

AHMED MOSTAKIM FAHIM

Dhaka, Bangladesh

ahmedmostakimfahim@gmail.com

EDUCATION

Varendra University (VU)

Bachelor of Science - BS, Computer Science and Engineering

Grade: 3.54

Rajshahi

Jan 2020 - Dec 2023

American International University-Bangladesh (AIUB)

Master of Science - MS, Computer Science

Dhaka

Oct 2024 - present

ACADEMIC WORK EXPERIENCE

Research Paper: Enhancing Fraud Detection: Integrating Explainable AI with Real-Time Anomaly Detection Using Unsupervised Learning

AIUB, Dhaka

Oct 2024 - Jan 2025

In this paper, we chose real-world credit card transactions, which is a highly imbalanced dataset. We used SMOTE to balance the dataset and PCA for feature selection and dimensionality reduction. Multiple anomaly detection algorithms such as Isolation Forest, Local Outlier Factor (LOF), DBSCAN, and Autoencoder were used. Random Forest and XGBoost were then used for benchmarking supervised learning models. To improve model interpretability, SHAP (SHapley Additive exPlanations) analysis was performed to assess feature importance and interaction. Paper is not published yet

Research Paper: Enhanced Brain Tumor Detection from MRI Images Using Advanced Deep Learning Models

AIUB, Dhaka

Oct 2024 - Jan 2025

This paper proposes an advanced approach to brain tumor detection using modern architectures like EfficientNet (98.5% Accuracy), Xception (98.7% Accuracy), Convolutional Neural Network (CNN) (93.3% Accuracy), and Vision Transformers (ViTs) (99.0% Accuracy). Additionally, interpretability tools like Grad-CAM and Grad-CAM++ are utilized. This paper is not published yet

Research Paper: Using Feature Analysis and Machine Learning for The Prediction of NBA Match Outcome

AIUB, Dhaka

Oct 2024 - Jan 2025

In this paper, we have shown various feature selection methods and techniques like Principal Component Analysis (PCA), Recursive Feature Eliminator (RFE), data balancing techniques SMOTE and ADASYN. Models used are XGBoost, Logistic Regression, SVM, Naive Bayes, Decision Tree, and K-Nearest Neighbor (KNN). In the end, we compare and monitor the performance. This paper is not published yet.

CASE STUDY

Case Study: Quantum Computing

AIUB, Dhaka

Dec 2024 - Jan 2025

In this case study, we covered the evolution of computing, the need for quantum computing, and the major differences between classical and quantum computing. We also explored the quantum computing architecture. During this case study, we found that Google Willow marked its sign in quantum computing by reducing the error rate. We covered its applications in the present and future, as well as its effects on climate and the environment.

Vulnerability Scanning And Penetration Testing (VAPT)

AIUB, Dhaka

Jan 2025 - Feb 2025

This is my full course module of Network Defense and Ethical Hacking. For completing this report, I used many tools and operating systems like Kali Linux, Ubuntu, and Backbox. From information gathering to report generation, I used various tools such as nmap, harvester, maltego, GVM, Nessus essential, Metasploit, burp suite, and dnslookup. For web pentesting, I used several web docker containers like websploit by Omar Santos.

SKILLS

Data Mining	Cleaning	Data Annotation
Statistical Analysis	Exploratory Data Analysis (EDA)	Machine Learning
Deep Learning	Microsoft Office	PowerPoint Presentation
Excel	Data Modeling	Python
Power Bi	Research Skills	Report Writing
Data Visualization	Regression Analysis	SQL

PROFESSIONAL CERTIFICATIONS

Google Advanced Data Analytics Professional Certificate

Completed on Coursera, offered by Google

Microsoft 365 Fundamentals

Completed on Coursera, offered by Microsoft

Generative AI for Everyone

Completed on Coursera, offered by DeepLearning.AI