MD Piyal Ahmmed

EDUCATION

Ahsanullah University of Science and Technology

Bachelor of Science in Computer Science and Engineering

Dhaka, Bangladesh *2025*

Birshreshtha Noor Mohammad Public College

Higher Secondary Certificate

Dhaka, Bangladesh 2019

A.K. High School and College

Secondary School Certificate

Dhaka, Bangladesh 2017

THESIS

• Gender Bias Mitigation for Bangla Classification Tasks [Link]

- Developed four manually annotated datasets for sentiment analysis, toxicity detection, hate speech detection, and sarcasm detection in Bangla.
- Used a **gender-name swapping technique** to detect gender bias in pretrained models.
- Implemented **joint loss optimization** (cross-entropy + cosine similarity) to mitigate bias in Bangla NLP tasks.
- Evaluated on Bangla BERT-based models and achieved improved fairness without compromising accuracy.
- Technologies Used: Python, PyTorch, TensorFlow, NLP, Transformers (BERT).

PROJECTS

- Linkdin Post Generator [GEN AI] Link
 - Built an automated content generation tool that mimics LinkedIn influencers' writing style using few-shot prompting.
 - Developed an interactive UI using Streamlit for selecting post topic, tone, and length with real-time preview.
 - Integrated OpenAI's LLM backend to ensure high-quality, stylistically aligned post generation.
 - Technologies Used: Python, OpenAI, Streamlit, Prompt Engineering.
- Credit Card Fraud Detection System <u>Link</u>
 - Built a fraud detection pipeline using the public Credit Card Transactions dataset.
 - Implemented and compared classification models: Logistic Regression, SVM, Random Forest, and K-Nearest Neighbors.
 - Conducted data preprocessing, normalization, and addressed class imbalance for improved detection.
 - Evaluated model performance using confusion matrix and classification reports.
 - Technologies Used: Python, Scikit-learn, Pandas, Matplotlib, Jupyter Notebook.

TECHNICAL SKILLS

Programming Languages: Python, C++, Java **Libraries and Tools:** Pydentic, Numpy, Pandas

ML Architectures: ANN,CNN, NLP Databases: MySQL, PostgreSQL

Frameworks: LangChain, LangGraph, PyTorch, TensorFlow

API:FastAPI, REST API

Others: Data Structures, Algorithms, OOP