Rasel Meya

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EXPERIENCE

Tappware Solution Limited

Data Scientist

Dhaka, Bangladesh
Oct 2023 – present, Full-time

- R&D initiatives in generative AI, Large Language Models (LLMs), and Natural Language Processing (NLP), driving cuttingedge solutions for various applications.
- Developed and fine-tuned LLMs for tasks such as text generation, document summarization, question-answering, and chatbots, optimizing for performance and accuracy. Engineered and deployed NLP models for text classification, sentiment analysis, and information extraction, utilizing raw text data to solve complex real-world problems.
- Conducted extensive data analysis, feature engineering, and model optimization, ensuring scalability and robustness in production environments.
- Collaborated closely with interdisciplinary teams to integrate AI and ML solutions across various business functions, ensuring seamless communication and delivery of projects.
- Played a key role in monitoring and improving model performance through continuous evaluation and fine-tuning of algorithms.

Tappware Solution Limited

Machine Learning Engineer

Dhaka, Bangladesh Oct 2022 – Jan 2023, Intern

- Conducted R&D on Elastic Search for ranking and indexing in a Linux environment.
- Documented the process of Elastic Search implementation, including installation, configuration, and usage.
- · Contributed to the development of a robotic project and NLP-based Bengali text extraction and indexing.
- Collaborated with the team to resolve technical challenges.

EDUCATION

Noakhali Science and Technology University

MS in Computer Science & Telecommunication Engineering;

Noakhali , BD Aug 2023 – May 2025

• Relevant Coursework; Machine Learning, Cloud Computing, Wireless Sensor Network, Stochastic Process and Modeling,

Noakhali Science and Technology University

Noakhali, BD

B.Sc. in Computer Science & Telecommunication Engineering; (CGPA: 3.29/4)

Jan 2018 - Jan 2021

Relevant Coursework: Data Structures & C, Object Oriented Programming, Database Management System, Software
 Engineering and Information System, Data Mining and Warehousing, Artificial Intelligence and Neural Networking, Image
 Processing.

PUBLICATIONS

Prompt-Based Fine-Tuning of Bangla Language Models for Sequence Classification

Accepted with Springer.

This study explores prompt-based fine-tuning of Bengali language models for tasks like sentiment analysis and news categorization, achieving 2-4% higher accuracy using only 20% of training data compared to traditional methods.

Detection of Autism Spectrum Disorder Based on Optimal Feature Selection Using Machine Learning [on review]

Utilized feature selection methods and machine learning models to predict ASD with 100% accuracy across four age-specific datasets, improving early detection and intervention.

Development of a Digital Prescription Assistance System to Enhance Access to Healthcare for Underprivileged Populations in Bangladesh

Research focus for M.Sc., aiming to improve healthcare accessibility through a digital prescription system.

PROJECTS

Nothi Smart Sompadona

• Developed an intelligent Bengali text editor integrated with TinyMCE, providing sentence and phrase suggestions to improve writing efficiency and reduce typing time.

X-Road Data Exchange Layer Solution | Article

 Enhanced public sector technology by addressing API gateway vulnerabilities. Focused on secure and efficient data exchange.

Certificate Classification and Info Extractor Github

• Built a web application and Android app for real-time image-to-information extraction using machine learning. Developed APIs with Django to classify and extract key information from various certificates (TIN, VAT, Trade License, Incorporated, etc.).

Bengali Spell Checker

• Developed a Bengali spelling checker system that provides real-time spelling corrections to enhance text accuracy.

LLM Web Application for Document Question Answering

Designed an application that answers questions based on document content, utilizing Large Language Models (LLMs).

Multi-Task LLM-Based Web Application | Streamlit Github

 Built a unified platform for email generation, text and audio summarization, document conversion, question answering, and article/blog writing.

Resume Pre-Screening Tools

Developed an AI-powered resume pre-screening tool to streamline recruitment processes. Key features and functionalities include:

- Bulk Resume Upload: Enables HR or organizational authorities to upload multiple resumes at once for efficient analysis.
- Candidate Analysis: Provides detailed insights into individual candidates' qualifications and alignment with specific job roles.
- Automated Pre-Selection: Scores resumes based on compatibility with organizational requirements and identifies top candidates.
- Pre-Screening Notifications: Automatically sends pre-screening emails to candidates who meet preliminary selection criteria.

Directory-Visualizer | Pypi Package | Github

• A CLI tool to visualize directory structures as Markdown or Mermaid diagrams.

Kaggle Projects (Notebook Expert) | Kaggle

• Worked on a variety of machine learning projects including COVID-19 data analysis, heart failure prediction, Autism Spectrum Disorder (ASD) detection, breast cancer prediction, mango leaf disease detection, resume categorization, spam classification, and Bengali handwritten digit classification, mistral, deepseek fine-tune for bengali multi-label text.

GitWithQA - AI-Powered GitHub Q&A Platform | Github

- Transforms any GitHub repo into an intelligent Q&A interface using LLM-based code understanding.
- Enables interactive chat to explore code, functions, and file responsibilities without setup.
- · Built with RAG-ready architecture and powered by gitingest for accurate, context-aware insights.

Lekhoni | লেখনি - Handwritten Bangla Dataset Platform Github

- Built a community-driven platform to collect handwritten Bangla character data
- Features include drawing canvas, label selection, real-time stats, and secure backend
- Supports Bangla OCR, handwriting recognition, and AI research
- Fully open-source and designed for public contribution and collaboration

Huggingface Model and Dataset | Huggingface

- Fine-tuned Mistral and DeepSeek for Bengali multi-label text classification.
- Developed and published a Bengali multi-label text dataset for open research.

CERTIFICATIONS

Become a Data Scientist: Statistics for Data Science: Covered essential statistical concepts for data science, including hypothesis testing, probability, and data distributions.

Neural Networks and Deep Learning: Learned the fundamentals of neural networks, implemented CNNs, optimized architectures, and applied deep learning techniques to real-world tasks.

NLP Fundamentals: Explored core concepts of Natural Language Processing, including tokenization, sentiment analysis, and text classification.

Machine Learning: Acquired knowledge of machine learning algorithms, model evaluation, and feature engineering, applying them to predictive analytics.

SKILLS

Languages: Python, R (Basic), C, C++, SQL, HTML, CSS, JavaScript

Frameworks: Django, Streamlit, REST Framework API **Databases:** MS SQL, MongoDB, Elastic Search

Libraries: Pandas, NumPy, Matplotlib, Scikit-Learn, TensorFlow, Keras, PyTorch, OpenCV

Technologies & Version Control: MS Excel, SPSS, Git (GitHub, GitLab)

Specialized Skills: GenAI, LLM (Large Language Models), RAG, Transformers, NLP, OOP