

ISTIAQ AHMED FAHAD

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EDUCATION

University of Dhaka

Bachelor of Science in Software Engineering, CGPA: 3.93 (Upto 7th Semester)

Jan '20 – May '25

Dhaka, Bangladesh

EXPERIENCE

Cefalo Bangladesh Limited

Trainee Software Engineer

Jan '24 – Feb '25

Dhaka, Bangladesh

- Enhanced Cefalo's payroll system with key modules such as **Salary Review**, **Tax Certificate**, and **Leaves Management**.
- Implemented **Kafka-based communication** for better data exchange with external systems.
- Designed and tested **REST APIs** with **Swagger** for system reliability.
- Collaborated in an **Agile SCRUM environment** to ensure project progress and team coordination.

Data & Design Lab (DnD Lab)

Research Assistant Intern

Nov '23 – Present

Remote

- Conducted **EDA** on energy datasets to derive key insights.
- Developed an **interactive dashboard** using **Streamlit** and **Next.js** for dynamic visualizations.
- Utilized **Python (Pandas, Matplotlib, Seaborn)** for data preprocessing and visualization.

SKILLS

- Programming Languages & Database:** Python, JavaScript, TypeScript, Java, C++, MySQL, MongoDB
- Libraries and Frameworks:** React, Next.js, TailwindCSS, Node.js, NestJS, FastAPI, Pandas, NumPy, Matplotlib, Seaborn, Plotly, Streamlit
- AI & ML Tools:** PyTorch, Keras, Scikit-learn, Hugging Face Transformers
- Other Expertise:** Jira, Jupyter Notebook, Git, Docker, Linux, VSCode, Postman

PROJECTS

Autonomous Vehicle Detection for Bangladesh Roads | Python, YOLO, DETR, Deep Learning, Kaggle

- Developed a solution leveraging **YOLO**, **DETR**, and Deep Learning models for object detection in the BadODD dataset.
- Utilized different road objects from **nine districts** of Bangladesh to cover a wide variety of objects, ensuring **43%** accuracy in vehicle detection.
- Recognition:** Secured **3rd Place** in SUST DL Enigma 2024 - a Deep Learning competition.

Bengali Automatic Speech Recognition (ASR) for Regional Dialects | Python, Deep Learning, ASR

- Processed a **79+ hour** speech corpus to improve transcription accuracy for Bengali dialects.
- Designed an end-to-end speech recognition pipeline using deep learning models that achieved **75%** accuracy for speeches in specific dialects.
- Recognition:** Secured **4th Place** in the IUT CSE Fest Datathon.

Mathematical Reasoning for Low-Resource Language (Bengali) | Python, Hugging Face, LLM Fine-Tuning

- Enhanced **Qwen-7B** for Bangla reasoning by fine-tuning with curated math datasets.
- Applied Direct Preference Optimization (DPO)** and used **mergeKit** to improve inference quality for Bangla math problems.
- Recognition:** Secured **6th Place** in the BUET DL Sprint 3.0, a Deep Learning competition.

SympLink: AI-based Symptom-to-Disease Mapping | Python, NLP, Deep Learning, DistilBERT, React

- Built an AI-powered NLP system for symptom analysis and medical specialist recommendation.
- Integrated **DistilBERT** for symptom-to-disease mapping that reduces the users' effort in finding relevant specialists.

PUBLICATIONS

- Automatic Vehicle Detection using DETR: A Transformer-Based Approach for Navigating Treacherous Roads.**
arXiv:2502.17843. ↗

EXTRA-CURRICULAR & LEADERSHIP ROLES

IIT Software Engineering Community

Seminar and Library Secretary

Apr '23 – Mar '24

- Organized seminars on **Blockchain** and **emerging technologies**.
- Conducted **3 GitHub** and **Linux training sessions** for 40+ freshers.
- Managed **CTF** event at **ITVerse2023**, a national IT Fest, with 50+ participants.