**Md. Roni Khan**  
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**Research Interests**

Deep learning and Machine learning, Biomedical engineering, Sustainable agriculture, and Microgrid optimization.

**Education**

**B.Sc. Engineering in Electrical and Electronic Engineering**

CGPA of 3.89 out of 4.00 (1st position in the batch)

Gopalganj Science and Technology University,

Gopalganj-8100, Bangladesh

September 2025

**Research Experience**

**1. Deep Learning-Driven Brain Tumor Sectionalisation: Leveraging Deep Learning for MRI Analysis (**Contribute to the paper as a first author)

DOI: <https://doi.org/10.1109/QPAIN66474.2025.11172256>

**2. YOLO11 for High Accuracy Real-Time Detection and Classification of Diverse E-Waste Categories: Enhancing Recycling Efficiency (**Contribute to the paper as a third author)

Accepted to the Engineering Reports journal

**3. Cervical Cancer Detection Using Pap Smear Images with Deep Learning** (Contribute to the paper as a first author)

Under review at the Journal of Medical Systems

**4.** **FarmChat: An LLM RAG-powered Real-Time Tomato Leaf Disease Detection and Farmer Assistance in Bangla**

Final year thesis work, yet to be submitted to a renowned journal.

**Undergraduate Projects**

**1. IoT-based automatic car accident detection and sending a rescue message (Course Project)**

**2. Portable wind turbine generator for mobile and low-wattage charging device (Competitive project)**

**Training**

**Industrial Training**  
Training Institute for Chemical Industries (TICI),

Narsingdi, Bangladesh

January 18 – 30, 2025

**Skills**

* **Machine Learning & DL**: PyTorch, TensorFlow, Scikit-learn, LangChain, Large Language Model (LLM), YOLOv5–v11, OpenCV, DETR, Detectron2
* **Programming**: Python, MATLAB, C, C++
* **Soft Tools**: Google Colab, VS Code, PyCharm
* **Microsoft Office**: Word, Excel, PowerPoint
* **Simulation**: Proteus, AutoCAD, MATLAB

**Extra Co-curricular Activities**

* **Competition:** Participated two times in IIEC TECHNOCRATS AND TECHNOCRATS V.2
* **IoT Training:** Completed 1-3 segments of the Robotics course from Roboment Bangladesh through online
* **Workshop:** Leadership and Communicative Skills Development Trainingby Inspiration for Human Welfare

**Language**

* **Bangla:** Native speaker
* **English:** Fluent in Reading, Writing, Listening and Speaking.