

Jubair Ibn Malik Rifat

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EDUCATION

PhD in Computer Science & Engineering
Marquette University, Milwaukee, Wisconsin, USA
University of North Texas, Denton, Texas, USA

January 2020 - Present

B.Sc. in Computer Science & Engineering
Islamic University of Technology (IUT), Gazipur, Bangladesh

December 2011-December 2015

RESEACH INTEREST

Deep Learning, Bioinformatics, Machine Learning, Natural Language Processing, Social Network Analysis

RESEARCH EXPERIENCE

Graduate Research Assistant

January 2020 – December 2023
June 2024 - Present

Department of Computer Science & Engineering, Marquette University
Department of Computer Science & Engineering, University of North Texas
Assistant to Dr. Serdar Bozdag

- Doing research on Clustering Single cells with Graph contrastive learning and self supervised clustering technique
- Doing research on finding cell type specific gene regulatory network from single cell multiomics data using Contrastive pretraining and Biological Knowledge guided Transfer Learning.

Graduate Teaching Assistant

January 2024-May 2024

Department of Computer Science & Engineering, University of North Texas
Assistant to Dr. Song Fu

- Assisted in grading assignments, projects, and exams for the graduate-level course Parallel Processing and Algorithms.
- Conducted office hours and provided one-on-one guidance to students on concepts such as parallel architectures, algorithms, and performance optimization.

PROFESSIONAL EXPERIENCE

PC Member

- 4th IEEE Workshop on High Performance Computing, Big Data Analytics, and Integration for Multi-Omics Biomedical Data (HPC-BOD), 2022

Reviewer

- Intelligent Systems for Molecular Biology (ISMB) conference, 2024,2022
- ACM SIGKDD International Conference on Knowledge Discovery, and Data Mining, 2022

- 21st International Workshop on Data Mining in Bioinformatics (BIOKDD), 2022
- IEEE International Conference on Bioinformatics and Biomedicine (BIBM), 2022
- 14th Great Lakes Bioinformatics (GLBIO) conference, 2021

Lecturer

October 2017-December 2019

Department of Computer Science and Engineering, Uttara University, Dhaka, Bangladesh

- Prepared lecturer notes, mentor, and train people at various levels, supervised undergraduate students
- Involved in assisting with subject coordination, routine preparation, admission test coordination, club activity monitoring and performing invigilation.

Junior Software Engineer

February 2016 – September 2016

CodeArrow Limited, Dhaka, Bangladesh

- Introduced new features and optimized the existing features of the existing project management system of the company.
- Created an Online News portal which is based on Drupal 8.

PUBLICATION

1. Rifat, J. I. M., Tabashum, T., Rahman, M.M., Mokter, M.F., Engala, S., Bozdag, S. (2025) BioLM-NET: an interpretable deep learning model combining prior biological knowledge and contextual LLM gene embeddings on multi-omics data to predict disease. In: Proceedings of the Pacific Symposium on Biocomputing (PSB 2026). (Accepted)
2. Kesimoglu, Z. N., Rifat, J. I. M., & Bozdag, S. (2025). Computational inference of co-regulatory modules from transcription factors, MicroRNAs, and their targets using CanMod2. Scientific Reports, 15, Article 97476. <https://doi.org/10.1038/s41598-025-97476-4>
3. Ashraf, F. B., Kabir, M. R., Shafi, M. S. R., & Rifat, J. I. M. (2020). Finding homogeneous climate zones in Bangladesh from statistical analysis of climate data using machine learning technique. 23rd International Conference on Computer and Information Technology (ICCIT), IEEE. <https://doi.org/10.1109/ICCIT51783.2020.9392689>

SELECTED PROJECT

Prediction of Emojis from Tweets (https://github.com/jubairmalik/Emoji_Prediction.git)

- In this project, we propose a new model to predict the most likely associated emoji in English tweets based on BERT. We had 20 classes and got our highest accuracy with a BERT-base of 0.35 and macro f1 score 0.23 and we have got 7 emojis with the highest number of f1 scores which constitutes 29.2% of the testing dataset.

TECHNICAL SKILLS

- Programming Languages: Python, R, Java, C, C++, HTML, CSS, SQL
- Machine Learning: PyTorch, TensorFlow, Scikit learn, Keras, Pandas, Matplotlib
- Databases: Oracle, MySQL

PROFESSIONAL CERTIFICATION AND TRAINING

- Oxford Machine Learning Summer School 2023
- Professional Diploma in Digital Transformation—Big Data.

- Top Up IT Training (on Android), in the month of April 2017, LICT project of Bangladesh Computer Council (BCC).
- Training on “The role and responsibility & Ethical Principles of the University Teachers” held on 2018 conducted by the Institutional Quality Assurance Cell (IQAC), Uttara University, Bangladesh

LEADERSHIP EXPERIENCES & PFOFESSIONAL AFFILIATION

- **Head of Project Showcasing Department:** Administered and organized project showcasing part in 7th IUT National ICT Fest Powered by AB Bank.
- **Executive Member of IUT Computer Society (IUTCS):** Arranged different ICT quiz competition, administered question setting process and presided several programs.
- **Member of Blood Donor Club:** Arranged Blood donation campaign in IUT.

AWARDS & HONORS

- **CCLS Fall RAship:** Awarded Research Assistantship for Fall 2025 by Center for Computational Life Sciences (CCLS), UNT.
- **Travel Grants, University of North Texas — October 2024:** Received funding from the Toulouse Graduate School, Department of Computer Science and Engineering, and BioDiscovery Institute to attend the Regulatory & Systems Genomics with DREAM Challenges (RSGDREAM 2024), Madison, WI
- **BDI Summer RAship:** Awarded Research Assistantship for Summer 2022 by BioDiscovery Institute (BDI), UNT.
- **OIC Full Free Scholarship:** Awarded during undergraduate in Islamic University of Technology.
- **Scholarship awarded by Bangladesh Government:** Awarded for obtaining high grades in Higher Secondary School Certificate and Secondary School Certificate exams.
- **Bangladesh Mathematical Olympiad:** Won Regional Champion and attended national math camps.

REFERENCES

Available upon request.