MD NAZRUL ISLAM

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Google Scholar | ResearchGate | Website

Research Interests:

- Vision Language, Robotics, NLP, LLMs, Security of LLMs.

Education:

Khulna University of Engineering & Technology (KUET), Khulna, Bangladesh January 2018 - February 2023
- B. Sc. in Computer Science & Engineering
- CGPA: 3.68 out of 4.00 (Ranked in the top **20%** in the Department of Computer Science and Engineering (CSE) at KUET.)

Professional Experience:

Lecturer at CSE Department February 2024 - Onwards
- Southeast University, Dhaka, Bangladesh

Lecturer at CSE Department July 2023 - February 2024
- Uttara University, Dhaka, Bangladesh

Part-time Lecturer at CSE Department March 2023 - July 2023
- Central University of Science and Technology, Dhaka, Bangladesh

Standardized Test Scores:

IELTS Academic, Exam: 11 October 2024 – Overall Band Score: 7.5
- (Listening: 7.5, Reading: 8.0, Writing: 6.5, Speaking: 7)
- IELTS Reference number: *A3-BD001-A-12054929,* TRF number: *24BD507339ISLM001A*

Publications:

Journals:

1. Ovishake Sen, Mohtasim Fuad, **Md Nazrul Islam**, Jakaria Rabbi, Mehedi Masud, Md Kamrul Hasan, Md Abdul Awal, Awal Ahmed Fime, Md Tahmid Hasan Fuad, Delowar Sikder, Md Akil Raihan Iftee. "Bangla natural language processing: A comprehensive analysis of classical, machine learning, and deep learning-based methods." *IEEE Access* 10 (2022): 38999-39044.

2. Md Tahmid Hasan Fuad, Awal Ahmed Fime, Delowar Sikder, Md Akil Raihan Iftee, Jakaria Rabbi, Mabrook S Al-Rakhami, Abdu Gumaei, Ovishake Sen, Mohtasim Fuad, **Md Nazrul Islam**. "Recent advances in deep learning techniques for face recognition." *IEEE Access* 9 (2021): 99112-99142.

Conferences:

1. Towsif Ahamed, **Md Nazrul Islam**, SM Taslim Uddin Raju, MMA Hashem. "Blood Donor Arrival Forecasting Using Regression Model and Analysis of Donor Behavioural Pattern." In *2022 25th International Conference on Computer and Information Technology (ICCIT)*, pp. 897-902. IEEE, 2022.

Honors and Achievements:

- Ranked **10th** globally and 1st among Bangladeshi teams in the *Indian Rover Design Challenge (IRDC)* 2020 organized by *Mars Society South Asia (MSSA)* **as a member of *"Team Durbar"*** from **KUET**.

- Enlisted for the ***Dean's Award*** by the Faculty of Electrical and Electronic Engineering in the academic year **2018-2019** and **2019-2020** respectively from **KUET.**

Certifications:

1. "Deep Learning Specialization" from DeepLearning.AI, Coursera
2. "DeepLearning.AI TensorFlow Developer Professional Certificate" from DeepLearning.AI, Coursera
3. "Machine Learning Specialization" from Stanford University, Coursera

Projects:

- BanglaBERT-Defense: Analyzing Adversarial Attacks in Low-Resource NLP | Pytorch, Python
  - A project for improving NLP security for low-resource languages, especially Bangla. Here, I set out to answer a simple question: How vulnerable are our best Bangla language models to adversarial attacks?
- Simple Reinforcement Learning and Lightweight LLM for Text-to-SQL Generation | Pytorch, Python
  - A tiny BERT-based model—paired with a simple reinforcement learning (RL) algorithm that could translate English texts into proper SQL commands. Here I used well-known Spider dataset.
- Simulation of Season Change using OpenGL | OpenGL, C++
  - The project contains a 3D scene of a village where the change of season is shown. The scene is developed using textures, lighting properties and shading.
- ML Toolkit & Projects: Learning through Experimentation | Python, TensorFlow, SciPy, Scikit-learn, NumPy, Pandas
  - The repository features various machine learning algorithms and tools to demonstrate how they work and to build practical projects. It covers clustering methods such as DBSCAN and K-Means, as well as classification models including Decision Trees, SVM, and others.
- Blood Transfusion System | Java, OSM, Firebase, Android Studio
  - The android application is built by maintaining traditional software development methods. It is constructed keeping in mind the Blood Transfusion Unit.
- Animal World | Python, OpenCV, Matplotlib
  - A simple simulation of three animals' ecosystems has been developed for AI Lab.
- Cinema Hall Booking System | HTML, CSS, ASP dot net
  - A website is built using ASP.net for booking or buying movies and making payments.
- Mini Compiler | C, CPP, Flex, Bison
  - It is a simple compiler where basic arithmetic and logical operations are implemented together with for and while loops. Also, the function definition is present.

Technical Skills:

- *Programming Languages:*
  - C++, Java, Python
- *Machine Learning Toolkit:*
  - TensorFlow, Pytorch, NumPy, SciPy, Scikit-learn, Pandas, OpenCV
- *Framework and Application Toolkits:*
  - Android Studio, Cisco Packet Tracer, Debian Based Linus Distros
- *Version Control and Documentation Preparation Tools:*
  - Git, Latex, Overleaf

Programming Activities:

- Codeforces
  - Handle: nz_nAJn, 185+ problems solved

Leadership and Volunteer Experience:

- Vice President (March 2022-March 2023)
  - Hardware Acceleration Club of KUET (HACK), KUET
  - Managed club activities, organized events, and conducted workshops on commonly used microcontrollers
- Senior Programmer (September 2020-December 2022)
  - Software Sub-Team, KUET Mars Rover, Team Durbar, KUET
  - Contributed to the computer vision component, including the development of a lightweight Convolutional Neural Network (CNN) for object recognition.
- Junior Programmer (March 2019- September 2020)
  - Software Sub-Team, KUET Mars Rover, Team Durbar, KUET
  - Worked with Arduino and Raspberry Pi to implement key systems for the Mars Rover.

References:

Provide on request.