MD. MUSFIQUR RAHMAN

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Education

- ☑ CGPA: 3.00 / 4.00 (Expected Graduation: November 2025)
- E Credits Completed: 123 / 137 (Major: Data Science)

• Publications & Awards

- Plant Disease Recognition from the Perspective of Bangladesh: A Comparative Study of Deep Learning Models and Ensemble Techniques — Published at *IEEE Xplore*, Conference: ECCE 2025.
 - Early detection prevents crop loss.
- Ensemble model achieves 95% accuracy.
- A Comparative Analysis of Various Deep Learning Models for Traffic Signs Recognition from the Perspective of Bangladesh — Published at Springer Nature, Conference: BIM 2023.
 - Built a novel Bangladeshi traffic sign dataset (2K+ images, 13 classes)
 - Evaluated 9 models; ViT achieved 99.91%.
 - Supervisor: Hasan Muhammad Kafi, Assistant Professor, BAUST.
- Bengali Fake News Detection: A Multi-Layered LSTM Ensemble Approach — Published at *IEEE Xplore*, Conference: QPAIN 2025.
 - Detect misinformation in mainstream Bangladeshi media.
 - Multi-layer LSTM ensemble achieving 82.43% accuracy.
 - Supervisor: Dr. Abu Saleh Musa Miah, Assistant Professor, BAUST.
- Champion, Final Year Design Project-I (RiceResQ: Rice Disease Detection and AI based Pesticide Recommendation) — Fall 2024.
 - Real-time rice disease detection and pesticide guidance.
 - AI-based detection pipeline for on-field recommendations.
 - \blacksquare Supervisor: Dr. Mohammad Nurul Huda, Professor, UIU.

• Research Projects

- A Reproducible Benchmark for Prompt Injection Vulnerability Assessment in Small-to-Medium Language Models
 - Standardized framework for prompt-injection assessment with 2,250 model-prompt tests and dual-judge eval. (Submitted at ICCIT 2025)
- \blacksquare Supervisor: Mir Moynuddin Ahmed Shibly, Assistant Professor, UIU.
- Predictive and Economic Assessment of Methane Emissions from Bio-Slurry Amended Systems using Ensemble Machine Learning
 - Predicts methane emissions; ensemble ML achieves $R^2=0.66$ and 69% classification using SHAP features. (Submitted at STI 2025)
- Deep Learning-Based Recognition of Recaptured Images for Digital Media Authentication
 - Detects recaptured images; DenseNet201/Xception reach 99% on RGB and Canny inputs. (Submitted at ICCIT 2025)
- Stacked and Super-Ensembled CNNs on Bangla Food Net for Fine-Grained Food Classification
 - Hierarchical super-ensemble (EfficientNetB1/DenseNet121/ResNet50), 98.13% acc for Bengali food recognition. (Submitted at ICCIT 2025)
- Multi-Level Ensemble Learning for Fine-Grained Classification of Traditional Bangladeshi Dress Using Deep Transfer Models
 - Fine-grained Bangladeshi dress classification; ensemble learning achieves 96.75% accuracy. (Submitted at $EICT\ 2025)$
- A Comparative Study of Deep Learning Models and Ensemble Techniques for Human Skin Type Classification
 - Human skin type classification; ensemble learning achieves 86.91% accuracy. (Submitted at EICT~2025)
 - Supervisor: Raiyan Rahman, Lecturer, UIU.

• Relevant Coursework

Machine Learning
Image Processing
Language Processing
Operating Systems
Web Programming
Computer Networks

Data Mining
Artificial Intelligence
Computer Security
Database Management
Deep Learning
Software Engineering

• Technical Skills

Languages: Python, Java, C, C++, TypeScript, JavaScript, HTML/CSS, PHP, SQL

Frameworks / ML: TensorFlow, PyTorch, Keras, scikit-learn, OpenCV, ViT, Transformers

Tools: Git, Colab, Roboflow, LabelImg, Docker (basic), Linux (Ubuntu)

Design: Illustrator, Figma, Canva

Selected Technical Portfolio

- Level 1 Freelancer (Graphic Design) Fiverr
- Completed 20+ international design projects with consistent 5/5 star client ratings and repeat collaborations.

- Intern, Graphic Design Dept. Youth School for Social Entrepreneurs
 - Created visual content for entrepreneurship campaigns, maintaining brand consistency and meeting deadlines.

Contact: Sheikh Mohammad Yousuf, President, YSSE

- Independent Freelancer (Graphic & Web Designer)
 - Delivered end-to-end branding and website design solutions for clients across multiple industries.

Portfolio: Bē https://www.behance.net/musfiqurtuhin

• Software & Hardware Projects

- BhangariWala: Recyclable Pickup & Selling Platform TypeScript Dev.
- Coders Q&A Platform Front-End (TypeScript)
- Java Chat & Gaming Platform System Design & Coding
- Car Rental Platform Front-End (React)
- Waste Sorting System Arduino Programming & Hardware
- Advanced Auth System Embedded Programming & Hardware

Also designed multiple WordPress websites and custom HTML, CSS, and JavaScript sites for various clients and projects.

• Leadership & Volunteering

- Founder, Muktanchol Sahittya Chorcha Kendro 2020 Present Organized 50+ literature festivals, book reading & writing seminars, workshops, and cultural events.
- Founder General Secretary, Ovizatri 2016 2020 Led social service initiatives on blood donation, poverty relief, tree plantation, etc.
- Child Journalist, National Children's Task Force 2015 2017
 Reported on child rights and advocacy campaigns in collaboration with
 National Shishu Academy and international partners such as Plan International and Save the Children.
- Patrol Leader, Bangladesh Scouts, Habiganj Govt. High School Unit 2013 - 2018
 Guided peers in leadership and community service.