Dept. of EEE
BRAC University
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MD **JOBAYER**

Prospective Graduate Student

HIGHLIGHTS

Research Interest Medical imaging, machine learning, signal processing, bioinformatics.

PUBLICATION

**Find all the latest articles on Google Scholar.*

Research Article

[1] **Jobayer**, **Md**, A. Taylor, M. R. Hasan, K. A. Ahmed, and M. Z. Hossain, "Machine Learning to Predict Gut Microbiomes of Agricultural Pests," *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, (*In review).

[2] Z. Chen, **Jobayer**, **Md**, M. R. Hasan, K. A. Ahmed, and M. Z. Hossain, "MutFusVAE: Mutational Fusion Variational Autoencoder for Predicting Primary Sites of Cancer," en, *Procedia Computer Science*, vol. 222, pp. 272–283, 2023. DOI: 10.1016/j.procs.2023.08.166.

[3] **Jobayer**, **Md**, M. A. H. Shaikat, M. Naimur Rashid, and M. R. Hasan, "A systematic review on predicting PV system parameters using machine learning," en, *Heliyon*, vol. 9, no. 6, e16815, Jun. 2023. DOI: 10.1016/j.heliyon.2023.e16815.

Conference Paper

[4] M. S. Tahsin, **Jobayer**, **Md**, M. B. U. Antor, M. Islam, F. F. Raisa, and M. A. H. Shaikat, "Predictive Analysis & Brief Study of Early-Stage Diabetes Using Multiple Classifier Models," in *2022 IEEE 12th Annual Computing and Communication Workshop and Conference (CCWC)*, Las Vegas, NV, USA: IEEE, Jan. 2022, pp. 0203–0207. DOI: 10.1109/CCWC54503.2022.9720736.

EXPERIENCE

Dec 2023 – Present Research Assistant, **BRAC University**
Computing Lab, Dept. of EEE

Currently working on –

- ◇ Context-aware sleep analysis based on Graph Attention Network
- ◇ Fracture localization through multimodal analysis of X-ray images
- ◇ Heart murmur detection based on TinyML and Swin transformer network

Jul 2023 – Sep 2023 Embedded System Engineer Intern, **FactoryNext**

Jul 2022 – Feb 2023 Senior Researcher, **LASSET**, **BRAC University**

Dec 2019 – Jan 2022 Android Developer, **Global Dream Pvt. Ltd., India**

RELEVANT PROJECTS

Project #01 — **UNet-based Breast Cancer Detection**

- Used the 'Breast Ultrasound Image Dataset' which has around 780 images
- Achieved an accuracy of 88% using the state-of-the-art UNet model

Project #02 — **Chest X-ray Abnormalities Detection**

- VinDr-CXR chest X-ray dataset was used as the data source
- Fine-tuned ResNet ML model for abnormalities detection

Project #03 — **MRI-based Alzheimer's Disease Prediction using Pre-trained Model**

- Public dataset available on Kaggle was used
- CNN model was built on top of ResNet to capture the spatial information

GRANTS & AWARDS

Award #1 — **Quality Journal Publication Award**
Research Metrics Committee (RMC), BRAC University

- Awarded an amount of 50,000 BDT in recognition

EDUCATION

Bachelor of Science — Electrical & Electronic Engineering, **BRAC University**

- Major in Electronics
- GPA of 3.3/4

PEER REVIEW

Review #01 — IET Renewable Power Generation — 3

Review #02 — IEEE EICT Conference — 4