Md. Imran Khan

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EDUCATION

East West University **Badda, Dhaka**

B.Sc. in Computer Science & Engineering *Graduation, September 2025*

- **Major:** Data Science
- **CGPA:** 3.75/4.00, *Cum Laude*
- **Related Coursework:** Data Structures & Algorithms,Database Systems, Operating Systems, Computer Architecture, Cyber Security Ethics and Law, Machine Learning, Artificial Intelligence, Object-Oriented Programming, Statistics , Big Data Analytics

PROJECTS

Mart Management System

Tools : Fundamental Java, Java OOP

- Developed 'Mart Management System' in Java to manage product stock, billing, cart, admin, and customer operations.

Electricity Billing Application

Tools : SQL , Oracle APEX , Trigger

- Built a database application for the Electricity Billing System , using SQL and Oracle APEX that will be able to prepare monthly bills and transactions dynamically for customers while maintaining a relational database with authorization.

Movie Ticketing Engine

Tools : Linux Operating System, C Multi-threading, Scheduling

- Implemented a Movie Ticketing System that synchronizes user activities using POSIX threads, mutex locks, and semaphores concepts.

Certificate Authority and Network Security

Tools : VirtualBox , SSL , Firewall, https

- Built a custom CA system with SSL certificate issuance and revocation, integrated IDS monitoring, and simulated real-world attacks for security analysis and forensic demonstration.

Bangla Text Similarity Search, Clustering, and Visualization using PySpark

Tools : PySpark, Python, LSH (MinHash), TF-IDF, Streamlit, Pandas, Numpy, Clustering , Hadoop

- An end-to-end Bangla text analytics pipeline for near-duplicate detection and clustering using Approximate Nearest Neighbor search and Locality Sensitive Hashing (LSH) in PySpark with deployment.

End-to-End MLOPS Pipeline

Tools : CI/CD automation , Git Actions, MLFlow, Pytest, MLRun

- Implemented an end-to-end MLOps workflow for a supervised ML model, automated data ingestion, preprocessing, training, evaluation and deployment with modular components and experiment tracking including CI/CD automation.

RESEARCH EXPERIENCE & PUBLICATIONS

Enhancing Renewable Energy and Solar Grid Efficiency Using Machine Learning **Springer (CIIR 2025)**

- Proposed a Transformer encoder-based model that effectively addressed key challenges of the domain & demonstrated superior performance compared to other state-of-the-art (SOTA) approaches.

Beyond Binary: Multimodal Fusion for Fine-Grained Fake News Classification and Benchmarking **Thesis**

- Designed and proposed advanced multimodal fusion models integrating text and image modalities for fake news detection combining transformer-based text/vision backbones (ViT/CLIP) . Conducted extensive benchmarking of fusion strategies, including early, tensor, late and hierarchical fusion , achieving a new benchmark (~88% accuracy).

SKILLS

Programming: Java, Python, JavaScript, HTML/CSS, SQL, PySpark, C++, C, SQL , Qiskit

Certifications: Coursera (Machine Learning), Mahdy's Research Academy (Quantum Computing)

Tools: PyCharm, Eclipse, Jupyter Notebooks, Git, Oracle VM VirtualBox, Linux(OS), AutoCAD , Microsoft Office Technical, Virtual Studio Code, Docker, Github Actions , Django

Language : Proficient in communicating in English & Bengali

AWARDS AND ACTIVITIES

EWU Merit Scholarship Award **Fall 2023**

EWU Merit Scholarship Award **Fall 2024**

Undergrad Teaching Assistant, EWU *UTA for CSE101 (Introduction to Computer)* **Spring 2025**