



Shemonti Barua

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EDUCATION AND TRAINING

BSc in Electronics and Telecommunication Engineering
Chittagong University of Engineering & Technology

Final grade: CGPA-3.77 Out of 4.00(Class Position: 5th)

RESEARCH INTERESTS

Machine Learning | Deep Learning | Signal Processing | Image Processing | AI for Health Care

RESEARCH EXPERIENCE

B.Sc. Thesis:

"Breast Cancer Image Classification Using External Attention Multilayer Perceptron Based Transformer",
Supervised by Dr Md Saiful Islam, Associate Professor, Department of ETE,CUET.

1. Diagnosed Breast Cancer Images from Breast Histopathology Images and BreakHis Datasets using self-attention based transformer and External attention based transformer and then comparison is shown.
2. **Findings:** Reduced the complexity using external attention | External attention gives higher accuracy than self attention. [Link](#)

PUBLICATIONS

Conference Paper

1. S. Barua and M. S. Islam, "Invasive Ductal Carcinoma Detection In Breast Histology Images Using Dilated Depthwise Separable Convolutions," 2023 International Conference on Next-Generation Computing, IoT and Machine Learning (NCIM), Gazipur, Bangladesh, 2023, pp. 1-5,doi: 10.1109/NCIM59001.2023.10212476. [Link](#)

PROJECTS

1. Brain Tumor Detection

A Deep Learning model called Depthwise Separable Convolution has been applied to predict the types of brain tumors. [Link](#)

2. Malaria Detection

A CNN model has been applied for the diagnosis of malaria. [Link](#)

3. Human Activity Recognition With Smartphone

A Machine Learning model using Python and Logistic Regression to classify activities into one of the six activities performed. [Link](#)

4. Stack Overflow Survey

Data analysis and visualization of Stack Overflow Developer Using Machine Learning. [Link](#)

5. Intrusion Detection System

Apply machine learning model for detecting bad connection and evaluate performance with different loss functions. [Link](#)

6. Health Monitoring System

An IOT-based project using Arduino code, Wi-Fi and heart-rate biosensor module. [Link](#)

7. Guess_The_Number

A number guessing game where people guess the number within three time. it is mainly a javascript project. [Link](#)

8. Github_Finder

A javascript project where people can find the profile of github user and their details. [Link](#)

9. Frolic City

An entertainment place where people can pass their free time by listening music, reading books and what not. It is built by using HTML, CSS, bootstrap. [Link](#)

HONOURS AND AWARDS

1. Dean's Award.

2. Champion in British Parliament Debate

13th Inter Department Debate Competition By CUET Debating Society

3. Participated in IEEE Computer Society Bangladesh Chapter Summer Symposium

IEEE Computer Society Bangladesh Chapter, Department of ICT, Islamic University, Kushtia.

TECHNICAL SKILLS

1. Device Simulator -

Colab, Git, MATLAB, Cadence, Cisco Packet Tracer, CST Studio.

2. Programming Languages -

C/C++, Python, HTML, CSS, JavaScript, MongoDB, ReactJS.

3. Library/Framework -

Keras, TensorFlow, sci-kit learn, SciPy.

4. Document Preparation & Illustration -

MS Office, Excel, Adobe Photoshop.

TRAINING AND ONLINE COURSES

1. AI and Machine Learning with Python

Sheikh Kamal IT Incubator, CUET. [23 June-3 July, 2022]

2. Machine Learning Foundation With Python

GeeksforGeeks. [June-August, 2020]

3. Machine Learning for All

Coursera. [September, 2020]

4. Python For Everybody

Coursera. [August, 2020]

5. Data Visualization Using Python

Great Learning.[November,2020]

STANDARDIZED TEST SCORE

International English Language Testing System (IELTS)

[23/09/2023 – 23/09/2025]

Listening Reading Writing Speaking Overall

8.5 7.00 6.5 7.00 7.5

LEADERSHIP AND SYNERGISTIC ACTIVITIES

1. Joint Organizing Secretary

Joyoddhoney, CUET [24/08/2022 – 24/03/2023]

2. Secretary(Entrepreneurship)

CUET Career Club [24/08/2022 – 24/03/2023]

RECOMMENDATIONS

1. Prof. Dr. Md. Saiful Islam

Associate Professor of the Department of Electronics & Telecommunication Engineering (ETE)

Chittagong University of Engineering & Technology

Contact no: 01840066254, Email: saiful05eee@cueta.ac.bd

2. Eftekhar Hossain

Assistant Professor of the Department of Electronics & Telecommunication Engineering (ETE)

Chittagong University of Engineering & Technology

Contact no: 01521532765, Email: eftekhar.hossain@cueta.ac.bd
