ABRAR TAHER

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EDUCATION

B.Sc. in Computer Science and Engineering
Chittagong University of Engineering & Technology 2018 - 2023
CGPA- 3.37/4.00
Last four semesters CGPA: 3.78/4.00

RESEARCH INTEREST

AI in healthcare, Explainable AI, Medical Image Processing, Computer Vision, Deep Learning, Machine Learning

RESEARCH EXPERIENCE

Thesis: A Deep Learning Approach for Multiclass Brain Tumor Classification and Segmentation
Supervisor: Ms. Sabiha Anan, Assistant Professor, Department of Computer Science and Engineering

- Developed a custom Convolutional Neural Network for multiclass brain tumor classification and a Residual Attention U-Net architecture for precise tumor segmentation.
- Conducted performance benchmarking against pretrained models while gaining hands-on experience with T1-weighted MR image preprocessing, feature extraction for small-scale tumors.

PUBLICATIONS

- **A. Taher** and S. Anan, "Multiclass Brain Tumor Classification and Segmentation from 2D MR Images: A Deep Learning Approach Using Custom CNN and Residual Attention U-Net," 26th International Conference on Computer and Information Technology (ICCIT), pp. 1-6, 2023. DOI: 10.1109/ICCIT60459.2023.10441606
- **A. Taher**, W. I. Z. Ayon, and M. S. Hossain, "Histopathological Image-Based Classification of Lung and Colon Cancer Using Deep Learning Architectures with Preprocessing Enhancements," in Proceedings of the 27th International Conference on Computer and Information Technology (ICCIT), 2024. DOI: 10.1109/ICCIT64611.2024.11022478
- **A. Taher** and W. I. Z. Ayon, "Exploring Sleep Disorders: A Comparative Analysis of Machine Learning Algorithms on Sleep Health and Lifestyle Data," 2024 IEEE International Conference on Power, Electrical, Electronics, and Industrial Applications (PEEIACON-24), 2024. DOI: 10.1109/PEEIACON63629.2024.10800593

PROJECTS

- Alzheimer Parkinson disease detection using Brain MRI: Developed a robust model leveraging EfficientNet-B7, achieving an impressive accuracy of 99.36%.
- Malaria Parasite detection from thin blood smear images: Developed a CNN model from scratch to detect parasitized red blood cells using the NIH Malaria Dataset, achieving an impressive accuracy of 95%
- Brain Tumor MRI analysis using Transfer Learning: Utilized pre-trained VGG19 and ResNet50 models as feature extractors and trained a custom model for tumor detection, achieving an accuracy of 82%.
- Breast Cancer prediction: Applied KNN regression and classification algorithms to analyze a structured dataset, achieving 94% accuracy.
- Image Classification using CNN: Built a Convolutional Neural Network model from scratch using a Kaggle dataset, achieving 81% accuracy.
- Mall Customer prediction: Implemented an unsupervised machine learning approach to segment customers into categories using the K-Means clustering algorithm.

SKILLS

Programming Language	Python, C
Frameworks & Libraries	Keras, TensorFlow, PyTorch, Scikit-learn, Pandas, Seaborn
Paradigms	Machine Learning, Deep Learning, Algorithms
Visualization Tools	Lucidchart, Draw.io, Microsoft Power BI, Overleaf, PowerPoint

LANGUAGE PROFICIENCY TESTS

- **IELTS** – Overall Band Score: **7** (Listening: 8.0, Reading: 6.5, Writing: 6.5, Speaking: 6.5)

TEACHING EXPERIENCE

Junior Instructor January 14, 2024 - Present
Computer Science Chittagong, Bangladesh
Asian University For Women

- Conduct classes of total 18 hours/week .
- Course: Programming With Python, Computational Thinking & Programming, Computer Fundamentals

Lecturer July 04, 2023 – January 03, 2024
Department of CSE Chittagong, Bangladesh
Port City International University

- Conducted total 22.5 credits per semester.
- Course: Structured Programming, Computer Fundamentals & Programming Techniques,Discrete Mathematics
- I also conduct sessional courses

ACHIEVEMENTS

- Awarded the Bangladesh Technical Education Board Scholarship (BTEB) based on term results
- Received a merit based scholarship for the University Undergraduate Admission Test-2017
- Champion of the Regional Astronomy Olympiad (2014)
- Silver Medalist in the Regional Physics Olympiad (2013)

EXTRA-CURRICULAR ACTIVITIES

- "Professional Development Training" organized by Asian University for Women
- "Faculty Training & Development Program" organized by Center for Training, Development, Career Counseling & Placement, Port City International University Bangladesh
- Participated regional programming contest of CUET-CSE Fest (2018)
- Volunteered in fund raising and relief committee for the flood affected area