

Rasel Meya

AI ENGINEER · MACHINE LEARNING ENGINEER

Dhaka, Bangladesh

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Career Objective

Passionate about AI, Machine Learning, NLP, and Large Language Models (LLMs), with a strong desire to work on AI-driven solutions that tackle complex problems. Keen to contribute innovative ideas, particularly for the Bengali language community, by developing practical and impactful AI applications. Eager to learn continuously, explore new technologies, and create solutions that advance both research and real-world applications in AI, NLP, and LLMs.

Experience

Tappware Solution Limited

Dhaka, Bangladesh

AI ENGINEER

Oct 2023 – Present

- Conducted R&D in generative AI, Large Language Models (LLMs), and Natural Language Processing (NLP) to create advanced solutions for various applications
- Developed and fine-tuned LLMs for text generation, document summarization, question-answering, and chatbots, optimizing for accuracy and performance
- Built and deployed NLP models for text classification, sentiment analysis, and information extraction from raw data to solve real-world problems
- Performed data analysis, feature engineering, and model optimization to ensure scalability and robustness in production environments
- Collaborated with interdisciplinary teams to integrate AI and ML solutions across business functions and ensure smooth project delivery
- Monitored and improved model performance through continuous evaluation and fine-tuning

Tappware Solution Limited

Dhaka, Bangladesh

MACHINE LEARNING ENGINEER (INTERN)

Oct 2022 – Jan 2023

- 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

Noakhali, Bangladesh

M.Sc. IN COMPUTER SCIENCE & TELECOMMUNICATION ENGINEERING

Aug 2021 – May 2023

- CGPA: 3.62/4.0

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

Noakhali Science and Technology University

Noakhali, Bangladesh

B.Sc. IN COMPUTER SCIENCE & TELECOMMUNICATION ENGINEERING

Jan 2018 – Jan 2021

- CGPA: 3.29/4.0

• 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

Springer, 2025

- Explored prompt-based fine-tuning for Bengali tasks (sentiment analysis, news categorization), achieving 2–4% higher accuracy using only 20% of training data compared to traditional methods
- DOI: 10.1007/978-981-96-2721-9_27

Research Experience

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

On Review

- Applied feature selection and machine learning models to predict ASD with 100% accuracy across four age-specific datasets, enhancing early detection and intervention strategies

MedicineNet: A Custom CNN-Based Approach for Recognizing Medicine Names in Handwritten Medical Prescriptions

On Review

- Developed a deep learning system (MedicineNet) using CNNs and hybrid models (CNN + Attention + LSTM/BiLSTM/BiGRU) to recognize medicine names from handwritten prescriptions, achieving 91.03% accuracy, 91.85% precision, and improved safety in prescription processing

Projects

Huggingface

HUGGINGFACE MODEL AND DATASET

- Fine-tuned Mistral and DeepSeek models for Bengali multi-label text classification
- Published a Bengali multi-label text dataset for open research, enabling NLP and ML experimentation

GitHub

MULTILINGUAL RAG SYSTEM – BENGALI + ENGLISH

- Built a Retrieval-Augmented Generation (RAG) pipeline for Bengali and English queries.
- Processed Bengali PDFs with Mistral OCR, performed text cleaning, chunking, and embedding generation using all-MiniLM-L6-v2.
- Implemented vector similarity search with FAISS to retrieve relevant document chunks and generate grounded answers using LLMs.
- Handled challenges like OCR noise, ligature errors, mixed-language content, and complex MCQ structures with custom preprocessing scripts.

GitHub, Streamlit

MULTI-TASK LLM-BASED WEB APPLICATION

- Built a unified LLM-powered platform for text and audio summarization, document conversion, Q&A, and content generation

GitHub

RESUME CATEGORIZATION – NLP & ML

- Automated resume classification using NLP and ML (Random Forest, SVM, ANN, LSTM).
- Developed scripts to process PDFs and categorize resumes efficiently.

GitHub

GITWITHQA – AI-POWERED GITHUB Q&A PLATFORM

- Transforms GitHub repositories into interactive Q&A interfaces using LLM-based code understanding
- Enables developers to explore functions, files, and code logic without setup

GitHub

LEKHONI – HANDWRITTEN BANGLA DATASET PLATFORM

- Built a community-driven platform for collecting handwritten Bangla characters, supporting OCR, handwriting recognition, and AI research

PyPI Package, GitHub

DIRECTORY-VISUALIZER

- Developed a CLI tool to visualize directory structures as Markdown or Mermaid diagrams, handling large projects efficiently

Article

X-ROAD DATA EXCHANGE LAYER SOLUTION

- Enhanced secure data exchange in public sector systems, implementing best practices for API gateways and interoperability

CURRENT COMPANY PROJECTS

- I also work on backend AI/NLP projects such as AI Summarizer, Invoice Info Extractor, Nothi Application Generator, Certificate Classifier, Content Generator, YouTube Video Summarizer, Resume Analyzer, Bokhshi OCR, Biennial Transparency Report Analyzer, Voucher Digitizer, and Speech-ToText, building robust ML pipelines and APIs.

Technical Skills

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

Frameworks Django, FastAPI, REST API Development, Streamlit, DRF (Django REST Framework)

Databases MS SQL, MongoDB, Elastic Search

Libraries Pandas, NumPy, 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

Embeddings & Vector Search sentence-transformers, Hugging Face Transformers, FAISS, ChromaDB, cosine similarity

Visualization & Reporting Matplotlib, Seaborn, Plotly

Certifications

[Neural Networks and Deep Learning](#)
[Machine Learning](#)
[Introduction to Git and GitHub](#)
[Crash Course on Python](#)
[Problem Solving \(Basic\)](#)

[Statistics for Data Science](#)
[Intermediate Machine Learning](#)
[Python Data Structures](#)
[C++ For C Programmers, Part A](#)
[Problem Solving \(Intermediate\)](#)

[NLP Fundamentals](#)
[Intro to Machine Learning](#)
[Python](#)
[Programming for Everybody](#)
[Python \(Basic\)](#)