Ekramul Islam

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📍 Dhaka, Bangladesh

WORK EXPERIENCE

Machine Learning Engineer, *IQVIA*   Aug 2024 – present
- Developed NLP solutions using LLaMA, Claude, and ChatGPT etc., incorporating prompt engineering, **RAG** techniques.

Machine Learning Engineer, *Giga Tech Limited*   Jan 2022 – Jul 2024 | Bangladesh
- *Shallow Parsing:* Developed data preparation, training, inference pipelines with API (FastAPI), PyPI package, dockerfile, achieving SOTA results (**96.47** FScore) on Penn Treebank.
- *Sentiment Analysis:* Conducted transformer based model experimentation, cross-dataset analysis, statistical significance tests, leading to a publication at **KDD '23**.
- *Named Entity Recognition:* Achieved **SOTA** results on all Bangla datasets with novel RAG method.
- *Lemmatization:* Developed a Bangla lemmatizer with **98.17%** accuracy, published in EMNLP 2023.

EDUCATION

BSc, CSE, Shahjalal University of Science and Technology

2017 – 2021 | Sylhet, Bangladesh

CGPA: 3.18

SKILLS

Libraries — *PyTorch, Hugging Face, Scikit-learn, Pandas, Numpy, Tensorflow, OpenCV, FastAPI*

Programming Language — *Python*

Database — *MySQL*

Containerization — *Docker, PyPI*

Version Control — *Git, GitHub*

PUBLICATIONS

SentiGOLD: A Large Bangla Gold Standard Multi-Domain Sentiment Analysis Dataset and its Evaluation 🔗

KDD '23, Long Beach, CA, USA.

BanLemma: A Word Formation Dependent Rule and Dictionary Based Bangla Lemmatizer 🔗

Findings of EMNLP 2023, Singapore

Word Completion and Sequence Prediction in Bangla Language Using Trie and a Hybrid Approach of Sequential LSTM and N-gram 🔗

ICAICT '20, Dhaka, Bangladesh

ACADEMIC RESEARCH

Handwritten Character Generation: Experimented with **GAN**'s (Conditional GAN, Auxiliary GAN etc) to synthesize images of Bangla handwritten characters from textual prompts. GitHub 🔗

Bangla Next Sequence Prediction: Proposed a solution using Trie and a combination of LSTM and N-gram to predict the relevant next sequence list in Bangla published in **IEE (ICAICT '20)** 🔗 . GitHub 🔗