Aminur Rahman

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EDUCATION

Bachelor of Science in Computer Science and Engineering   2018 - 2023
Chittagong University of Engineering and Technology (CUET)
CGPA: **3.78** (with **honors**)/4.0
Merit Position: **10**th among 126 students

Higher Secondary Certificate   2015 - 2017
Shaheed Police Smrity College, Dhaka
GPA: **5.00**/5.00

Secondary School Certificate   2014 - 2015
Banani Model School, Dhaka
GPA: **5.00**/5.00

RESEARCH INTERESTS

Natural Language Processing | Large Language Models (LLMs) | Machine Learning | Deep Learning | Low-Resource Language Computing | Healthcare NLP

RESEARCH EXPERIENCE

Founding Member & Researcher, KCR-Lab ⌕   Oct 2024 - present

- Supervise undergraduate research in machine learning, deep learning, and computation linguistics
- Organize workshops, hands-on training to stablish students as experts in AI
- Mentor students in research methodology, experimental design, and publication writing
- Lead projects exploring natural language processing for low-resource languages
- Collaborate with faculty on interdisciplinary research initiatives

Undergraduate Thesis Researcher, CUET   Feb 2022 - April 2023

- Title: "A Deep Learning Based Pharmaceutical Product Evaluation from Bengali Reviews Considering Emoji"
- Developed a benchmark dataset of 4000+ pharmaceutical product reviews
- Identified the Rating-Review discrepancy concern in E-commerce industry
- Proposed a novel approach to integrate emoji effects in text classification tasks
- Implemented ML and Hybrid Deep learning methods to classify user-generated reviews
- Supervised by: Prof. Dr. Muhammad Ibrahim Khan

PUBLICATIONS   **C**=CONFERENCE, **J**=JOURNAL

[C.1] **BScFilter: A Deep Learning Approach for Sports Comments Filtering in a Resource Constraint Language.**
A. Rahman, M.I. Khan, M.M.H. Rifat
5th International Conference on Trends in Computational and Cognitive Engineering (TCCE 2023). ⌕

UNDER REVIEW PAPERS
<div style="text-align:right">C=CONFERENCE, J=JOURNAL</div>

[J.1] Triple-Pooling Feature Fusion with Explainable AI for E-Commerce Review Analysis: A Low-Resource Language Perspective
M.A. Mia, <u>A. Rahman</u>, M.I. Khan, I.H. Sarker [**Preprint**]

[C.1] Optimizing Eye Disease Classification with Vision Transformers: An Analysis of Bangladeshi Fundus Images
<u>A. Rahman</u>, M. Hasan, M.A. Mia, M.I. Khan [**Preprint**]

TEACHING & PROFESSIONAL EXPERIENCE

Lecturer, Department of CSE, Dhaka International University (DIU) ⧉   Sep 2023 - present

- Teach undergraduate courses in Computer Science and Engineering

- Develop practical lab exercises focusing on implementation of theoretical concepts

- Supervise undergraduate students on academic and research projects

- Participate in curriculum development and course assessment activities

Software Engineer Intern, Dynamic Solution Innovators (DSI)   Nov 2023 - Dec 2023

- Completed project on Railway Seat Reservation System [○]

- Gained experience in software development life cycle and agile methodologies

- Collaborated with cross-functional teams on system design and implementation

RESEARCH PROJECTS

Diabetes Factor Analysis with Outlier Detection [○]
Technologies: Scikit-learn, pandas, numpy, matplotlib, seaborn

- Applied statistical methods to identify significant factors affecting diabetes diagnosis

- Implemented outlier detection techniques to improve feature selection quality

- Employed ensemble methods (Random Forest, XGBoost) for enhanced prediction accuracy

- Achieved 2-4% overall performance increment with outlier removal

Sentiment Analysis on Twitter Texts [○]
Technologies: Scikit-learn, NLTK, Transformers, Tkinter, pandas, matplotlib

- Developed a system for social media sentiment classification

- Implemented multiple feature extraction techniques (TF-IDF, word embeddings)

- Compared performance across classical ML and deep learning approaches

- Created interactive interface for real-time sentiment prediction

CUET-BUS-TRACKER: Real-time Transportation Monitoring System [○]
Technologies: Java, Firebase, Google Maps API, Android Studio

- Designed and implemented location tracking system for university transport

- Built Android application with real-time updates for student convenience

- Integrated Google Maps API with Firebase for synchronous data updates

TECHNICAL SKILLS

Machine Learning: Scikit-learn, PyTorch, TensorFlow, Keras

Data Analysis: Pandas, NumPy, Matplotlib, Seaborn

Natural Language Processing: NLTK, SpaCy, Transformers

Programming Languages: Python, C, C++

Web Development: HTML, CSS, PHP

Database: MySQL, Firebase

Research Tools: LaTeX, Jupyter Notebooks

Languages: Bengali (Native), English (Fluent, IELTS: 6.5)

Version Control: Git

CERTIFICATES

Machine Learning ⬈
Stanford University

Python for Everybody Specialization ⬈
University of Michigan

Deep Learning Specialization (Three Courses) ⬈
DeepLearning.AI

Natural Language Processing with Classification and Vector Spaces ⬈
DeepLearning.AI

DeepLearning.AI TensorFlow Developer Specialization ⬈
DeepLearning.AI

Advanced Deep Learning with Keras ⬈
Datacamp

HONORS & AWARDS

Microsoft Virtual Hackathon 2022 ⬈
Secured a position among the top 34 participants out of 625 teams

CUET-ETE DAY ML Competition ⬈
Secured 12th position in a machine learning contest arranged by Department of ETE, CUET

Best Poster Presenter ⬈
Won the best poster presenter award in Algorithm Design Course

ALPHA Tester for DeepLearning.AI ⬈
Selected as an Alpha Tester for course development at DeepLearning.AI

Government Technical Board Scholarship
Awarded each semester for academic excellence at CUET

PROFESSIONAL AFFILIATIONS & LEADERSHIP ROLES

Advisor, DIU Cyber Security Club ⬈   Mar 2024 - present

- Guide and supervise students in various competitions and workshops

- Coordinate and organize training and skill sessions by inviting experts

Coordinator, Undergraduate Pre-defence Sessions   July 2024 - present

- Facilitate pre-defense sessions for undergraduates by organizing presentations

- Invite faculty and coordinate with students for proposal defenses at DIU

- Evaluate the proposals of undergraduate level projects and thesis

Publication Secretary, CUET Computer Club ⬈   Aug 2022 - Jun 2023

- Managed club publications

- Coordinated technical content creation

PROFESSIONAL DEVELOPMENT

- Workshop on *Bloom's Taxonomy, OBE, LOs & Attainments* ⬈ (IQAC, DIU)

- Workshop on *Document Preparation for IEB* (Department of CSE, DIU)

- Workshop on *CO, PO Assessment and Course File Preparation* (Department of CSE, DIU)

- Workshop on *IoT-Based Smart Campus* ⬈ (ICT Division and BD High-TECH park)

- Workshop on *Software Engineering: The Best Professional Practices* ⬈ (Department of CSE, CUET and Brain-Station23)

ADDITIONAL ACTIVITIES

- Executive Member, Workshop and Seminar Organizing Committee, DIU   July 2024 - present

- Executive Member, Program Documentation & Newsletter Committee, DIU   July 2024 - present

- Campus Ambassador, Scholarship School BD ⬈   Aug 2020 - Jun 2023

- Content Writer, Engineers Diary ⬈   Mar 2020 - present

REFERENCES

Dr. Muhammad Ibrahim Khan
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Dr. Mohammad Shamsul Arefin
Dean, Faculty of ECE, CUET
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