JASMIN JAHAN PUSPO

jasminjahanpuspo@gmail.com | Academic Portfolio | Sylhet, Bangladesh

EDUCATION

Master's in Computer Science and Engineering Jan. 2023 – Oct. 2025 (Expected)
Shahjalal University of Science & Technology *CGPA: N/A (in progress)*

Bachelor's in Computer Science and Engineering Jan. 2017 – Jun. 2021
North East University Bangladesh *CGPA: 3.54/4.0*

RESEARCH INTERESTS

• Medical Imaging • Computer Vision • Machine Learning

PUBLICATIONS

Journal

- TransembleNet: Enhancing vector **mosquito species** classification through transfer learning-based ensemble model. *Plos One, **Q1**, 2025*

Conference

- BengaliTaka: A Comparative Analysis of Transformer and CNNs on **Bangladeshi Currency** Recognition. *QPAIN 2025*
- SkinNet: An EnsembleNet Technique to Detect **Skin Cancer** Using Pre-Trained Models. *ECCE 2025*
- A Novel Approach to Classify **Breast Cancer** Using Transfer Learning. *ICCIT 2024*

ACADEMIC THESIS

One Stage Detection, Segmentation, Shape, and Stage Classification in **Digital Mammography**. *Undergraduate Thesis, NEUB | 2021*

RESEARCH EXPERIENCE

Research Collaborator Sep. 2025 - present
Elite Lab | Remote *Dhaka, BD*

- Conducting research on **chest disease** detection using Transformer models with explainable AI (XAI).
- Collaborating with lab team to develop innovative research methodologies, improving efficiency and accuracy.

AI Researcher Jan. 2025 - Jun. 2025
SafeNet.AI | Remote *Dhaka, BD*

- Implemented transformer models in Python for retinal disease detection, focusing on conditions like **diabetic retinopathy**, and removing black borders during preprocessing.

Volunteer Research Intern | *Remote* Sep. 2023 – Feb. 2024

- Analyzed experimental results and authored the literature review for a study on **mosquito diseases**.
- Summarized from recent research papers and wrote a literature review catalog template

TECHNICAL SKILLS

Programming Language: Python
Machine Learning: TensorFlow, Keras, Transformers
Data Analysis: Numpy, Pandas, Scikit-learn, OpenCV
Tools: JIRA

Professional Experience

ML Engineer Feb. 2025 - Apr. 2025
NxtVis | Remote *Dhaka, BD*

- Developed and optimized deep learning models for real-time video anomaly detection, improved dataset quality.

Content Writer Oct. 2022 - May 2023
Russkin Bright | Hybrid *Sylhet, BD*

- Researched and created engaging **curriculum, course chapters**, and MCQ for various courses.
- Wrote sales content of 300-450 words by maintaining 100% quality and zero plagiarism.

Teaching Experience

ICT Lecturer | $(9^{\text{th}} - 12^{\text{th}})$ grade Feb. 2024
Women's Model College *Sylhet, BD*

- Was responsible for daily 40-minute multimedia classes and delivered up to four lectures per day.
- Conducted classes covering technological topics, including theoretical coursework, and programming languages.

ICT Teacher | $(3^{\text{rd}} - 8^{\text{th}})$ grade Sep. 2022 - Dec. 2022
Sylhet International School and College *Sylhet, BD*

- Prepared lesson plans including laboratory class, lecture, exam, and homework.
- Graded assignments, tests, and lab work, providing constructive feedback to help students improve academically.

Peer Tutor | $(3^{rd} - 12^{th})$ *grade* May 2013 – Jun. 2024

- Designed lesson plans and materials to simplify concepts, enhancing student understanding and engagement.
- Assisted students with college admissions, supporting them in securing placements at reputable colleges.

Dataset Collections

• Bengali Taka • Bengali Sign Language

Standardized Test Results

• IELTS Academic: **Overall 6.0** (L: 6.0 | R: 6.5 | W: 5.5 | S: 6.0)

Academic Projects

Breast Cancer Classification

- Utilized an ideal CNN model to classify the binary cancer stage with 95% accuracy on the MIAS dataset.

Bangla Money Recognition-Kaggle

- Classified Bangla Nine notes with KNN, Linear Regression, and CNN algorithms from scratch and compared them with Scikit Learn libraries to obtain similar accuracy.
  - Key achievement: Github Arctic Code Vault Contributor 2020

Titanic Survival Prediction-Kaggle

- Trained RF and KNN algorithms to predict whether passengers would survive and received a 71% score.

Object Info

- Collected short descriptions and a single image of 25 objects from the internet as input; identified and briefly described an object with pronunciation as output.

Line Follower Robot

- The four-wheeled robot passed in a particular direction, i.e., lines (90, 180 degrees) and angles (V, U shapes)
  - Key accomplishment: Placed second in the NEUB ICT Fest 2018.