Khondakar Ashik Shahriar

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Google Scholar Researchgate ORCID
Github Kaggle

Education

Bangladesh University of Engineering and Technology (BUET), Bangladesh
BSc. in Electrical Engineering & Computer Sciences 2022 – June, 2026
CGPA: 3.61/4.0

Technical Skills

Programming C, C++, Embedded C, Python, Verilog, MATLAB, Micropython, Arduino, HTML, JavaScript, CSS
Research: LATEX, Microsoft Word, R, DrawIO, Numpy, Pandas, Scikit-learn, Tensorflow, Pytorch, Corresponding Authorship
Design: System Integration, Data Acquisition, Version Control; (Git/Github), PCB Design (Proteus, EasyEDA)
Device: Arduino Uno, Arduino Mega, Arduino Nano, ESP-32, ESP-CAM, Raspberry PI Pico, Raspberry PI, FPGA Board, STM-32.

Honors and Awards

- IEEE VIP CUP 2025 - (2nd Runner-Up-Team EyeQ).
- KUET BitFest Datathon - Champion.
- EEE Day BUET 2023 Project Showcasing - 2nd Prize.
- Undergraduate Dean's List Award (level-1/Term-1).
- 5th in National Physics Olympiad (2018).

Research Experience

Journal Article

1. **Glioma Grade Classification: Hypertuned CNN with Saliency-Based Insight from MRI, *IEEE Access*, 2025**.
2. **Lightweight Domain-Adaptive Modulation Classification Under SNR and Channel Mismatch, *IEEE Wireless Communication Letters*, 2026**.
3. **Why Nonlinear Models Matter: Unified Analysis of Cognitive Load, Stress, and Exercise Using Wearable Physiological Signals, *Physiological Measurements IoPScience*, 2026**.
4. **Generalize Beyond the Lens: Deep Magnification Adaptation in Breast Cancer Histopathology, *IJACIS, Springer*, 2026**.
5. **Lightweight Privacy-Preserving Human Activity Recognition from CSI Data using CNN-Temporal Attention Network, *Digital Discovery, RSC*, 2026**.
6. **Supervised autoencoder for gradient and BCG artifact removal in EEG during simultaneous EEG-fMRI, *Magnetic Resonance Imaging, Elsevier*, 2026**.

Conference Proceedings

1. **Bidirectional EEG–fMRI Reconstruction via a Shared Latent Space for Cross-Modal Neuroimaging(ISMRM-2026)**
2. **EGD-YOLO: A Lightweight Multimodal Framework for Robust Drone-Bird Discrimination via Ghost-Enhanced YOLOv8n and EMA Attention under Adverse Condition**.
3. **Multimodal Physiological Signal Classification from Wearables: Towards Interpretable Stress and Exercise Recognition**.

Under Review

1. **Raman Spectroscopy-Based COVID-19 Screening: A Physics-Informed Deep Spectral Framework** (Spectrochemia Acta:A , Elsevier).
2. **Cross-Spectral Second-Order Modeling for Robust Event Detection in Distributed Fiber Channels** (IEEE Communication Letters) (1st Revision).
3. **Lightweight Resolution-Aware Audio Deepfake Detection via Cross-Scale Attention and Consistency Learning** (PLOS One).
4. **Uncertainty-aware personalized estimation of Parkinson's disease severity from longitudinal speech** (PLOS One) (1st Revision).

Work in Progress

1. **Adaptive Temporal Dynamics for Multimodal Emotion Recognition: A Liquid Neural Network Approach**.
2. **Geometry-Aware Feature Learning With Adaptive Loss Weighting for Radar Signal Classification**

Reviewer Activity

Measurement Science and Technology (IoPScience), PLOS One, Medical Engineering & Physics (IoPScience).

Extra Curricular Activities

1. **Vice President: IEEE Student Branch, BUET**.
2. **Vice Chairperson: IEEE RAS Student Branch, BUET**.
3. **Vice President(Technical): BUET Robotics Society**

Additional Information

Fields of Interest: Wireless Communications, Signal Processing, Generative AI, Edge-Computing, Biomedical Signal Processing, Wearable Electronics. **Hobbies** Travelling, Writing, Mountaineering.