# Monirul Haque

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## RESEARCH INTERESTS

Natural Language Processing, Generative Adversarial Network, Text Retrieval, Machine Learning

## ACADEMIC QUALIFICATIONS

Master of Science in Computer Science and Engineering

Spring 2023 - Present

BRAC University, Dhaka, Bangladesh

CGPA: 3.83 out of 4.00 (completed 18 credits)

Bachelor of Science in Computer Science and Engineering

Summer 2018 - Fall 2021

BRAC University, Dhaka, Bangladesh

CGPA: 3.81 out of 4.00

#### PUBLICATIONS

BanglaBait: Semi-Supervised Adversarial Approach for Clickbait Detection on Bangla Clickbait Dataset. Md. Motahar Mahtab, Monirul Haque, Mehedi Hasan, and Farig Sadeque. Proceedings of Recent Advances in Natural Language Processing, pages 748–758, Varna, Bulgaria, September 2023. https://aclanthology.org/2023.ranlp-1.81/

#### RESEARCH PROJECTS

Text Retrieval using Community Detection Techniques on a Word Association Graph Network A novel information retrieval technique that leverages community detection on a word association graph network generated from a news corpus.

WhisperWave: Synergizing Parameter Efficient Fine-Tuning using LoRA Technique in Transformer Models for Out-Of-Distribution Bangla Automated Speech Recognition (Accepted in IEEE CSDE 2023) Fine-tuning pre-trained multilingual Whisper Large V2 with Low-Rank Adaptation Parameter Efficient Fine-Tuning Technique on a low specification computer.

Flagging Sexism on Social Media Leveraging Hidden Layers of Transformers as Word Representations and Facilitating Model Interpret-ability through XAI Techniques (Accepted in IEEE CSDE 2023) Calibrated different layers of pre-trained BERT-based transformer models to obtain higher scores on the SemEval-2023 Task 10 Dataset while explaining their insights using Lime and SHAP.

# TEACHING EXPERIENCE

Adjunct Lecturer

BRAC University, Dhaka, Bangladesh

Courses: \* CSE111: Programming Languages II \* CSE331: Automata &

\* CSE360: Computer Interfacing \* CSE421: Computer Networks

\* CSE220: Data Structures \* CSE221: Algorithms

Computability \* CSE341: Microprocessors

\* CSE422: Artificial Intelligence

May 2022 - Present

June 2021 - January 2022

Undergraduate Teaching Assistant BRAC University, Dhaka, Bangladesh

Courses: \* CSE220: Data Structures \* CSE221: Algorithms

# CERTIFICATIONS

Neural Networks and Deep Learning

DeepLearning.AI, Coursera, July 2020

Introduction to Applied Machine Learning

Alberta Machine Intelligence Institute, Coursera, July 2020

Machine Learning Specialization

University of Washington, Coursera, June 2020

Basics of Robotics

BRAC University, Residential Campus, December 2018

## ACHIEVEMENTS

- ☐ Participant in ICPC Dhaka Regional, 2019
- ☐ Stood 21<sup>st</sup> in LU CSE Carnival Programming Contest, Sylhet, 2019
- ☐ Stood 5<sup>th</sup> in CSE-ian of BD Programming Contest 7, 2019 (Junior Division)
- ☐ Appeared in VC's List 4 times and Dean's List 2 times

#### CO-CURRICULAR ACTIVITIES

- O Served as the role of Coach for two teams in ICPC Dhaka Regional 2022 & four teams in ICPC Dhaka Regional 2023
- O Conducted a workshop on Introduction to Competitive Programming in Fall 22
- O Acted as a Representative of Robotics activity in RS day (Residential Semester 49, 2018)

## TECHNICAL SKILLS

Languages/Tools: Python, C/C++, Java, JavaScript, XML, JSON, SQL, MarkDown, Selenium, Playwright, LATEX

Frameworks: Tensorflow, Pytorch, CUDA, Git, Docker, Spring Boot, Node JS, React JS

# RELEVANT COURSES

CSE712: Symbolic Machine Learning II (NLP), CSE710: Advanced Artificial Intelligence, CSE706: Parallel Programming, CSE713: Advanced Syntactic Pattern Recognition

# SOFTWARE PROJECTS

My Entertainment Hub: Java, Spring Boot, Spring Security, MySQL, MVC, TMDb API

Bengali Online News Scrapper: Python GUI, Selenium Web Driver

Catch the Letter 8086 Game: 8086 Assembly Language, TASM compile, DOSBox

Students Scholarship Management System: Node JS, Express, MySQL, Embedded JavaScript

# LANGUAGE PROFICIENCY

IELTS Score: 7.0 October 2023

Speaking: 7.0, Listening: 8.0, Reading: 7.0, Writing: 6.5

#### REFERENCES

## Muhammad Nur Yanhaona

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Farig Yousuf Sadeq

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