Nafisa Farhin

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RESEARCH INTERESTS

Applied Machine Learning, Deep Learning, Explainable AI (XAI), and Computer Vision. Seeking industrial research opportunities to implement transparent and interpretable AI solutions.

EDUCATION

University Institute of Technology | Barddhaman
Master of Engineering (M.E.) in Computer Science | **Expected July, 2027**

- **Focus:** Advanced ML, Neural Networks
- **Key Coursework:** Pattern Recognition, Computer Vision

University of Burdwan | Barddhaman
Master of Science (M.Sc.) in Computer Science | **August, 2025**

- **Result:** CGPA: 9.28 (~ 88%)
- **Key Coursework:** Intelligent Computation, Cryptography

MUC Women's College, Burdwan | Barddhaman
Bachelor of Science (B.Sc.) in Computer Science | **July, 2023**

- **Result:** CGPA: 9.61 (~ 91%)
- **Key Coursework:** Computer Networks, Soft Computing

TECHNICAL SKILLS

- **Languages:** Python (Expert), C, SQL.
- **AI/ML Frameworks:** TensorFlow, PyTorch, Keras, Scikit-learn.
- **Data Science:** NumPy, Pandas, Matplotlib, OpenCV.
- **Tools & Platforms:** Git, Google Colab, Kaggle.

RESEARCH EXPERIENCE

Research Lead | Federated Learning and Vertical Federated Learning: **A Privacy-Preserving Framework for Healthcare and Fraud Detection.** *October, 2024 - August, 2025*

- Developed a Federated Learning based model for Covid-19 prediction in healthcare, achieving almost 97% accuracy.
- Compared all **Classification and Regression** techniques (e.g., Random Forest, AdaBoost etc.) and interpreted model decisions.
- Presented findings in "Internal Academic Review".

Research Lead | Machine Learning and Federated Learning Classification: **Insurance Fraud Detection using Vertical Federated Learning.** *October, 2024 - August, 2025*

- Developed a Federated Learning based model that detects the fraud without disclosing data completely achieving almost 89% accuracy.
- Compared all **Classification and Regression** techniques (e.g., Random Forest, AdaBoost etc.) and interpreted model decisions.

ACADEMIC PROJECTS

- Implemented an ANN classification system to classify Iris dataset with 4 features.