



Arshadul Hoque

Machine Learning Engineer

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Expertise

Python

SQL

Machine Learning

Natural Language Processing

Statistical Data Analysis

Prompt Engineering

Language

English

Bangla

German

Competition

April 2024 - July 2024 | Automatic Essay Scoring

Achieved the Top 80% (2141/2706 participants) by optimizing DeBERTa models. Achieved a score of 0.78.

Dec 2024 - Feb 2025 | Rohlik Sales Forecasting Challenge

Built a LightGBM model and ranking Top 56% (431/777 participants).

Experience

2025 – Present

THE COBALT PARTNERS

Prompt Engineer & Business Analyst

Designed and iteratively **refined prompts** for **business process specifications, user stories** and **clarifications log** achieving a **40% improvement in accuracy**. **Streamlined workflows**, reducing **turnaround times** by **10%**, and translating business requirements into **actionable specifications**.

2023 - 2024

UNIVERSITY OF
CHITTAGONG

Research Assistant

Performed multi-label classification with **BanglaBERT** on Bangladesh cricket-related social media data, improving F1 scores to **0.73** and **0.69** for positive and neutral sentiments, respectively. Used **stratified k-fold cross-validation** and **focal loss** to address data imbalance, showcasing skills in model optimization. The research is currently under **peer review** for potential publication. The preprint is available on [Zenodo](#).

Education

2016 - 2022

University of Chittagong

BSc. Engineering Degree in Computer Science and Engineering

Coursework: Machine Learning, Artificial Intelligence, Algorithms, Data Structures
Undergraduate Thesis: **"Sentiment Analysis of COVID-19 Vaccine Tweets using BERT"** – Conducted sentiment analysis using **natural language processing (NLP)** techniques to assess public opinion on vaccine-related topics. Despite working with a limited dataset of only **130 entries**, the model achieved an **accuracy of 62%**, demonstrating the potential of BERT for extracting insights from small datasets.

References

Md. Ashikul Hosen

Miaki Media Ltd / Software Engineer(iOS)

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