

# ABRAR FAIAZ

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EDUCATION	<i>Bangladesh University of Engineering and Technology (BUET)</i> <i>B.Sc. (Engineering) in Civil Engineering (Currently Studying)</i> <i>Islamic University of Technology (IUT)</i> <i>Mechanical Engineering (Transferred)</i> <i>Notre Dame College</i> <i>Higher Secondary Certificate (HSC) - GPA: 5.00/5.00</i> <i>Ideal School and College</i> <i>Secondary School Certificate (SSC) - GPA: 5.00/5.00</i>	Dhaka, Bangladesh 2021 - Present Gazipur, Bangladesh 2018 - 2021 Dhaka, Bangladesh 2018 Motijheel, Dhaka, Bangladesh 2008 - 2018
RESEARCH EXPERIENCE	<ol style="list-style-type: none"><li>1. <b>Forecasting Air Quality by Estimating PM2.5 Concentration Level Using k-Nearest Neighbor Model in Gazipur, Bangladesh.</b> <i>Advances in Civil Engineering Materials</i>, Springer DOI: 10.1007/978-981-97-0751-5_19</li><li>2. <b>Intrusion Detection Using Convolutional Neural Network: A Color Mapping Approach on NSL-KDD Dataset.</b> <i>Proceedings of the 11th International Conference on Networking, Systems, and Security (NSysS '24)</i> DOI: 10.1145/3704522.3704541</li><li>3. <b>AI-Driven Disaster Warning System: Integrating Predictive Data with LLM for Contextualized Guideline Generation.</b> <i>Proceedings of the 11th International Conference on Networking, Systems, and Security (NSysS '24)</i> DOI: 10.1145/3704522.3704549</li><li>4. <b>Advances and Challenges in Soil Erosion Modeling and Prediction: A Comprehensive Review.</b> <i>Civil Engineering Conference in the Asian Region, 2024 (CECAR10)</i></li></ol>	
WORK EXPERIENCE	<b>Team Lead, Machine Learning and Modeling Expert</b> <i>Start Network Bangladesh</i> 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.	(April 2025 – December 2025)
PROJECTS	<ol style="list-style-type: none"><li>1. <b>AI and ML Projects on Hugging Face</b> <i>huggingface.co/Abrar20</i> Technology: Transformer-based NLP Models, PyTorch, TensorFlow, LLM, Langchain</li><li>2. <b>Cyclone Predictive and Dynamic Guideline System</b> <i>Forewarn Bangladesh and Bangladesh Meteorological Department (Ongoing)</i> Technology: Deep Learning, LLMs, Geospatial Data Analysis, VLM, Python</li><li>3. <b>Agri-Tech: AI-Powered Agricultural Analytics</b> <i>agriconnect.fly.dev/ (Ongoing)</i> Technology: Computer Vision, LLM, Langchain, JavaScript, Python</li></ol>	
CURRICULAR ACTIVITIES	<i>Assistant Director</i>   ACI BUET Student Chapter <i>Deputy Secretary</i>   ASCE BUET Student Chapter <i>Senior Assistant Secretary</i>   BUET Innovation and Designing Club (BIDC)	December 2022 May 2023 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	<i>Programming Languages:</i> Python, C++, MATLAB	
	<i>Developer Tools:</i> VS Code, Jupyter Notebook	
	<i>Technologies/Frameworks:</i> GitHub, TensorFlow, Keras	
	<i>Libraries:</i> Scikit-learn, Pandas, Numpy, Scipy, OpenCV, Matplotlib, Seaborn	
	<i>Software:</i> AutoCAD, Revit	
	<i>Languages:</i> English, Bangla, French	
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>	