# A. F. M. MINHAZUR RAHMAN

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#### **ABOUT**

I am a Computer Science and Engineering (CSE) graduate from Rajshahi University of Engineering & Technology (RUET), Bangladesh, where I earned a Bachelor of Science degree with first-class honors, ranking first in my class. I earned a Master of Science degree in CSE at RUET, where my thesis involved deep learning-based image segmentation for medical image analysis. Currently, I serve as an Assistant Professor at the same institution. My research focuses on deep learning, particularly in computer vision tasks, including segmentation and classification. I am passionate about contributing to advances in computer vision, a field that I believe will significantly shape the future.

#### RESEARCH INTERESTS

Computer Vision, Deep Learning, Artificial Intelligence, Multimodal Learning, Medical Image Analysis

# **EDUCATION**

Master of Science | Computer Science & Engineering (CSE)

2025

Rajshahi University of Engineering & Technology (RUET)

Rajshahi, Bangladesh

CGPA: 4.00/4.00

- Relevant coursework: Machine Learning, Advanced Digital Image Processing, Advanced Artificial Intelligence, Data Mining, Natural Language Processing
- Thesis title: An Effective Deep Learning Approach for Analysis of Abnormalities in MRI Images
- Thesis supervisor: Dr. Md. Ali Hossain, Professor, CSE, RUET

Bachelor of Science | Computer Science & Engineering (CSE)

2021

Rajshahi University of Engineering & Technology (RUET)

Rajshahi, Bangladesh

CGPA: 3.89/4.00, Department Position: 1st

- Relevant coursework: Digital Image Processing, Digital Signal Processing, Neural Networks & Fuzzy Logic, Artificial Intelligence, Technical Writing & Presentation, Vector Analysis & Linear Algebra, Object Oriented Programming, Applied Statistics, Data Structure, Computer Algorithms
- Thesis title: Hyperspectral Image Classification Using Factor Analysis and Convolutional Neural Networks
- Thesis supervisor: Dr. Boshir Ahmed, Professor, CSE, RUET

#### WORK EXPERIENCE

# Rajshahi University of Engineering & Technology

Assistant Professor, Department of Computer Science & Engineering Lecturer, Department of Computer Science & Engineering Rajshahi, Bangladesh September 2024 – Present December 2021 – September 2024

- Supervised 10 undergraduate students in their theses on deep learning, computer vision, and image analysis, providing guidance on research methodologies and project execution
- Courses taught: Algorithm Analysis & Design, Applied Statistics, Technical Writing & Presentation, Operating Systems, Parallel & Distributed Systems

#### North Bengal International University

Lecturer

Rajshahi, Bangladesh March 2021 – December 2021

- Supervised undergraduate students in their software development projects
- Courses taught: Object Oriented Programming with Java, Computer Architecture & Organization

# **Published Book Chapters**

• A. F. M. Minhazur Rahman and Boshir Ahmed. "Hyperspectral Image Classification Using Factor Analysis and Convolutional Neural Networks." In Mohammad Shamsul Arefin, M. Shamim Kaiser, Anirban Bandyopadhyay, Md. Atiqur Rahman Ahad, and Kanad Ray, editors, *Proceedings of the International Conference on Big Data, IoT, and Machine Learning*, pages 129–139, Singapore, 2022. Springer Singapore.

# **Accepted Book Chapters**

• A. F. M. Minhazur Rahman and Md. Ali Hossain. "Ensemble-Based Transfer Learning Approach for Brain Tumor Segmentation from MRI Images." Accepted and presented at the International Conference on Big Data, IoT, and Machine Learning: BIM 2023. Currently under editing for publication in a Taylor & Francis book.

# **Published Conference Papers**

- A. F. M. Minhazur Rahman, and Md. Ali Hossain. "Attention-refined U-Net with Skip Connections for Effective Brain Tumor Segmentation from MRI images." In 2023 26th International Conference on Computer and Information Technology (ICCIT), pages 1–6, 2023.
- Sunayana Ghosh, **A. F. M. Minhazur Rahman**, Plabon Talukder, Md. Ali Hossain, and Azmain Yakin Srizon. "A Multimodal Approach to Bengali Music Genre Classification Using 1D CNN and ResNet-50." In 2024 27th International Conference on Computer and Information Technology (ICCIT), pages 1–6, 2024.
- Noman Amin, Anwar Hossain Efat, A. F. M. Minhazur Rahman, and S. M. Mahedy Hasan. "Enhanced Skin Lesion Detection Using Concatenated DenseNet and Multi-Attention Mechanisms." In 4th International Conference on Innovations in Science, Engineering and Technology (ICISET), pages 1-6, 2024. (Best Paper Award Winner)
- Kowshik Deb Nath, A. F. M. Minhazur Rahman, and Md. Ali Hossain. "An Attention-based Deep Learning Approach to Knee Injury Classification from MRI Images." In 2023 26th International Conference on Computer and Information Technology (ICCIT), pages 1–6, 2023.
- Md. Farhan Shakib, Md. Shahid Uz Zaman, Md. Al Mamun, Azmain Yakin Srizon, and A. F. M. Minhazur Rahman. "Enhancing Bushfire Classification in Satellite Imagery through Gradient Based Channel Selection". In 2025 International Conference on Electrical, Computer and Communication Engineering (ECCE), pages 1–6, 2025.
- Md Minhazul Islam, Tanbeer Jubaer, Azmain Yakin Srizon, Md. Rakib Hossain, S. M. Mahedy Hasan, Md. Farukuzzaman Faruk, and A. F. M. Minhazur Rahman. "Navigating Bengali Linguistics: Insights from Machine and Deep Learning Perspectives for Categorization of Sentences". In 2023 26th International Conference on Computer and Information Technology (ICCIT), pages 1–6, 2023.

#### RESEARCH PROJECTS

# Brain Tumor Segmentation Using Effective Deep Learning Approach

2022-23

Project Director

- A research project funded by the University Grants Commission (UGC), Bangladesh, and RUET.
- Research grant amount: 149,760 BDT
- · Proposed a novel, efficient deep learning based model for semantic segmentation of brain tumors in MRI images

# SOFTWARE DEVELOPMENT PROJECTS

# Attendance Manager | Java

An Android application for taking class attendance, keeping track of students and generating attendance reports Available on GitHub: Link

# Med Organizer | Java

An Android application for keeping track of medication, setting reminders, keeping doctor appointment notes, etc Available on GitHub: Link

# C-Like Compiler | C, Flex, Bison

Compiler for a programming language similar to C that generates MIPS assembly code

Available on GitHub: Link

#### ACHIEVEMENTS

#### Student of the Year - 4th Year

Awarded for outstanding result in 4th year with average 3.97 GPA and academic excellence

#### Student of the Year - 3rd Year

Awarded for outstanding result in 3rd year with average 3.93 GPA and academic excellence

#### Student of the Year - 1st Year

Awarded for outstanding result in 1st year with average 3.94 GPA and academic excellence

# Board Scholarship, Higher Secondary Certificate (HSC)

Recipient of the Rajshahi Board Scholarship for academic excellence

#### **SKILLS**

#### Technical Skills

- Deep Learning Libraries: Keras, PyTorch, TensorFlow
- Data Analysis Tools: NumPy, Pandas, Matplotlib, Seaborn
- **Programming Languages**: Python (advanced), C++ (intermediate), Java (advanced)
- Software Development: Android, PHP-Laravel, MySQL, Docker, Git

#### • Language Proficiency

- English: Professional (IELTS: 8.0 Listening: 8.5, Reading: 7.5, Writing: 8.0, Speaking: 7.0)
- Bengali: Native

#### REFERENCES

#### • Dr. Md. Ali Hossain

Professor

Department of Computer Science & Engineering

Rajshahi University of Engineering & Technology

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#### • Dr. Md. Al Mamun

Professor

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