

# JASMIN JAHAN PUSPO

✉ jasminjahanpuspo@gmail.com | 🎓 Academic Portfolio | 📍 Sylhet, Bangladesh

## EDUCATION

### Master's in Computer Science and Engineering

Shahjalal University of Science & Technology

Jan. 2023 – Sep. 2025 (Expected)

CGPA: N/A (in progress)

### Bachelor's in Computer Science and Engineering

North East University Bangladesh

Jan. 2017 – Jun. 2021

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

### AI Researcher

SafeNet.AI | Remote

Jan. 2025 - present

Dhaka, BD

- Implementing 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

- Collaborated with lab team to develop innovative research methodologies, improving efficiency and accuracy
- Summarized from recent research papers and wrote a literature review catalog template

## PROFESSIONAL EXPERIENCE

### ML Engineer

NxtVis | Remote

Feb. 2025 - present

Dhaka, BD

- Developing and optimizing deep learning models for real-time anomaly detection in video streams.
- Collaborating with cross-functional teams to refine datasets and improve model performance.

### Content Writer

Russkin Bright | Hybrid

Oct. 2022 - May 2023

Sylhet, BD

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

## TECHNICAL SKILLS

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**Programming Language:** Python


**Machine Learning:** TensorFlow, Keras, Transformers


**Data Analysis:** Numpy, Pandas, Scikit-learn, OpenCV

**Tools:** JIRA

## DATASET COLLECTIONS

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• Bengali Taka 

• Bengali Sign Language 

## TEACHING EXPERIENCE

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**Trainee ICT Lecturer | (9<sup>th</sup> – 12<sup>th</sup>) grade**

Feb. 2024

*Women's Model College*

*Sylhet, BD*

- Responsible for conducting daily 40-minute multimedia classes, delivering up to four lectures each day.
- Conducted classes covering technological topics, including theoretical coursework, and programming languages.

**ICT Teacher | (3<sup>rd</sup> – 8<sup>th</sup>) 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<sup>rd</sup> – 12<sup>th</sup>) 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.

## PERSONAL PROJECTS

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**Fully Automatic Computer-aided Mass Detection and Segmentation via Pseudo-Color Mammograms and Mask R-CNN**

- Reduced image size using MatLab; Data size: 8.38 GB; Mask R CNN algorithm experimented on Gray and PCM images and predicted 67% and 87% accuracy.

**Object Detection & Segmentation**

- Gathered and annotated data (15 images) from the internet
- Detected and segmented aimed objects via the Mask R CNN algorithm, leading to 95% success.

## ACADEMIC PROJECTS

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**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.