MOST MARUFATUL JANNAT MIM

Research Interest

Computer Vision - Deep Learning - Medical Image Analysis - Machine Learning

Education

United International University (UIU), Dhaka, Bangladesh

2019 - 2024

B.Sc in Computer Science and Engineering

Thesis: Movie Genre Prediction Using Graph Convolutional Neural Networks **Supervisor:** Dr. Md. Saddam Hossain Mukta, Post-doctoral Researcher, LUT, FI

Major: Data Science (CGPA: 3.62/4.00)

Publications

- [1] Mohaimenul Azam Khan Raiaan, Md Saddam Hossain Mukta, Kaniz Fatema, Nur Mohammad Fahad, Sadman Sakib, **Most Marufatul Jannat Mim**, Jubaer Ahmad, Mohammed Eunus Ali, Sami Azam, "A Review on Large Language Models: Architectures, Applications, Taxonomies, Open Issues and Challenges," IEEE Access, 2024. [Paper].
- [2] **Most Marufatul Jannat Mim**, Ripon Kumar Debnath, Dr. Dewan Md. Farid, "Applying Deep Convolutional Neural Network for Classification of Black Gram Plant Leaf Disease," 26th International Conference on Computer and Information Technology (ICCIT), 2023. [Paper].

Work Experience

• Research Engineer (Data Science)

September 2024 - Present

AIMS Lab, United International University

- Applied machine learning and deep learning algorithms for disease prediction from physiological data.
- Performed data visualization and mining.
 Dhaka, Bangladesh

• Instructor

September 2023 - August 2023

UIU App Forum [Profile]

- Provide Grooming sessions on Advanced OOP lab, DBMS lab, System Design lab, Software Engineering lab, and Final Year Design Project

Dhaka, Bangladesh

• Grader

November 2022 - January 2024

United International University

- Assisted the course instructor with various tasks.
- Evaluated and graded assignments.
- Provided feedback and guidance to students.
- Supported administrative tasks related to the course.

Dhaka, Bangladesh

• Digital Content Creator

February 2022 - Present

YouTube [Link]

- Created and published a series of tutorials on computer architecture and database management

systems (DBMS) and the theory of computation.

- Produced and published engaging vlog videos on various topics related to seminars, CSE project exhibitions, travel and entertainment.
- Managed the entire content creation process, from planning and scripting to filming, editing, and uploading, resulting in 38000+ views, and 359 subscribers.

 Dhaka, Bangladesh

Research Experience

Enhancing Malware Detection through Convolutional Neural Networks and Explainable AI

- Submitted in IEEE TENSYMP, 2024
- Collaborators: Most Marufatul Jannat Mim, Naznin Akter Nela, Tonny Rani Das, Dr. Mohammad Shahriar Rahman, and Mr. Mir Moynuddin Ahmed Shibly
- **Description:** In this research we used Convolutional Neural Networks (CNNs) with Explainable AI techniques like Grad-CAM and LIME to enhance malware detection. By leveraging these methodologies, we aim to improve both the accuracy and interpretability of malware detection systems, contributing to more robust cybersecurity measures.

CNN-Based Lung Tumor Segmentation Enhanced by Explainable AI

- Project in progress
- Collaborators: Most Marufatul Jannat Mim, Ripon Kumar Debnath, Dr. Riasat Azim
- **Description:** In our research paper, we're focusing on finding lung tumors in medical images. We're using a technology called Convolutional Neural Networks (CNNs) to do this job. But we're also making it easier to understand how the computer finds these tumors by using a type of AI called Explainable AI. This makes the process more accurate and helps doctors better understand the results, which can improve patient care.

BCNet-11: A dilated convolutional neural network for breast cancer classification using histopathology images

- Submitted in 2nd International Conference on Big Data, IoT and Machine Learning, 2023
- Collaborators: Sadman Sakib, Aren Ittesafun Abian, Most Marufatul Jannat Mim, Ripon Kumar Debnath, Azizul Hakim Zen, Md. Rayhan Ahmed

Technical Skills

- Packages: Scikit-learn, Numpy, Pandas, Matplotlib, Opency, Tensorflow etc.
- **Programming:** Python, C/C++, Java, PHP
- Database & Tools: MYSQL
- Scripting: LATEX, HTML, CSS, JavaScript, bash, shell
- Project Management Tools: Jira, Notion
- Data Reporting Tools: Microsoft Power BI, Tableau
- Design Tools: Adobe Illustrator, Adobe Photoshop, Figma, Canva, Draw.io
- Hardware Tools: Atmega32 Microcontroller
- Miscellaneous: MS Word, Powerpoint, Excel

Selected Project

Bus Shuttle

UIU Bus Shuttle is a Java-based website enabling seamless tracking of university shuttles, displaying their current location and available seat occupancy. Users can book or cancel seats effortlessly, all presented with a user-friendly CSS interface. **Programming Language:** Java. [GitHub Repo].

Car Solution

Car Solution is a dynamic website offering a range of automotive services including car wash and car rental, implemented using PHP, CSS, and JavaScript for seamless functionality and user interaction. .

Programming Language: PHP, JavaScript. [GitHub Repo].

Job Seekers

Job Seekers serves as a centralized platform, bringing together both job seekers and recruiters, offering a seamless space for employment opportunities, all powered by CSS, PHP, and JavaScript. **Programming Language:** PHP, JavaScript. [GitHub Repo].

Achievements and Awards

• University Scholarship

3 times 25%, 2 times 50%, and 1 times 100% scholarship.

• 1st Runner Up

Final Year Design Project-1, CSE Project Show, UIU, Summer 2023

• Runner Up

Table Tennis Female Singles, UIU Intra Indoor Games 2023

• Champion

Table Tennis Female Singles, UIU Intra Indoor Games 2022

Leadership Experience

- President, UIU App Forum, Dhaka (March, 2023 Present)
- Vice President, UIU App Forum, Dhaka (August, 2022- March, 2023)
- Head of Public Relations, UIU App Forum, Dhaka (June, 2021- August, 2022)