

Mominul Islam

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in mominul-ssv

🌐 <https://mominul-ssv.github.io>

Education

BSc North South University, Computer Science and Engineering

Jan. 2019 – Jun. 2023

- CGPA: 3.86/4.00
- Highest Distinction: Summa Cum Laude
- **Major Courses:** Machine Learning, Natural Language Processing, Pattern Recognition and Neural Network.

Experience

Teaching Assistant (Part-Time), North South University

Dhaka, Bangladesh

- Grading homework assignments and maintaining office hours for student consultations.
- Conducting tutorial sessions for students requiring extra help outside of class hours.
- Maintaining 4 hours per week per section, divided among assisting faculty members.

Feb. 2022 – Present
2 years 1 month

Publications

CosSIF: Cosine similarity-based image filtering to overcome low inter-class variation in synthetic medical image datasets

Jul. 2023

M. Islam, H. Zunair, N. Mohammed

Journal: *Computers in Biology and Medicine* | Impact Factor: 7.7 | Q1 (Under Revision)

Paper: arxiv.org/abs/2307.13842 | Code: [GitHub](#)

ML Domain: CNNs, Vision Transformers, GANs, Image Classification

This publication also serves as my bachelor's thesis.

Projects

Fine-Tuned the Pre-Trained T5 Transformer Model for Context-to-Question Generation

Jan. 2024

- Code: [Kaggle](#)
- Model: [Hugging Face](#)
- ML Domain: Text Generation, Sequence-to-Sequence Modeling

Fine-Tuned the Pre-Trained mT5 Transformer Model for Abstractive Bengali Text Summarization

Jun. 2023

- Code: [GitHub](#)
- ML Domain: Text Summarization

Image-to-Image Translation via GAN to Address Class Imbalance

Sep. 2022

- Ref. Code: [GitHub](#)
- ML Domain: Generative Adversarial Networks
- GAN Architecture: Nvidia's StyleGAN2-ADA

Skin Lesion Classification Using Cross-Stage CNNs and Transformers

Aug. 2022

- Ref. Code: [GitHub](#)
- ML Domain: Binary & Multi-Class Image Classification
- Models: ConvNext, Swin-Transformer, ViT

Heart Disease Detection Using Machine Learning

Jul. 2022

- Code: [GitHub](#)
- ML Domain: Binary Classification
- Algorithms: Logistic Regression, Random Forest, Decision Tree, KNN, Naive Bayes

Honors and Awards

2023, Top 10 (Solo) out of 102 teams, in Innovation Challenge (IC) Season 13, Capstone Project Showcase.

2022, 50% tuition waiver: in recognition of academic performances at North South University.

2020, 25% tuition waiver: in recognition of academic performances at North South University.

Skills

Programming Languages: Python, C/C++

Frameworks / Libraries: TensorFlow, PyTorch, Scikit-learn

Development Platforms: Colab, Kaggle, AWS ML

Version Control: GitHub, Git

Web: HTML, CSS, JavaScript, Flask

DBMS: MySQL

LLM & Multimodal-LLM Access: Gemini Pro, Gemini Vision Pro

Certificates

2022 Coursera, Deep Learning Specialization, Neural Networks and Deep Learning; Grade: 97%. [Certificate](#)

References

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