Bishanath Tarafder

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Education

B.Sc in Computer Science & Engineering (CSE) 2019 - 2024
American International University-Bangladesh (AIUB) CGPA: 3.59/4
Major: Information Systems **Minor:** Machine Learning, Computer Vision and Pattern Recognition

Skills

Python, R, C++	Machine Learning	Flask, FastAPI
JavaScript	Deep Learning	MLflow
SQL (MySQL, Oracle)	Data Analysis	Git
Microsoft Office Suite	AWS Sagemaker	Docker

Thesis

Title: *Code2Diagram: A Benchmark Tool for Evaluating Large Language Models in UML Diagram Generation*
Description: Developed a benchmark tool to assess LLMs like GPT-4o, Gemini-1.5, and Claude-3 in UML diagram generation, exploring their potential in software engineering applications. **Claude-3** showed the highest accuracy in flowchart generation (**4.0**), surpassing **GPT-4o** (**3.5**) and **Gemini-1.5** (**2.5**). For ER diagrams, **Claude-3** and **Gemini-1.5** scored moderately at **4.0** and **3.0**, respectively, while **GPT-4o** had difficulty with complex relationships (**3.0**). This research demonstrates the potential of LLMs to support automated diagram generation in software engineering contexts.
Document:
https://docs.google.com/document/d/1Y0fb71ZrKlVpsRcGik0EoEjTcf3sM0CBvSxBovPGBTk/edit?usp=sharing

Projects

1. Phishing Data Detection and Deployment Pipeline

Built a machine learning pipeline for phishing website detection. Integrated model training, evaluation, and deployment using FastAPI.

Tools & Frameworks: Python, FastAPI, scikit-learn, MongoDB, Docker, MLflow, GitHub Actions, AWS EC2

Achievements: Deployed Dockerized API, tracked experiments using MLflow, and automated CI/CD deployment pipeline on AWS.

Project Link: https://github.com/BishanathTarafder/phishing-detection-pipeline_project

2. Facial Recognition-Based Attendance System: A Deep Learning Approach

Implemented a deep learning-based facial recognition system for automated attendance management, trained on diverse datasets for accurate identification across various backgrounds.

Project Link:
https://github.com/BishanathTarafder/CVPR-23-34-Spring/tree/main/MID/cvprproject_attendance_recognition

3. Apply Web Scraping and Data Pre-processing

Scraped and processed IPL stats using R, rvest, and ggplot2; cleaned 500+ records, engineered 2+ features, and visualized 3 key metrics.

Project Link:
https://github.com/BishanathTarafder/data_science/tree/main/Apply_Web_Scraping_and_Data_Pre-processing