## JASMIN JAHAN PUSPO

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**EDUCATION** 

M.Sc (Thesis) Shahjalal University of Science & Technology March 2023 - Present

Major: Computer Science & Engineering

GPA: N/A

**B.Sc (Engg.)** North East University Bangladesh January 2017 - June 2021

Major: Computer Science & Engineering

CGPA: 3.54/4.00

RESEARCH INTEREST

Medical Imaging
Computer Vision
Machine Learning

RESEARCH EXPERIENCE

**Volunteer Research Intern** | Remote

Dhaka, BD

Mentor: Abdullah Al Maruf

September 2023 - February 2024

- Skilfully analyzed datasets, boosted data accuracy by 50%, and reduced run time.
- 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.

## **UNDER 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 conference 2024

SkinEnsembleNet: An EnsembleNet Technique to Detect Skin Cancer Using Pre-Trained Models. Muslims in ML Workshop | NeurIPS'24

SkinTransformer: A Transformer Approach to Classify Skin Cancer. CVPR 2025

#### TECHNICAL SKILLS

**Programming Languages**: Proficient in C, Java, Python

Deep Learning Frameworks: TensorFlow, Keras

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

## TEACHING EXPERIENCE

#### **Women's Model College**

Sylhet, BD

Trainee ICT Lecturer(9<sup>th</sup> - 12<sup>th</sup> grade)

February 2024

Responsibilities:

- Took classes of diverse sections e.g. Science, Arts, and Commerce.
- 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.

#### **Sylhet International School and College**

September 2022 - December 2022

ICT Teacher( 3<sup>rd</sup> - 8<sup>th</sup> grade)

Responsibilities:

- Prepared lesson plans including laboratory class, lecture, exam, and homework.
- Graded papers, made questions, and took class tests.
- Reported students' performance weekly to the school board.

#### WORK EXPERIENCE

#### Russkin Bright

Sylhet, BD

Sylhet, BD

Content Writer | Hybrid

October 2022 - May 2023

Responsibilities:

- 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.
- Wrote 3-4 modules each day of targeted content, rewrote based on editor feedback.

#### Personal Projects

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

- Conceptualized and implemented this research paper.
- 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; Created charts in Google Colab to perform preliminary analysis and visualize data using Matplotlib.
- 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.
  - o Key achievement: Github Arctic Code Vault Contributor 2020.

#### Titanic Survival Prediction-Kaggle:

• Trained Random Forest and KNN algorithms to predict whether passengers would survive and received a 71% score.

#### Tic Tac Toe:

• Designed a 5\*5 GUI interface in Python using the Tkinter module that decides whether a player wins, loses, or ties with the computer.

#### **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.

#### **Desktop Application:**

• Could search for specific files from the local hard disks written in Java.

#### **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.

#### **Vision-based Vacuum Cleaner:**

• Avoided the frontier obstacles automatically while vacuuming the floor.

#### **Study Management System:**

• Designed and established a user-friendly website with PHP, HTML5, CSS3, and MySQL where students could store their study materials.

#### **Medicare:**

• Established an interactive website that uses PHP, HTML5, CSS3, and MySQL to provide health-related information.

## COURSES ON DATACAMP

Biomedical Image Analysis in Python by Stephen Bailey Image processing in Python by Rebeca Gonzalez certificate certificate

## LEADERSHIP EXPERIENCE

Private Tutor Sylhet, BD

• Tutored for school and college students to achieve better grades May 2013 - June 2024

## LANGUAGES

• **Bangla**: Native Language; •

• English: Fluent Language

Last Update: October 14th, 2024