

# Mominul Islam

☎ (+880) 179 594 8308

✉ [mominul.islam05@northsouth.edu](mailto:mominul.islam05@northsouth.edu)

🌐 [mominul-ssv.github.io](https://mominul-ssv.github.io)

🎓 [Google Scholar](#)

🔑 [ORCID](#)

🐙 [GitHub](#)

🌐 [LinkedIn](#)

## Education

---

**BSc** North South University, Computer Science and Engineering

Jan. 2019 – Jun. 2023

- CGPA: 3.86/4.00 ( $\approx$ Top 4%)

## Experience

---

**Lab Instructor**

July. 2024 – Present

Dept. of Electrical and Computer Engineering  
North South University

– CSE225L: Data Structures and Algorithms Lab

**Intern**

Mar. 2024 – Jun. 2024

Dept. of Business Systems  
Beximco Communications Limited

3 months

– ERP Data Verification and Migration Using Python

**Teaching Assistant (GA / UGA)**

Feb. 2022 – Jun. 2024

Dept. of Electrical and Computer Engineering  
North South University

2 years 4 months

Graduate Assistant (GA) — (Jul. 2023 – Jun. 2024)

Undergraduate Assistant (UGA) — (Feb. 2022 – Jun. 2023)

- CSE332: Computer Organization and Architecture
- CSE325: Concepts of Programming Language

## Research Interests

---

- Computer Vision (*Image Quality Assurance, Classification, Segmentation, Pose Estimation, Generative Models*)
- Natural Language Processing (*LLM Context Preservation, Q&A, XAI, Ethical AI*)

## Publications

---

**CosSIF: Cosine similarity-based image filtering to overcome low inter-class variation in synthetic medical image datasets**, \*[Mominul Islam](#), Hasib Zunair, Nabeel Mohammed

Mar. 2024

*Computers in Biology and Medicine* (Impact Factor: 7.7 — Q1)

Paper: [doi.org/10.1016/j.compbiomed.2024.108317](https://doi.org/10.1016/j.compbiomed.2024.108317) — Code: [GitHub](#)

## Projects

---

Deep Learning — NLP

**Context-to-Question Generation Using Transformer Models**

Jan. 2024

- Code: [Kaggle](#)
- Models: BERT, T5 — [Hugging Face](#)

**Bengali Text Summarization Using a Multilingual Encoder-Decoder Model**

Jun. 2023

- Code: [GitHub](#)
- Model: mT5

## Deep Learning — Computer Vision

### Cattle Pose Estimation Using a Semi-Annotated High-Resolution Image Dataset

Jun. 2024

- Code: [Kaggle](#)
- Model: HRNet-32

### Skin Lesion Classification Using Cross-Stage CNNs and Transformers

Sep. 2022

BSc Thesis (Part 2/2)

- Ref. Code: [GitHub](#)
- Models: ConvNeXt, Swin-Transformer, ViT

### Image-to-Image Translation with GAN to Address Class Imbalance

Aug. 2022

BSc Thesis (Part-1/2)

- Ref. Code: [GitHub](#)
- Model: StyleGAN2-ADA

## Machine Learning

### Heart Disease Detection Using Machine Learning

Jul. 2022

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

## Honors and Awards

### Bachelor's Degree Honors:

– Summa Cum Laude (Highest Distinction)

### Merit Scholarships During Bachelor's Studies:

– 50% Tuition Waiver (Summer 2022 - Fall 2022)

– 25% Tuition Waiver (Spring 2020 - Spring 2022)

## Skills

**Programming Languages:** C/C++, Python, Java

**ML Frameworks:** PyTorch, TensorFlow, OpenMMLab

**Web:** HTML, CSS, JavaScript, SQL

**Simulation Software:** Logisim, Proteus

**Typesetting:** L<sup>A</sup>T<sub>E</sub>X

**OS:** Linux, Windows

## Languages

**Bengali:** Native

**English:** Proficient

**IELTS, Overall:** 7.0

Oct, 2023

<b>Speaking:</b> 7.5	<b>Reading:</b> 7.5	<b>Writing:</b> 7	<b>Listening:</b> 6.5
----------------------	---------------------	-------------------	-----------------------

## References

### Dr. Nabeel Mohammed

Associate Professor

Dept. of Electrical and Computer Engineering

North South University

Dhaka, Bangladesh

Email: [nabeel.mohammed@northsouth.edu](mailto:nabeel.mohammed@northsouth.edu)

Contact Number: (+880) 172 050 5591

### Dr. Mohammad Ashrafuzzaman Khan

Assistant Professor

Dept. of Electrical and Computer Engineering

North South University

Dhaka, Bangladesh

Email: [mohammad.khan02@northsouth.edu](mailto:mohammad.khan02@northsouth.edu)

Contact Number: (+880) 175 257 6450