Kazi Ferdous Hasan

+8801748266401 | kfh.ewu@gmail.com

kazi-ferdous-hasan | Kazi-Ferdous-Hasan

260, Khilgaon, Dhaka-1219, Bangladesh

Research Interests

Data Mining, Deep Learning, Natural Language Processing, and Image Processing.

Education

- **East West University** *October 2024 - December 2025*
  Master of Science in Computer Science and Engineering Dhaka, Bangladesh
  - CGPA: 4.00/4.00
  - Core Courses: Machine Learning, Pattern Recognition, Data Mining, Big Data Analytics, Statistics for Data Science, Data Structures, Algorithms

- **East West University** *January 2020 - September 2024*
  Bachelor of Science in Computer Science and Engineering Dhaka, Bangladesh
  - CGPA: 3.69/4.00
  - Core Courses: Machine Learning, Artificial Intelligence, Digital Image Processing, Data Structure, Statistics & Probability, Linear Algebra

Experience

- **Daffodil International University [🌐]** *March 2025 - August 2025*
  Lecturer (Contractual), Department of Software Engineering Birulia, Savar, Dhaka, Bangladesh
  - Taught Artificial Intelligence, Structured Programming, Software Engineering, and Computer Fundamentals

- **East West University [🌐]** *October 2024 - March 2025*
  Graduate Teaching Assistant (GTA) Aftabnagar, Dhaka, Bangladesh
  - Taught Structured Programming (C), Digital Logic Design (DLD), and Electrical Circuit

- **East West University [🌐]** *January 2024 - October 2024*
  Undergraduate Teaching Assistant (UTA) Aftabnagar, Dhaka, Bangladesh
  - Taught Object Oriented Programming (OOP), and Discrete Mathematics

Research Publications

C = Conference, J = Journal, S = In Submission

[J.1] Rashid, M. R. A., Hasan, K. F., et al. (2025). BERT-KAN: Enhancing bilingual sentiment analysis in bangladeshi E-commerce through fine-tuned large language models. *Natural Language Processing Journal*.

[J.2] Rashid, M. R. A., Hasan, K. F., et al. (2024). A comprehensive dataset for sentiment and emotion classification from Bangladesh e-commerce reviews. *Data in Brief*

[J.3] Islam, M. M., Hasan, K. F., et al. (2024). TFP-BD: An image dataset for Traffic Flow and Pedestrian movement analysis on Bangladeshi urban roads. *Data In Brief*

[S.1] Hasan, K. F., et al. Fusion of Reconstruction and Contrastive Self-Supervised Learning for Efficient 3D Object Detection in LiDAR Point Clouds. *Under Review: Nature Scientific Reports*

[C.1] Hasan, K. F., et al. (2025). Enhanced Stress Detection via Heart Rate Data: A Feature Selection and Stacking Ensemble Approach. Accepted for presentation at NCIM 2025, DUET, Gazipur, Bangladesh. *IEEE Xplore*.

[C.2] Hasan, K. F., et al. (2024). Load Balancing Algorithm: A Markov Chain Model Using Queuing Theory Approach. Accepted for presentation at ICISET 2024, IIUC, Chittagong, Bangladesh. *IEEE Xplore*

[C.3] Hasan, K. F., et al. (2024). Deep Learning Approaches for the Differential Diagnosis of Benign and Malignant Bladder Lesions from MRI Scans. Accepted for presentation at ICDMIS 2024, West Bengal, India. *Springer Nature Link*

Research Projects

- **Dual Path Self Supervised 3D Perception: ReconTrast & JST-SSL for Sparse Industrial LiDAR** *MSc Thesis*
  [PyTorch, Self-Supervised Learning, 3D Perception]
  - Developed hybrid self-supervised frameworks (ReconTrast for hybrid geometric contrastive representation learning and JST-SSL for spatio-temporal consistency).
  - Demonstrated strong feature learning, accuracy, and label efficiency in the application of warehouse automation systems.
- **Empirical Analysis of LLMs for Multilingual Product Sentiment Analysis in Bangladesh E-Commerce** *BSc Thesis*
  [PyTorch, NLP (LLM), Kolmogorov-Arnold Networks]
  - Addressed the code mixed (Bengali & English) challenges in reviews from e-commerce platforms: Daraz and Pickaboo
  - Developed SentiBERT-KAN integrating BERT with Kolmogorov-Arnold Network layer
- **ProdBot: Product Recommendation Chatbot using RAG and Vector Database** *Capstone Project*
  [RAG, Vector Databases, NLP (LLM)]
  - Built full product recommendation system for e-commerce

Honors and Awards

- **Gold Medal** *2026*
  East West University
  - Awarded for securing perfect CGPA of 4.00/4.00 in Master of Science in Computer Science and Engineering at the 25th Convocation.

Technical Skills

- **Programming Languages:** Python, C++, C, Java, SQL
- **Machine Learning & Data Science:** PyTorch, TensorFlow, Scikit-learn, NumPy, Pandas, Matplotlib, Seaborn
- **Large Language Models (LLMs):** Hugging Face (Transformers), OpenAI API, Vector Databases (Pinecone), LoRA/QLoRA, Prompt Engineering
- **Developer Tools & Platforms:** GitHub, Linux, LaTeX, Visual Studio Code, Jupyter

Leadership Experience

- **Sub Executive** *June 2022 - November 2022*
  East West University Computer Programming Club (EWUCoPC)
  - Organized Inter University Programming Contest. 2022
  - Organized In house Programming Battle, 2022
  - Organized Inter University Gaming Contest, 2022