

ABRAR FAIAZ

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EDUCATION

<i>Bangladesh University of Engineering and Technology (BUET)</i> B.Sc. (Engineering) in Civil Engineering (Currently Studying)	Dhaka, Bangladesh 2021 - Present
<i>Islamic University of Technology (IUT)</i> Mechanical Engineering (Transferred)	Gazipur, Bangladesh 2018 - 2021
<i>Notre Dame College</i> Higher Secondary Certificate (HSC) - GPA: 5.00/5.00	Dhaka, Bangladesh 2018
<i>Ideal School and College</i> Secondary School Certificate (SSC) - GPA: 5.00/5.00	Motijheel, Dhaka, Bangladesh 2008 - 2018

RESEARCH EXPERIENCE

1. Forecasting Air Quality by Estimating PM2.5 Concentration Level Using k-Nearest Neighbor Model in Gazipur, Bangladesh. *Advances in Civil Engineering Materials*, Springer DOI: 10.1007/978-981-97-0751-5_19
2. Intrusion Detection Using Convolutional Neural Network: A Color Mapping Approach on NSL-KDD Dataset. *Proceedings of the 11th International Conference on Networking, Systems, and Security (NSysS '24)* DOI: 10.1145/3704522.3704541
3. AI-Driven Disaster Warning System: Integrating Predictive Data with LLM for Contextualized Guideline Generation. *Proceedings of the 11th International Conference on Networking, Systems, and Security (NSysS '24)* DOI: 10.1145/3704522.3704549
4. Advances and Challenges in Soil Erosion Modeling and Prediction: A Comprehensive Review. *Civil Engineering Conference in the Asian Region, 2024 (CECAR10)*

WORK EXPERIENCE

- Team Lead, Machine Learning and Modeling Expert
Start Network Bangladesh (April 2025 – December 2025)
Developing an AI-powered cyclone prediction system integrating machine learning for forecasting cyclone metrics and an LLM for generating localized advisories for Bangladesh Meteorological Department.

PROJECTS

1. AI and ML Projects on Hugging Face
huggingface.co/Abrar20
Technology: Transformer-based NLP Models, PyTorch, TensorFlow, LLM, Langchain
2. Cyclone Predictive and Dynamic Guideline System
Forewarn Bangladesh and Bangladesh Meteorological Department (Ongoing)
Technology: Deep Learning, LLMs, Geospatial Data Analysis, VLM, Python
3. Agri-Tech: AI-Powered Agricultural Analytics
agricconnect.fly.dev/ (Ongoing)
Technology: Computer Vision, LLM, Langchain, JavaScript, Python

CURRICULAR ACTIVITIES

<i>Assistant Director</i> ACI BUET Student Chapter	December 2022
<i>Deputy Secretary</i> ASCE BUET Student Chapter	May 2023
<i>Senior Assistant Secretary</i> BUET Innovation and Designing Club (BIDC)	June 2023

AWARDS AND HONORS	• <i>Champion</i> , Disaster Hackathon 2.0	2024
	• <i>Finalist</i> , Deep Learning Sprint, BUET CSE Fest	2024
	• <i>Finalist</i> , Youth Startup Summit, ICT Division Ministry	2025

SKILLS	Programming Languages: Python, C++, MATLAB
	Developer Tools: VS Code, Jupyter Notebook
	Technologies/Frameworks: GitHub, TensorFlow, Keras
	Libraries: Scikit-learn, Pandas, Numpy, Scipy, OpenCV, Matplotlib, Seaborn
	Software: AutoCAD, Revit

RESEARCH INTERESTS	<i>Computer Vision</i>
	<i>Intelligent Transportation Systems</i>
	<i>Molecular Modeling with Artificial Intelligence</i>
	<i>Large Language Models (LLMs) and NLP</i>
	<i>Environmental Modeling</i>
	<i>AI for Disaster Management</i>
	<i>Human Computer Interaction</i>