# JASMIN JAHAN PUSPO

✉ jasminjahanpuspo@gmail.com | 🎓 https://jasminjahanpuspo.github.io/ | 📍 Sylhet, Bangladesh

## EDUCATION

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

**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 (First Author)**

- Attention-Based CNN Architectures for Automated Binary Classification of Salmon **Fish Diseases**. *WIECON-ECE 2025*

- 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* 🔗

## MANUSCRIPTS UNDER REVIEW

**Journal (First Author)**

- InHAF: Explainable Vector Feature Fusion in Multi-Stage **Hybrid Attention CNNs** for Bangla Paper Currency Classification. *IEEE Access (Q1), 2025*.

## RESEARCH EXPERIENCE

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

- Working on image-data analysis using **Transformer** architectures and **XAI** (explainable AI) techniques.
- 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 **attention-based CNN** models and explored neural network architecture customization.

**Research Intern** — Sep. 2023 – Feb. 2024
*AL Lab | Remote* — *Dhaka, BD*

- 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

## ACADEMIC THESIS

**Graduate Thesis**                                                          Oct. 2024 - Oct. 2025
*SUST | SUST Research Centre | PI: Dr. Mohammad Shahidur Rahman*                    *Sylhet, BD*
- Developed and curated a newly launched **Bangla banknote** dataset.
- Designed an explainable **hybrid CNN architecture** with multi-stage attention and vector feature fusion.

**Undergraduate Thesis**                                                     Jun. 2020 - Jun. 2021
*NEUB | PI: Muhammad Mahir Hasan Chowdhury*                                         *Sylhet, BD*
- Conducted research on medical image classification using CNN models.
- Applied region-based preprocessing **(Mask R-CNN)** to enhance segmentation accuracy, and improved model focuses on **breast masses** by excluding pectoral muscles.

## TECHNICAL SKILLS

**Programming Language**: Python, C
**Deep Learning**: CNNs, Transformers, Foundation Models
**Framework** : TensorFlow, Keras
**Data Analysis**: Pandas, Scikit-learn, OpenCV
**Data Annotation** : LabelImg, VGG Image Annotator
**Tools**: Git, JIRA

## PROFESSIONAL EXPERIENCE

**Content Writer**                                                           Oct. 2022 - May 2023
*Russkin Bright | Hybrid*                                                           *Sylhet, BD*
- Researched and created engaging **curriculum, book chapters**, and MCQ for various courses.
- Wrote sales content of 300-450 words by maintaining 100% quality and zero plagiarism.

## TEACHING EXPERIENCE

**Course Instructor |** $(3^{rd} - 8^{th})$ **grade**                         Jan. 2026 - present
*AL Amanah Academy*                                                                *Sylhet, BD*
- Delivering lessons across all **STEM subjects**, incorporating practical demonstrations and interactive learning.

**ICT Lecturer |** $(9^{th} - 12^{th})$ **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.

**Academic Teacher |** $(3^{rd} - 8^{th})$ **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 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 Paper Currency 🔗          • Bengali Sign Language 🔗

## STANDARDIZED TEST RESULTS

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

## ACADEMIC SERVICE

• Conference Reviewer: **ICEF 2026**