetable Recognition: A CNN-based classification system** Oct 2022 - Jan 2023
Tools: Python, TensorFlow, VGG-19 etc. [\[G\]](#)
 - * Implemented fine-tuned VGG-19 architecture achieving 94% classification accuracy across 136 classes
 - * Developed robust image preprocessing pipeline and optimized model parameters for improved performance
- **Electricity Billing System: Utility management application** Jan 2021 - Feb 2021
Tools: Java, Java Swing etc. [\[G\]](#)
 - * Developed comprehensive billing calculation system
 - * Created automated billing generation based on consumption data

SKILLS

- **Programming Languages:** Python, C, Java, C++
- **Libraries & Frameworks:** NumPy, Pandas, Matplotlib, Seaborn, Scikit-Learn, Tensorflow, Pytorch, Flask
- **Version Control:** Git

- **Database Systems:** MySQL
- **Problem Solving:** Solved 800+ problems (Codeforces, HackerRank, AtCoder, etc.)
- **Tools & Software:** MS Word, PowerPoint, Microsoft Excel

HONORS AND AWARDS

- **Best paper award** Dec 2023
Association for Computational Linguistics 
 * Title: *EmptyMind at BLP-2023 Task 1: A Transformer-based Hierarchical-BERT Model for Bangla Violence-Inciting Text Detection*
- **Technical Scholarship [Funded my undergraduate studies]** 2019 - 2024
Chittagong University of Engineering and Technology 
- **1st at FakeDetect-Malayalam, detecting fake news in Malayalam news articles across five categories** Nov 2024
DravidianLangTech-2025, NAACL 2025 
- **2nd at Political Multiclass Sentiment Analysis of Tamil X (Twitter) Comments** Nov 2024
DravidianLangTech-2025, NAACL 2025 
- **6th at Fake News Detection in Dravidian Languages: Classify social media posts into original or fake** Nov 2024
DravidianLangTech-2025, NAACL 2025 
- **5th in Marathi Subtask at SemEval 2024 Task 1: Semantic Textual Relatedness (STR)** Sep 2023
The 18th International Workshop on Semantic Evaluation, NAACL 2024 
- **7th in Telugu Subtask at SemEval 2024 Task 1: Semantic Textual Relatedness (STR)** Sep 2023
The 18th International Workshop on Semantic Evaluation, NAACL 2024 
- **9th at BLP Shared Task 1: Violence Inciting Text Detection (VITD)** Aug 2023
Bangla Language Processing(BLP) Workshop at EMNLP 2023 
- **7th at BLP Shared Task 2: Sentiment Analysis of Bangla Social Media Posts** Aug 2023
Bangla Language Processing(BLP) Workshop at EMNLP 2023 
- **1st at Sentiment Analysis of Code-Mixed Text CLBLP 2023 (Task 2)** Feb 2023
International Workshop on Computational Linguistics and Bangla Language Processing (CLBLP 2023) 
- **6th at Multimodal Sentiment Analysis CLBLP 2023 (Task 1)** Feb 2023
International Workshop on Computational Linguistics and Bangla Language Processing (CLBLP 2023) 

VOLUNTEER EXPERIENCE

- **Research Mentor** 2024 - Present
 * Mentor undergraduate students in thesis research and academic writing
 * Guide research methodologies and technical implementations
- **Adviser** 2025 - Jan 2026
DIU Computer Programming Club (CPC)
 * Guide students in organizing programming competitions and tech events
 * Mentor club members in developing their programming and problem-solving skills
- **Financial Secretary** 2022 - 2023
RAJUK Ex- Students' Association (RESA), CUET
 * Managed financial operations and budget allocation for association activities
 * Maintained transparent financial records and coordinated fundraising initiatives

CERTIFICATIONS

◦ Reviewer for ECCT 2026 by ECCT 2026 Organizer	<i>May 2026</i>
◦ Fundamental of LLMs by Hugging Face	<i>May 2025</i>
◦ AI Agents Fundamentals by Hugging Face	<i>March 2025</i>
◦ The Reasoning Course - Building AI models that reason by Hugging Face	<i>March 2025</i>
◦ Python Matplotlib by Great Learning Academy	<i>Nov 2023</i>
◦ Data Visualization by kaggle	<i>Nov 2023</i>
◦ Pandas by kaggle	<i>Nov 2023</i>
◦ Neural Networks and Deep Learning by DeepLearning.AI	<i>Oct 2023</i>

ADDITIONAL INFORMATION

Languages: Bengali (Native), English (Professional Working Proficiency)
Interests: Exploring new things, Reading research papers & blogs, Listening songs, Watching Movies