



Jubaer Ahmed

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• ABOUT ME

Aspiring AI Developer with hands-on experience in machine learning, deep learning, computer vision, and natural language processing (NLP). Skilled in designing, developing, and deploying intelligent systems for real-world applications, including medical imaging, crop disease detection, and text analytics. Passionate about contributing to impactful AI solutions through model optimization, data preprocessing, feature engineering, and performance evaluation. Experienced in leveraging pre-trained models, transformers, CNNs, vision transformers, and explainable AI techniques (Grad-CAM, LIME, SHAP) to create interpretable and high-performing solutions. Adept at team collaboration, innovation, and staying updated with emerging AI technologies, with a strong interest in research-driven projects and solving complex problems across multiple domains.

• WORK EXPERIENCE

 **ASSOCIATE EXECUTIVE, EAST WEST UNIVERSITY ROBOTICS CLUB** – AFTABNAGOR, DHAKA, BANGLADESH

EAST WEST UNIVERSITY

 **RESEARCH WORK** – BANGLADESH

EAST WEST UNIVERSITY – 15 JAN 2023 – CURRENT

• EDUCATION AND TRAINING

15 JUN 2021 – 2 JUN 2025 Dhaka, Bangladesh

BACHELOR OF SCIENCE: COMPUTER SCIENCE AND ENGINEERING East West University

Final grade 3.51 out of 4.00 |

Thesis An Explainable Framework for Real-Time Multi Type Crop Leaf Disease Diagnosis

• PROJECTS

An Explainable Framework for Real-Time Multi-Type Crop Leaf Disease Diagnosis

- Designed and implemented a framework for crop leaf disease detection using pre-trained models (ResNet152, EfficientNet-B3, MobileNetV3, DenseNet121) and vision transformer models (Efficient-ViT B3, MobileViT-v2).
- Developed a custom CNN architecture and integrated explainable AI techniques (Grad-CAM, Grad-CAM++, LIME) to ensure transparency of model predictions.
- Built a working prototype system capable of real-time detection of diseases in Lemon, Hog Plum, and Aegle Marmelos (Bael) datasets.
- Achieved improved classification accuracy through transfer learning, model fine-tuning, and explainability-driven evaluation.

Resume Screening with NLP

- Developed an AI-powered resume checker using Python and NLP techniques to automatically classify resumes based on job roles and skills.
- Performed data cleaning and preprocessing (tokenization, stopword removal, lemmatization) and applied TF-IDF feature extraction.
- Trained and evaluated multiple Machine Learning models (Logistic Regression, Random Forest, Naïve Bayes) to achieve reliable classification accuracy.
- Improved recruitment efficiency by automating resume evaluation and candidate shortlisting.

Tech Stack: Python, Scikit-learn, Pandas, NLTK, TF-IDF

Factors on CO2 Emissions Using Machine Learning and Explainable AI

- Investigated the impact of environmental and technological factors on CO₂ emissions using advanced machine learning techniques such as Random Forest, XGBoost, and Support Vector Machines (SVM).
- Implemented dimensionality reduction (PCA) and feature selection methods to improve model efficiency and interpretability.
- Applied explainable AI methods (SHAP, LIME) to provide transparent insights into model predictions.
- Research outcomes support data-driven policy decisions for sustainable development and carbon emission reduction strategies

Deep Learning Techniques for Early Brain Tumor Detection: A Comparative Study on Models Performance Utilizing Dataset Enhancement

- Conducted research on MRI brain tumor detection covering glioma, meningioma, pituitary gland tumors, and healthy brain images.
- Applied image enhancement techniques to improve visibility and classification performance.
- Implemented and compared deep learning models (EfficientNetB0, ResNet50, MobileNetV2), observing significant accuracy gains after enhancement.
- Achieved 91.73% accuracy with EfficientNetB0 and 90.59% with ResNet50, demonstrating the effectiveness of dataset enhancement in early tumor detection.
- Findings contribute to medical imaging research and AI-assisted healthcare diagnostics.

Framework for Drone-Enhanced Attention-Guided Convolutional Neural Networks with Explainable AI in Papaya Leaf Disease Detection

- Developed a comprehensive Attention-guided CNN model, PapayaNet, for timely detection of papaya leaf diseases with 96.07% accuracy.
- Evaluated deep learning models including DenseNet121 (84.46%) and MobileNetV2 (89.14%), leveraging transfer learning and model fine-tuning.
- Integrated Explainable AI techniques to interpret model decisions and enhance prediction reliability.
- Implemented a drone-based approach to capture high-resolution images, enabling real-time large-scale aerial monitoring and precision farming applications.
- Framework contributes to agricultural sustainability, improved productivity, and disease management, reducing crop damage and economic losses.

● SKILLS

Data Science | Deep Learning | Web Development | Computer Vision | Transfer Learning | Artificial Intelligence | Object-Oriented Programming | Machine Learning | LLM | NLP

Programming Language

Java | Python | C | C++ | HTML | CSS | JavaScript | SQL

Database

Oracle database | MySQL

Tools

Pytorch, Tensorflow | Python for data analysis (NumPy, Pandas, ...) and application development (PyQt) | AutoCad 2D -3D | NetBeans | visualstudio | Oracle Apex

● **VOLUNTEERING**

Associate Executive, East West University Robotics Club

- Conducted AI/Robotics workshops & training.
- Coordinated National Robotics Festival 2024.

● **HONOURS AND AWARDS**

Medha Lalon Scholarship – East West University

This scholarship is awarded for achieving a CGPA of more than 3.50 for three consecutive semesters.

● **PUBLICATIONS**

2024

Data in Brief

Gani, R., Rashid, M. R. A., Ahmed, J., Isty, M. N., Islam, M., Hasan, M., ... & Ali, M. S. (2024). Smartphone image dataset to distinguish healthy and unhealthy leaves in papaya orchards in Bangladesh. Data in Brief, 55, 110599.

2024

IEEE International Conference on Computing

M. N. Isty, R. Gani, J. Ahmed, T. Islam and S. Ripon, "Deep Learning Techniques for Early Brain Tumor Detection: A Comparative Study on Models Performance Utilizing Dataset Enhancement," 2024

2025

Data in Brief

Huq, M. R., Ahmed, J., Gani, R., Isty, M. N., & Islam, T. (2025). Comprehensive smartphone image dataset for Aegle Marmelos, Hog plum, and lemon plant leaf disease and freshness assessment. Data in Brief, 111590.

2025

Innovations in Data Analytics: Selected Papers of ICIDA 2024, Volume 3

Gani, R., Islam, T., Isty, M. N., & Ahmed, J. (2025). Factors on CO2 Emissions Using Machine Learning and Explainable AI. Innovations in Data Analytics: Selected Papers of ICIDA 2024, Volume 3, 3, 93.