

Mohammad Delowar Hossain

Aspiring AI/ML Engineer | LLM & AI Agent | LangChain • FastAPI • RAG • Python

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📄 Summary

Aspiring AI/ML Engineer with hands-on experience building practical AI solutions using LLMs, LangChain, CrewAI, FastAPI, and RAG, along with strong skills in Python-based machine learning workflows, data processing, model development, AI agents, workflow automation, computer vision, and production-ready AI API development.

🎓 Education

B.Sc. in Computer Science & Engineering

Daffodil International University

Jun 2022 – Jun 2026

HSC, Science

Cox's Bazar Govt. College

Passing Year - 2020

📁 Projects

Taka Detector

REST API for real-time Bangladeshi banknote detection using computer vision.

2026

- Trained and integrated a YOLOv8 model for banknote detection
- Built FastAPI endpoints to serve predictions with confidence scores
- Returned denomination, confidence, and bounding box data per request
- Containerized the full pipeline with Docker for one-command deployment

BD Multi-Tool AI Agent

Multi-tool LangChain agent answering natural-language queries over Bangladeshi datasets.

2026

- Ingested 3 HuggingFace datasets (hospitals, institutions, restaurants) into SQLite
- Built LangChain SQL tools to query structured data per domain
- Integrated a SerpAPI web-search tool for general knowledge fallback
- Designed an agent router that selects the correct tool per incoming query

IMDB Sentiment Analysis

NLP benchmarking framework comparing sentiment classification models on 50,000 movie reviews.

2026

- Benchmarked TF-IDF, Word2Vec, and BERT architectures for sentiment classification
- Achieved ~93% accuracy with fine-tuned BERT vs. ~88% with TF-IDF baseline
- Built a full preprocessing pipeline: HTML stripping, tokenization, stopword filtering
- Evaluated models using precision-recall curves and confusion matrices

🧠 Skills

- **Programming** — Python, C, Java, JavaScript
- **AI/ML & Frameworks** — TensorFlow, PyTorch, Scikit-learn, Keras, Regression, Classification, Clustering, Deep Learning
- **LLM/GenAI Tools** — LangChain, CrewAI, OpenAI API, RAG, Multi-Agent Systems
- **Data Processing & Visualization** — Pandas, NumPy, Matplotlib, Seaborn, OpenCV, PIL, EDA, Feature Engineering, Model Evaluation
- **Backend Development** — FastAPI, Flask, REST API
- **Cloud & DevOps** — Docker, Git, Vercel, Render, GitHub
- **Database** — MongoDB, SQLite
- **Soft Skills** — Communication, Adaptability, Time Management, Problem Solving & Decision Making, Teamwork, Critical Thinking

📚 Courses

AI Engineering Bootcamp for Programmers

Ostad

Nov 2025 – Present

Master Git and GitHub – Beginner to Expert

Udemy

Jul 2026

🏠 Volunteering

Daffodil International University

Active Volunteer

Nov 2025 | Savar, Dhaka

Supported DIU Job Utsob 2025, a 2-day career fair connecting students with employer partners.

Assisted with event coordination and participant support across both days.

🌐 Languages

Bengali (Native Working Proficiency)

English (Professional Working Proficiency)

🔗 References

Dr. Md. Ali Hossain,

Associate Professor, Computer Science and Engineering,

Daffodil International University

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