

Mahir Tajuar Akash

Machine Learning Engineer

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[Portfolio](#) | [Github](#) | [LinkedIn](#) | [LeetCode](#)

SKILLS

Programming: C, C++, Python, SQL

Machine Learning/Deep Learning: Scikit-learn, TensorFlow, Keras, PyTorch, Pandas, NumPy, NLP,

Web Technologies: Django, Streamlit, Selenium

MLOps: FastAPI, Docker

EXPERIENCE

AI/ML Mentor and Project Co-ordinator | Phitron, Programming hero Limited

November 2025 - Present

- Teaching and doing project on Machine Learning, Deep Learning, NLP and conducting various sessions on Automation, MLOps, and AI Engineering topics

Executive, Business Department | Qtec Solution Limited

August 2025 - October 2025

- Collaborating with technical teams to align business requirements with ML solutions

PROJECTS

Bengali Hate Speech Detection Using BanglaBERT & XLM-R

[Github](#)

Tech: Python, BanglaBERT, XLM-R, Tesseract OCR, Hugging Face, FastAPI, Streamlit, Docker, AWS EC2

- Fine-tuned BanglaBERT and XLM-R models on Bengali text data collected via web scraping & Tesseract OCR, achieving strong classification performance (90% accuracy).
- Built a FastAPI backend to serve the model as a REST API and a Streamlit frontend for interactive user access.
- Containerized the application with Docker and deployed it on AWS EC2 for scalable production use.

Health Insurance Fraud Prediction Using Machine Learning

[Github](#)

Tech: Python, BERT, SVM, Random Forest, Logistic Regression, NLP

- Implemented multi-model approach combining NLP and traditional ML for high-accuracy fraud detection

Multiple Disease Classification using CNN, VGG16, MobileNet, and ML Models

[Github](#)

Tech: Python, TensorFlow, Keras, CNN, VGG16, MobileNet, SVM, Random Forest, Logistic Regression

- Implemented deep learning models (CNN, VGG16, MobileNet) for image-based disease classification
- Integrated traditional machine learning models (SVM, Random Forest, Logistic Regression) for comparative benchmarking
- Conducted performance evaluation across models to identify the most effective classification strategy

EDUCATION

BSc in Computer Science & Engineering | CCN University of Science and Technology

2022-2025

ACHIEVEMENTS & ACTIVITIES

- Champion**, Comilla University IT Society Data Hackathon 2024
- Participant**, Brain Station 23 Hackathon 2025 (Intent-based E-commerce Search Engine)
- Participant**, 2nd International Workshop on Computational Linguistics and Bangla Language Processing, Chittagong University of Engineering Technology (CUET), Jan 2023
- Participant**, IUPC ,Bangladesh Army International University of Science and Technology (BAIUST))
- Participant**, NASA Space Apps Challenge 2025
- Campus Ambassador**, Phitron - Organized workshops and professional development
- Founding President**, CCN-UST Computer Club - Led team of 8 members, building and technical workshops
- 3rd Runner-up**, AUAP English Debate Competition, Philippines

PUBLICATIONS

Effective **Health Care Insurance Fraud Detection** and Interpretation: Integrating **Machine Learning, Deep Learning, Language Models**, and Explainable AI (*Ongoing*) – M. T. Akash (First Author), S. Alam, Y. Hasan

Utilizing **AI** for Differential Diagnosis: A Machine Learning Approach to Automated Detection of Pemphigus Versus Monkey-pox Skin Lesions (*Ongoing*)

LANGUAGES

Bengali: Native | **English:** Professional working proficiency