

# NAZMUL HUDA BADHON

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[LinkedIn](#) | [Google Scholar](#) | [Portfolio](#)



Graduate with peer-reviewed publications in deep learning and machine learning, with experience in convolutional neural networks. International academic exposure through a funded exchange study.

## EDUCATION

Bachelor of Science	Computer Science and Engineering Daffodil International University CGPA: 3.88 / 4.00	Spring 2022–Fall 2025 Dhaka, Bangladesh
	Computer Engineering (Exchange Semester) Dongseo University, GPA: 3.94 / 4.50	Fall 2023 Busan, South Korea

## RESEARCH INTERESTS

Designing computationally efficient deep neural network architectures.  
Developing robust and generalizable deep learning models for real-world applications.

## RESEARCH PUBLICATIONS

### Research Articles

1. **Nazmul Huda Badhon**, Imrus Salehin, Md. Tomal Ahmed Sajib, Md. Sakibul Hassan Rifat, S M Noman, Nazmun Nessa Moon. [TLCNN: tabular data-based lightweight convolutional neural network for electricity energy demand prediction](#). Global Energy Interconnection (Q1), Elsevier, 14 Nov 2025. ISSN: 2590-0358.
2. Md. Tomal Ahmed Sajib, **Nazmul Huda Badhon**, Imrus Salehin, Md. Sakibul Hassan Rifat, Faysal Ahmmed, Nazmun Nessa Moon. [A comparative deep learning methodology for plant insect image classification: assessment of CNN architectures and augmentation techniques](#). MethodsX (Q2), 103680, Elsevier, 17 Oct 2025. ISSN: 2215-0161.

### Systematic Review

3. Imrus Salehin, Md. Tomal Ahmed Sajib, **Nazmul Huda Badhon**, Md. Sakibul Hassan Rifat, Nazrul Amin, Nazmun Nessa Moon. [Systematic Literature Review of LLM-Large Language Model in Medical: Digital Health, Technology and Applications](#). Engineering Reports (Q2), 7.9: e70365, Wiley, 12 Sep 2025. ISSN: 2577-8196.

### Data Article

4. Imrus Salehin, Mahbubur Rahman Khan, Ummya Habiba, **Nazmul Huda Badhon**, Nazmun Nessa Moon. [BAU-Insectv2: An Agricultural Plant Insect Dataset for Deep Learning and Biomedical Image Analysis](#). Data in Brief (Q3), 110083, Elsevier, 23 Jan 2024. ISSN: 2352-3409.

### Book Chapter

5. Imrus Salehin, **Nazmul Huda Badhon**, Md. Tomal Ahmed Sajib, Md. Sakibul Hassan Rifat, Nazmun Nessa Moon. [Predicting Peak Energy Demand Using Machine Learning Techniques for Efficient Electricity Supply Management](#). Engineering Applications of AI for Demand Forecasting, Taylor & Francis. [Accepted on 24 Apr 2025 \(In press\)](#).

## PROJECTS

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### Selected Research Projects

1. **Breast Cancer Classification using Hybrid Segmentation Deep Learning**
  - Built a two-stage U-Net and CNN-based hybrid model on the BUSI datasets.
  - Achieved strong performance on accuracy and ROC metrics.
2. **Lung and Colon Cancer Histopathology Classification**
  - Applied preprocessing on histopathology and evaluated transfer learning models.
  - Identified the best-performing model by accuracy and F1-score.
3. **Vision Transformer–Based Medical Image Classification**
  - Designed preprocessing workflows for medical images and classification with ViT.
  - Achieved 87% testing accuracy and improved transformer performance.

### Additional Projects

4. **Lost and Found Web Application**
  - Developed a full-stack web app with HTML, CSS, and JS for reporting and searching lost and found items.
  - Implemented PHP-based backend, REST APIs, MySQL database, and secure user/admin authentication with image upload support.

## SCHOLARSHIPS AND AWARDS

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- Global Korea Scholarship (GKS)**–fully funded exchange scholarship Fall 2023  
Govt. of the Republic of Korea
- Special Scholarship** for Consistent Academic Excellence Spring 2022–Fall 2025  
Daffodil International University
- Research Award** for Outstanding Undergraduate Research Contribution 2024  
Division of Research, Daffodil International University

## TECHNICAL SKILLS

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- **Machine Learning & Deep Learning:**  
Convolutional Neural Networks, U-Net, Vision Transformers, Transfer Learning
- **Frameworks & Libraries:** PyTorch, TensorFlow, Keras, Scikit-learn, OpenCV
- **Programming:** Python, Java, C
- **Data Analysis & Visualization:** NumPy, Pandas, Matplotlib, Seaborn
- **Tools & Platforms:** GitHub, Google Colab, LaTeX

## ACADEMIC SERVICE & LEADERSHIP

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- Peer Reviewer Recognition** 2025  
Journal: Digital Health Publisher: SAGE Publishing
- Volunteer Internship** 2024  
International Affairs, Daffodil International University
- Team Leader** 2023  
International Camping, Dongseo University, Busan, South Korea

## REFERENCES

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