

# NAOSHER MUSTAKIM

Chattogram, Bangladesh

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Dedicated and curious researcher with a passion for advancing knowledge and making meaningful contributions. Eager to drive impactful discoveries through rigorous experimentation, data analysis, and critical thinking.

## ACADEMIC CREDENTIALS

University of Dhaka (DU).

May 2023 – Oct 2024

*M.S. in Biomedical Physics & Technology - GPA - 3.86/4.00*

*Dhaka, Bangladesh*

Chittagong University of Engineering & Technology (CUET).

Mar 2017 – Aug 2022

*B.Sc. in Electrical and Electronics Engineering. - CGPA - 2.99/4.00*

*Chattogram, Bangladesh*

## PUBLICATIONS

1. Mustakim, N., Muntashir, N., Muntaha, S., Azad, M.S and Mahdy, M.R.C. (2025) 'Explainable AI for Predicting Problematic Internet Use Among Bangladeshi Students: The Role of Loneliness, Low Self-Esteem, and Psychological Distress', Public Library of Science, PLOS One. In review.

2. Muntaha, S., Salam, S.S. and Mustakim, N.(2024) 'An Explainable AI-based Deep Learning Model for Classification of Diabetic Retinopathy Stages Using Retinal Fundus Images', 27th International Conference on Computer and Information Technology (ICCIT 2024). Published.

## STANDARDIZED TEST SCORES

International English Language Testing System (IELTS)

May 2025

Overall	Reading	Writing	Speaking	Listening
7.5	7.5	6.5	7	8

## RESEARCH EXPERIENCE

Collaborative Research Work - Mahdy's Research Academy

May 2024 - Present

Area - Statistical Machine Learning, & Deep Learning for Medical Imaging

- Participated in a private thesis course at Mahdy Research Academy on AI, Machine Learning, and Deep Learning under the supervision of Dr. Mahdy Rahman Chowdhury.
- Completed over 20 sessions of live and recorded lectures, covering foundational and advanced topics in AI research, achieving 100% marks
- Engaged in hands-on coding-based experiments, simulations, and discussions on diverse topics, including medical image analysis, computer vision, explainable AI, and AI safety.
- Gained expertise in ML and DL tools, including TensorFlow, PyTorch, RapidMiner, and WEKA, while contributing to journal article reproduction and simulation tasks.
- Participated in group projects and journal article presentations, focusing on replicating experimental results from peer-reviewed research.

Graduate Research Work: Utilizing Deep Learning for Multi-Label

Sept 2023 - July 2024

Classification of Bimanual Clench Force fNIRS Data

- Designed a custom force sensing device using FSR and Arduino Mega.
- Designed a custom graphical user interface for visual feedback to participants using python and tkinter.
- Collected fnirs cognitive data correlated to five levels of hand clench force for both hands.
- Constructed, trained and evaluated a custom multi-label deep learning classifier model using CNN layer, spectral attention layer and LSTM layer.
- Applied explainable AI (SHAP) to interpret the deep learning model.
- Applicable in robotic arm control, stroke rehabilitation, determining Parkinson's disease, etc.

## Undergraduate Research Work: Design & fabrication of a wideband slot-loaded textile antenna.

Jan 2022 - July 2022

- Designed a wideband textile antenna using ADS & CST simulation software.
- Fabricated the antenna using 100% polyester (as substrate) and copper tape (as radiating patch & ground plane).
- Achieved high bandwidth of 17.36% in simulation and 11.5% in real world. Peak gain of the design antenna is 7.81 dBi and has high radiation efficiency of 88%
- Achieved Specific Absorption Rate (SAR) of 0.316 W/Kg for 100 mW input power within FCC Guidelines of 1.6 W/Kg.
- Applicable in patient monitoring, protective suits of rescue worker & military personals vast, etc.

## PROFESSIONAL EXPERIENCE

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**Engineer Electrical**– Bangladesh Steel Re-Rolling Mills Ltd (BSRM)

Mar 2024 – Present

- \* Electrical maintenance of induction furnace and utilities

## TECHNICAL SKILLS

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**Programming Languages:** Python, PyTorch, Tensorflow, SciKit-Learn, Numpy, Pandas, Matplotlib, Plotly, Seaborn, MATLAB, C, LaTeX

**Software:** Microsoft Office, Overleaf, Draw.io, RapidMinor, WEKA, COMSOL, ADS simulation software, CST, Origin plots

## VOLUNTEERING EXPERIENCE

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**Omdena** 

*Junior Machine Learning Engineer*

Jul 2021 – Aug 2021

Chattogram, Bangladesh

- Web scraped road accident data from newspaper
- Cleaned and preprocessed the data
- Visualized and analyzed the data
- Built a Time-series model using LSTM

## AWARDS

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1. Government Technical Scholarship awarded based on merit in the undergraduate entrance exam.

## LANGUAGE PROFICIENCY

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|------------------------|---|
| • English - Proficient | • Hindi - Intermediate (Conversational) |
| • Bangla - Native      | • German - Beginner                     |

## REFERENCES

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**Dr. Muhammad Abdul Kadir, Professor and Chairman**

*Department of Biomedical Physics & Technology*

University of Dhaka

Dhaka – 1000, Bangladesh

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