MD TASNIM JAWAD

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PROFESSIONAL EXPERIENCE

Graduate Assistant (GA) | Florida International University **August 2024 - Present**
Miami, FL

RESEARCH PUBLICATIONS

- "EFT-LR: Benchmarking Learning Rate Policies in Parameter-Efficient Large Language Model Fine-tuning." Md Tasnim Jawad, and Yanzhao Wu (Accepted manuscript in CIKM 2025)
- "Jailbreaking Large Vision Language Models in Intelligent Transportation Systems." Badhan Chandra Das, Md Tasnim Jawad, Md Jueal Mia, M. Hadi Amini, Yanzhao Wu (Accepted manuscript in ICMLA 2025)
- "GSNet: a multi-class 3D attention-based hybrid glioma segmentation network." Md Tasnim Jawad, Ashfak Yeafi, and Kalyan Kumar Halder. Optics Express, 31: 40881-40906, 2023.
- "Covid-19 identification from volumetric chest ct scans using a progressively resized 3d-cnn incorporating segmentation, augmentation, and class-rebalancing." Md Kamrul Hasan, Md Tasnim Jawad, Kazi Nasim Imtiaz Hasan, Sajal Basak Partha, Md Masum Al Masba, Shumit Saha, and Mohammad Ali Moni. Informatics in medicine unlocked, 26: 100709, 2021.
- "Associating measles vaccine uptake classification and its underlying factors using an ensemble of machine learning models." Md Kamrul Hasan, Md Tasnim Jawad, Aishwariya Dutta, Md Abdul Awal, Md Akhtarul Islam, Mehedi Masud, and Jehad F Al-Amri. IEEE Access, 9:119613- 119628, 2021.
- "Dermo-DOCTOR: A framework for concurrent skin lesion detection and recognition using a deep convolutional neural network with end-to-end dual encoders." Md Kamrul Hasan, Shidhartho Roy, Chayan Mondal, Md Ashraful Alam, Md Toufick E Elahi, Aishwariya Dutta, Raju, S.M. Taslim Uddin Raju, Md Tasnim Jawad, & Mohiuddin Ahmad. Biomedical Signal Processing and Control, 68: 102661. 2021.
- "Breast cancer classification using ensemble of machine learning boosting algorithms." Md Kamrul Hasan and Md Tasnim Jawad. In 2022 International Conference on Inventive Computation Technologies (ICICT), pages 444-451. IEEE, 2022.

PROJECTS

EFT-LR **October 2025**

- Build a benchmarking framework for fine-tuning LLM with PEFT methods (LoRA, QLoRA) under supervision of Professor Dr. Yanzhao Wu.
- Analyzed hyperparameter optimization and LR policy tuning through EFT-LR.
- Provided a comprehensive benchmark for future studies.

EnsembleBench Framework Contribution **September 2024**

- Collaborated on open-source development of EnsembleBench using Python and PyTorch under supervision of Professor Dr. Yanzhao Wu.
- Enhanced pytorchUtility.py by implementing ensemble methods, designed training notebooks for MNIST and FashionMNIST, and resolved critical bugs to improve framework efficiency and usability.

GSNet **November 2023**

- Developed an efficient segmentation network for glioma regions under supervision of Professor Dr. Kalyan Kumar Halder.
- Designed a lightweight model with Python, HTML, and JavaScript to address imbalanced 3D datasets and integrated pipeline into a GUI application for medical practitioners.
- Engineered hierarchical encoder-decoder architecture and attention-based skip connections.

Breast Cancer Classification Using Ensemble of ML Algorithms **July 2022**

- Engineered a weighted ensemble model combining XGBoost and AdaBoost for breast cancer detection under supervision of Professor Md. Kamrul Hasan.
- Achieved 97% accuracy by applying preprocessing techniques namely Outlier Rejection and Attribute Selection.
- Developed a web-based application using Streamlit for real-time predictions, leveraging algorithms such as Gaussian Naive Bayes, Random Forest, XGBoost, and AdaBoost.

SKILLS

- Languages: Strong reading, writing, and speaking competency in English and mother-tongue Bengali.
- Programming Languages: Proficient in Python (primary language), with experience in C and C++. Working knowledge of SQL, HTML, CSS, and JavaScript.
- Frameworks and Libraries: Expertise in Hugging Face Transformers and PyTorch, with extensive hands-on experience in tools and libraries for deep learning, machine learning, computer vision, data preprocessing, and model evaluation.
- Productivity Tools: MS Excel, Word, PowerPoint.

EDUCATION

Ph.D. **August 2024 - Present**

Florida International University (FIU); Miami-33199, FL
Research Interest: LLM, Computer Vision, ML/DL Optimization
Major: Computer Science, CGPA: 4.00/4.00

B.Sc. **January 2018 - March 2023**

Khulna University of Engineering and Technology; Khulna-9203, Bangladesh
Major: Electrical and Electronic Engineering, CGPA: 3.24/4.00
Thesis title: GSNet: A Multi-class 3D Attention-based Hybrid Glioma Segmentation Network

RELEVANT COURSEWORK

- Advance Topics in ML
- Digital Image Processing
- Digital Signal Processing
- Operating Systems
- Data Structures and Algorithms
- Theory of Computing
- Computer Fundamentals and Programming

ONLINE COURSEWORK

- Deep Learning
- DeepLearning.AI Tensorflow Developer
- Introduction to Data Science in Python

ACTIVITIES/INVOLVEMENT

- Won the FIU GPSC Travel Award, Florida International University (October), 2025
- Acted as an external Reviewer in the Web Conference (WWW), 2025.
- Acted as an external Reviewer: in the Computer Vision and Pattern Recognition Conference (CVPR), 2025.
- Served as a Research Assistant under supervision of Professor Md. Kamrul Hasan (2021-23).
- Acted as Technical Secretary in IEEE Student Branch KUET (2022-23).
- Gained 1 year of experience as an Ambassador for IEEEXtreme 14.0 (2020).
- Secured the Runner-Up position in the IEEE AUTHORSGATE 2019 competition, organized by IEEE Student Branch KUET (2018).
- Secured an impressive 10th position in the MATH OLYMPIAD hosted at the INTRA KUET MATH FESTIVAL 2018, as recognized by KUET Math Club.