# Md. Naimur Asif Borno

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## **EDUCATION**

# Rajsahi University of Engineering and Technology

Bachelor of Science in Mechatronics Engineering

**CGPA**: 3.44/4.00

Last 4 semester avg. CGPA: 3.64/4.00

Feb 2019 - April 2024 Rajshahi, Bangladesh

# RESEARCH INTERESTS

Diffusion Models, Image Editing & Inpainting with Illusions or Structure Guidance, Vision Transformers & Attention Mechanisms, Image-to-Image Translation, Medical Image Generation & Classification, Continual Learning & Knowledge Distillation,

# RESEARCH EXPERIENCE

**Research Assistant** Nov 2024 - Ongoing

Supervisor: Dr. Mohammad Ali Moni

Faculty of Health, Medicine and Behavioural Sciences

The University of Queensland

308 Queen St, Brisbane City, QLD 4000, Queensland, Australia

Research Topic: 1

- Developing a frequency-aware diffusion framework that fuses multi-image frequency components and injects prompt-based attention maps for controllable, structure-style-semantic disentangled image synthesis.
- Targeted Venue AAAI, 2025.

Research Topic: 2

- Latent-Based Continual Learning with Dual-Layered Distillation and a Streamlined U- Net for Efficient Text-to-Image Generation (Manuscript Under Review).

Research Topic: 3

- Decentralized LoRA Augmented Transformer with Context-aware Multi-scale Feature Learning for Secured Eye Diagnosis (Manuscript Under Review).

**Research Assistant** Aug 2024 - Dec 2024

Advance Machine Intelligence Research Lab (https://amirl.org/)

Supervisor: Jungpil Shin, PhD

School of Computer Science and Engineering

University of Aizu

Research Topic:

- Percept-Diff: Innovations in Stable Diffusion for High-Fidelity IHC Image Generation in HER2 Breast Cancer **Incorporating Perceptual Loss**
- Published on 2024 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT)

## PROFESSIONAL EXPERIENCE

The Sparks Foundation (Remote)

Data Analyst And Business Analytics Intern

**Forbs Marshall** 

Intern

Jan 2023 - Mar 2023 Singapore Jun 2022 - Aug 2022 Dhaka,Bangladesh

Dhaka,Bangladesh

### RESEARCH PUBLICATIONS

Borno, M.N.A., Shovon, M.S.H., Al-Moisheer, A.S. and Moni, M.A., 2025. Latent-Based Continual Learning with Dual-Layered Distillation and a Streamlined U- Net for Efficient Text-to-Image Generation. Under review at Future **Generation Computer Systems** 

Borno, M.N.A., Shovon, M.S.H., Sikder, M.D., Rimi, I.F., Alahmadi, T.J. and Moni, M.A., 2025. Decentralized LoRA Augmented Transformer with Context-aware Multi-scale Feature Learning for Secured Eye Diagnosis. Under review at **Knowledge-Based Systems** 

M. N. A. Borno, M. T. Raihan, A. Ahmed, M. S. H. Shovon, J. Shin and M. F. Mridha, "Percept-Diff: Innovations in Stable Diffusion for High-Fidelity IHC Image Generation in HER2 Breast Cancer Incorporating Perceptual Loss," 2024 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT), Sakhir, Bahrain, 2024, pp. 520-526, https://doi.org/10.1109/3ict64318.2024.10824425.

Borno, N., Mazumder, D., and Ghosh, A., 2023, December. The Categorization of Surface Irregularities Presents on the Hot-Rolled Steel Strip, Encompassing Six Distinct Types of Surface Anomalies, Achieved through the Implementation of Vision Transformer. In 6th Industrial Engineering and Operations Management Bangladesh Conference, https://doi.org/10.46254/BA06.20230101.

# LANGUAGE PROFICIENCY

IELTS Academic: Overall Band Score 7MayListening: 7.5, Reading: 7, Writing: 6.5, Speaking: 62025

## TECHNICAL COMPETENCIES

**Programming** Python, C++, Java

ML Libraries Data analysis, Scikit-Learn, NumPy, Pandas,

Matplotlib, Seaborn, Matlab etc.

Cloud AWS, Azure, GCP, Mlflow, Fast Api, Streamlit

etc.

Vision Diffusers, Transformers, PIL, OpenCV, Model

Development, CNN, Generative ai, Object

Detection, Segmentation etc.

Miscellaneous Git, Github, Latex, Microsoft Word, Microsoft

Excel, Microsoft PowerPoint, Adobe Illustrator

etc.

## **SPECIALIZED COURSES**

Coursera Exploratory Data Analysis for Machine

Learning (Certificate)

**Coursera** introduction to Tensorflow for Artificial

Intelligence, Machine Learning and Deep

Learning (Certificate)

**Coursera** Statistics for Data Science with Python

(Certificate)

Coursera Neural Networks and Deep

Learning(Certificate)

Deep Learning.ai Convolutional Neural Networks in

Tensorflow(Certificate)

Deep Learning.ai Custom Models, Layers and Loss Functions

with Tensorflow(Certificate)

Coursera Generative Ai

# **AWARDS & HONORS**

Face The Case 3.0	Top 10
IEEE CUET Student Branch	2023
Cognizent 2.0	Top 8
Ruet, IPE Club	2023
Internship Completion	2023
Forbs Marshall	

**Data Science and Bussiness Analytics Internship Completion** 

The Sparks Foundation

2023

#### **ACTIVITIES & INTERESTS**

Traveling, Movies, Singing, Photography, Books

#### REFERENCES

#### Dr. Mohammad Ali Moni

School of Health and Rehabilitation Sciences Faculty of Health, Medicine and Behavioural Sciences The University of Queensland 308 Queen St, Brisbane City, QLD 4000, Queensland, Australia.

Email: m.moni@uq.edu.au

#### Md. Faisal Rahman Badal

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Department of Mechatronics Engineering
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