Touhid Alam

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Touhid Alam | Touhid Alam

Career Objective

Seeking an AI Research or Engineering role to leverage expertise in deep learning, computer vision, and predictive modeling, contributing to scalable machine learning solutions for real-world applications.

Education

Bachelor of Science in Computer Science and Engineering Jan 2022 – Till Now

- American International University-Bangladesh
- CGPA: 3.99/4.00

Skill Summary

Programming Languages: Python, R, C++, Java, C#, JavaScript, HTML, CSS, PHP

Technologies: Scikit-Learn, TensorFlow, Pytorch, Keras, OpenCV, ASP .NET, Node, Next

Research and Publications

Machine Learning in Healthcare: Key Applications and Insights from Recent Studies *Presented at Undergraduate Conference on Intelligent Computing and Systems (UCICS)*
ResearchGate Link

Machine Learning Models for Reliable Thyroid Cancer Recurrence Prediction: A Comparative Analysis *Presented at International Conference on Trends in Electronics and Health Informatics (TEHI-2024)*
ResearchGate Link

Ensemble based Machine Learning Models for Early Stroke Prediction and Risk Factors Identification *To be presented at 8th International Conference on Engineering Research, Innovation and Education (ICERIE 2025)*

A Precise Machine Learning Driven Approach for Crop Recommendation *To be presented at 13th International Symposium on Digital Forensics and Security (ISDFS 2025)*

Projects

Vision-CNN Face Recognition System: *Python, TensorFlow, Haarcascade* **GitHub Link**

- Developed an accurate face recognition system capable of detecting faces of group members.
- The system could recognize faces with a confidence level of 80%.

DYL-Leaf: *Python, PyTorch* **GitHub Link**

- Utilized Knowledge distillation for leaf disease classification.
- Transferred Knowledge from YOLOv11n(2.6M parameters) to a smaller student model.
- Achieved 93.8% validation accuracy with student model that has only 545,005 parameters.
- Trained on a subset of the PlantVillage dataset containing 4,144 images across 13 classes.

Breast Cancer Detection Using ML: *Python, Scikit-Learn* **GitHub Link**

- Developed a model with 99.3% accuracy for breast cancer detection.
- Utilized the renowned breast cancer dataset WDBC.
- Techniques implemented include data preprocessing, hyperparameter tuning, and feature importance.

DCGAN for Synthetic Image Generation: *Python, Scikit-Learn, Pytorch* **GitHub Link**

- Generated high-resolution synthetic prostate cancer images to address data imbalance and scarcity.

- Utilized a generator and discriminator with 51,859,971 parameters.
- Demonstrates balanced adversarial learning with discriminator loss of 0.6953 and generator loss of 0.6526.

PreprocessBoost: *Python, Scikit-Learn* **GitHub Link**

- Reviewed various data preprocessing techniques including feature engineering and data transformations.
- Highlighted their impacts on model performance.

Agriculture E-commerce: *PHP, HTML, CSS, JavaScript* **GitHub Link**

- Built a platform with user authentication, profile order management, and dynamic UI.
- A total of 5 user types are implemented in the system.
- Implemented dynamic login authorization that reduced the verification and login time by 30%.

E-Comet: *PHP, HTML, CSS, Bootstrap, JavaScript* **GitHub Link**

- Developed a web-based e-commerce platform for a smooth online shopping experience.
- The system has two types of users including admin and buyer.

Airways Management System: *JAVA* **GitHub Link**

- An airways management system where admins can handle customer, ticket, and employee information.
- Developed a user-friendly interface, storing data in memory during runtime.

Honors and Awards

Dean's List Honors - *Spring 22-23, Fall 22-23*

Certifications

Supervised Machine Learning: Regression and Classification - *Provided by DeepLearning.Ai and Coursera*

Advanced Learning Algorithms - *Provided by DeepLearning.Ai and Coursera*

Deep Learning with Keras and Tensorflow - *Provided by DeepLearning.Ai and Coursera*