JUBAER AHMED

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ABOUT ME

Aspiring AI Developer with hands-on experience in machine learning, computer vision, and deep learning. Passionate about contributing to real-world AI solutions through model optimization, data analysis, and research. Adept at teamwork, innovation, and staying current with emerging technologies.

EXPERIENCE

ASSOCIATE EXECUTIVE, EAST WEST UNIVERSITY ROBOTICS CLUB   Dec 2023 — Jan 2025
AFTABNAGOR, DHAKA, BANGLADESH

EAST WEST UNIVERSITY , RESEARCH WORK   15 Jan 2023 — Present

EDUCATION

EAST WEST UNIVERSITY , B.Sc in Computer Science and Engineering 16 June 2021 — 2 June 2025
- 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 CO_2 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 │ Artificial Intelligence │ Deep Learning │ Web Development │ Object-Oriented Programming │ NLP

Programming Language

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

Database

Oracle database │ MySQL

Tools

Pytorch │ Tensorflow │ 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

- 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.
- 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
- 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.
- 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.