

Mehedi Hasan Shakil

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Professional Summary

Machine Learning Engineer with expertise in Deep Learning, NLP, Computer Vision, and Generative AI. Experienced in developing, fine-tuning, and deploying transformer-based models (e.g., BERT) for real-world applications. Published researcher with a strong focus on Android Malware Detection and IoT Security.

Technical Skills

- **Languages & Tools:** Python, SQL, C++, Git/GitHub, VS Code, Jupyter, Colab
- **Machine Learning & Deep Learning:** PyTorch, TensorFlow, Scikit-learn, Hugging Face Transformers (BERT), CNNs, Transfer Learning
- **Data Engineering & Visualization:** Pandas, NumPy, ETL Pipelines, Matplotlib, Seaborn
- **Deployment:** Flask, AWS (basic), Docker (basic).
- **Technical Writing & Documentation:** LaTeX (expert), Research Documentation, Report Writing
- **Soft Skills:** Problem Solving, Time Management, Presentation Skills, Adaptability, Team Collaboration

Education

B.Sc. in CSE — Chittagong University of Engineering & Technology (CGPA: 3.37) January 2018- July 2023

Work Experiences

Data Science Internship - Data Glacier March 2025- July 2025

- Developed, fine-tuned, and deployed machine learning models (e.g., BERT for NLP tasks), improving performance through hyperparameter optimization and feature engineering.
- Built APIs and deployed models for real-time inference using Flask, ensuring efficient model deployment pipelines.
- Collaborated with researchers to deliver end-to-end solutions, including data preprocessing, model training, and deployment, contributing to research-driven projects.
- Contributed to technical documentation and project reporting, ensuring clear communication of results and insights.

Research Experience & Publication

- Empowering Malware Detection (ICCIT 2023, IEEE) — Developed DL ensemble with optimized features.
- Optimized IoT Security with Hybrid Attention Model (ICCIT 2024, IEEE) — Proposed novel IDS framework with improved detection performance.

Projects

- **Dataset Sherpa:** Built an app for dataset profiling, leakage detection, and baseline model evaluation. Used FastAPI for the backend and Streamlit for the UI.
- **Twitter Hate Speech Detection:** Fine-tuned a BERT model using Hugging Face Transformers and applied hyperparameter tuning, achieving 3.17% improvement in classification accuracy.
- **Brain Tumor Detection (CNN Model):** Achieved 95.57% accuracy on medical imaging dataset.
- **Phishing Website Detection:** Achieved 97.15% accuracy using Neural Network.

Certificates

- **Machine Learning Specialization** DeepLearning.AI (2022)
- **Deep Learning Specialization** DeepLearning.AI (2022)
- **Natural Language Processing Specialization** DeepLearning.AI (2023)
- **Transfer Learning for NLP with TensorFlow Hub** Coursera (2023)
- **Google Certificate for Python** Google (2020)

Leadership Experiences

- **Vice President, CUET Computer Club:** Organized NCPC 2022, workshops, and CSE Fest.
- **Finance Secretary, CUET RAG 2023:** Organized Graduation Completion Ceremony of the 48th batch.