Asif Islam

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EDUCATIONAL QUALIFICATIONS

Bangladesh University of Engineering and Technology   Dhaka, Bangladesh
B.Sc. in Electrical and Electronic Engineering (Major: Communication and Signal Processing)   *April 2019 – May 2024*

• **CGPA:** 3.36 out of 4.00

• **Thesis:** CAPRes50-GAN: A Real-World Approach for Word-Level Sign Language Recognition Exploiting GAN-based Classifier

TOEFL   iBT Test
***Total Score:** 104*   *Test Date: July 13, 2024*
Reading: 28, Listening: 22, Speaking: 27, Writing: 27

GRE   General Test
***Total Score:** 322*   *Test Date: October 6, 2025*
Quant: 170/170, Verbal: 152/170

RESEARCH EXPERIENCE

Research Engineer   Feb 2025 – present
Advanced Intelligent Multidisciplinary System (AIMS) Lab   *United International University, Bangladesh*
• Working on projects related to Brain Computer Interface, Natural Language Processing and Eye Gaze Estimation

• Developed real-time EEG signal processing for attention classification, aided by eye gaze estimation, with feedback mechanism through LLM

Intern   2023–2023
Bangladesh Satellite Company Ltd   *Dhaka, Bangladesh*
• Conducted analysis on satellite technologies

• Attended workshops on SOCC, NOCC etc.

RESEARCH AND PUBLICATIONS

Proceedings

• A. Deb, R. Roy, A. Islam, I. Islam, A. Musabbir, M. S. S. Rian and C. Shahnaz, ”**Enhancing Communication for the Deaf and Hard-of-Hearing: A Custom Deep Learning Model-Based Approach for Real-Time Sign Language Recognition and Translation,**” 2024 IEEE 12th Region 10 Humanitarian Technology Conference (R10-HTC), Kuala Lumpur, Malaysia, 2024, pp. 1-6, doi: 10.1109/R10-HTC59322.2024.10778790.

• A. Deb, S. I. Ahmed, A. Islam, M. Haque, S. A. Fattah and C. Shahnaz, ”**A Real-time Automatic Dengue Breeding Zone Detection and Prevention Scheme based on MobileNetV2 Enabled Autonomous Drone,**” 2023 26th International Conference on Computer and Information Technology (ICCIT), 2023, pp. 1-6, doi: 10.1109/ICCIT60459.2023.10441054.

• A. Deb, Asaduzzaman, R. Roy, A. Islam, C. Shahnaz, and M. Saquib, ”**N2N2N: A Clean Data Independent Speech Enhancement Approach with Modified cGAN,**” TENCON 2024 - 2024 IEEE Region 10 Conference (TENCON). IEEE, pp. 1474–1477, Dec. 01, 2024. doi: 10.1109/tencon61640.2024.10903013

• A. Deb, R. Roy, M. S. Sadik Rian, A. Islam, and C. Shahnaz, ”**Dpmas-net: A privacy-preserving deep learning model for emg-based hand gesture recognition with time-frequency domain features,**” in 2024 IEEE Region 10 Symposium (TENSYMP). IEEE, Sep. 2024, p. 1–6. [Online]. Available: http://dx.doi.org/10.1109/TENSYMP61132.2024.10752112

• Detailed list of proceedings available at asifprotick10.github.io/publications.html

Current Works

• A. Islam, A. Deb, R. Roy, C. Shahnaz, and G. Sharma ”**CAPRes50-GAN: A Real-Time Approach for Word-Level Sign Language Recognition Exploiting GAN-based Classifier,**” Journal in preparation

• A. Islam, F. Ishtiaque, M. Haque, K. M. Rahman, R. Vaidyanathan, and K. A. Mamun ”**NeuroPilot: A Realtime Brain-Computer Interface system to enhance concentration levels in online learning for students,**” Journal in preparation, https://github.com/asifprotick10/BCIforConcentrationDetectionInOnlineLearning

Technical Skills

Programming Languages: Python, MATLAB, C, C++

Deep Learning Frameworks: PyTorch, TensorFlow

Libraries & Tools: NumPy, Pandas, Scikit-learn, OpenCV, Git, Docker, Librosa, TorchVision, MediaPipe

Robotics & Automation: ROS- Noetic, ROS2, DroneKit, Arduino, Raspberry PI (Linux)

Software: Psychopy, VS Code, PSpice, Proteus, Keil MDK, Anaconda Navigator, Simulink

Web Development: HTML, Django, CSS

Graphic Design, Video Editing & 3D Modeling: ANSYS, Solidworks, Inkscape, AutoCAD

Hardware Proficiency: Embedded System, Embedded System Programming

Awards and Honors

• Finalist - BioTech Category in BEAR SUMMIT and National Semiconductor Symposium - Awarded for the project NeuroPilot: A Realtime Brain-Computer Interface system to enhance concentration levels in online learning for students - 2025

• National Round Winner - Health Systems Innovation Hackathon - Awarded for the innovative idea of using Agentic AI, federated learning and Brain Computer Interface to develop empathetic AI therapist for people with Mental Disorder - 2025

• Assistant Technical Secretary of ICCIT - 2024

• HTC Silver Award - For innovation entitled CHINHO: An AI based Smart Wearable Sign Language Interpreter for People with Hearing and Speech Disability - 2024

• Champion - IEEE R10 Robotics Competition - Awarded for developing an autonomous Drone that can detect Mosquito breeding zone and descend upon detection to actuate bio-friendly BTI spray without any ground control along with obstacle avoidance- 2023

• Runners Up - IEEE SPS 5-Minute Video Clip Contest (ICIP) - For the autonomous drone project - 2023

• IEEE WIE Big Idea Pitch Competition winners - 2023 and 2024

Extracurricular Activities

Assistant Technical Secretary   Dec – 2024
ICCIT 2024   *Cox's Bazar, Bangladesh*
  • Aided in the coding of programs necessary to automate the conference submissions and final checks, and directed hybrid technical sessions arranged by ICCIT

Publicity Coordinator   2023 – 2024
IEEE BUET Student Branch   *Dhaka, Bangladesh*
  • Aided in organizing functions of IEEE SPS, and volunteered in Conferences arranged by ICCIT and PES

Undergraduate Projects

Delivery Drone with Arduino   2024
Robotics and Automation Lab   *Arduino, Sensors, Robotics and Automation*
  • Used Arduino for precise control and navigation of the drone tailored for medicine delivery

Smart Trash Collector Integrated with AI   2022
Communication System-II Project   *Arduino, RasPI, Wireless-Comm, Robotics, Solidworks*
  • Employed computer vision to correctly identify waste and sort them in baskets

DL-based Automatic License Plate Detection System   2021
Digital Signal Processing Lab   *Python, PyTorch, YOLO, Transfer Learning, MATLAB*
  • Utilized advanced deep learning algorithms(YOLO, ResNet) for accurate license plate detection.