Jasmin Jahan Puspo

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

Education

Master's in Computer Science and Engineering Jan. 2023 – present
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

Research Experience

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

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

Publications

In Review

EnsembleNet: Enhancing vector mosquito species classification through transfer learning-based ensemble model. *Q1 Journal 2024*
A Novel Approach to Classify Breast Cancer Using Transfer Learning. *ICCIT 2024*
SkinNet: An EnsembleNet Technique to Detect Skin Cancer Using Pre-Trained Models. *ECCE 2025*
A Transformer Approach for Brain Tumor classification in MRI images. *ICCV 2025*

Academic Thesis

An Average K-fold EnsembleNet Approach for Binary Classification in Digital Mammography. *Master's Thesis, SUST | 2024*
One Stage Detection, Segmentation, Shape, and Stage Classification in Digital Mammography. *Undergraduate Thesis, NEUB | 2021*

Technical Skills

Programming Languages: Python, C, Java
Frameworks and Libraries: TensorFlow, Keras, PyTorch
Data Analysis Tools: Numpy, Pandas, Scikit-learn, OpenCV

Teaching Experience

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

- Responsible for taking 40 minutes of multimedia class each day up to 4 lectures
- Taught learning, reading, writing, and timing strategies to enhance students' marks

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

- Prepared lesson plans including laboratory class, lecture, exam, and homework.
- Graded papers, made questions, and took class tests.

Work Experience

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

DATASET COLLECTIONS

• Bengali Taka • Bengali Sign Language • Nagri Alphabet • Annotated Oral X-ray

Personal Projects

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

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.

Leadership Experience

Private Tutor May 2013 - Jun. 2024

- Developed personalized tutoring plans for over 10 students, boosting academic performance, and achieving a 95% success rate in college admissions.