# Asadullah Bin Rahman

galib.hstu.cse17@gmail.com | asadullahgalib007.github.io | in/asadullah007 | Google Scholar

**Research Interests:** Machine Learning, Quantum Computing

## Employment

07/2025 – Present ◇ **Lecturer of Computer Science and Engineering**, World University of Bangladesh, Dhaka, Bangladesh

07/2023 – Present ◇ **Research Assistant (RA)** at **IoThink Lab**, Department of Computer Science and Engineering, HSTU

03/2023 – 09/2023 ◇ **Lecturer of Computer Science and Engineering**, Govt. Shahid Akbar Ali Science and Technology College (Affiliated to HSTU), Bangladesh

## Education

07/2023 – Present ◇ **MSc (Engineering) in Computer Science and Engineering**, Hajee Mohammad Danesh Science and Technology University (HSTU), Bangladesh
GPA : 3.625/4.00 (Thesis in progress)

01/2017 – 12/2022 ◇ **BSc (Engineering) in Computer Science and Engineering**, Hajee Mohammad Danesh Science and Technology University (HSTU), Bangladesh
CGPA : 3.31/4.00

## Skills

Quantum Computing ◇ Proficient in Qiskit, Cirq, PennyLane, Classiq; Expertise in Quantum Algorithms, Quantum Machine Learning, Quantum Key Distribution

Machine Learning ◇ Proficient in NumPy, Pandas, SciPy, Matplotlib, OpenCV, PyTorch, TensorFlow; Expertise in Image Processing, Computer Vision

Programming ◇ C++, Java, Python; Data Structures, Algorithms, Databases; Solved 300+ problems (CodeForces, HackerRank, UVa)

Languages ◇ Bangla (Native), English (IELTS Academic: **6.5**, CEFR Level: B2 )

Others ◇ Linux, Git, LaTeX

## Research Publications

1. **A. B. Rahman**, M. I. Afjal, and M. A. A. Mamun, *Deep Learning Architectures for Medical Image Denoising: A Comparative Study of CNN-DAE, CADTra, and DCMIEDNet*, 2025. arXiv: 2508.17223 [eess.IV]. URL: https://arxiv.org/abs/2508.17223

2. **A. B. Rahman**, M. I. Afjal, and M. A. A. Mamun, *Systematic Evaluation of Wavelet-Based Denoising for Mri Brain Images: Optimal Configurations and Performance Benchmarks*, 2025. arXiv: 2508.15011 [eess.IV]. URL: https://arxiv.org/abs/2508.15011

3. **A. B. Rahman**, M. Ibn Afjal, and M. A. Al Mamun, "Mitigating Noise from Biomedical Images Using Wavelet Transform Techniques," in *2025 International Conference on Electrical, Computer and Communication Engineering (ECCE)*, 2025, pp. 1–6. DOI: 10.1109/ECCE64574.2025.11013062

4. **A. B. Rahman**, M. Touhid Islam, M. R. Islam, M. Sohrawordi, and M. N. Sultan, "Enhanced Brain Tumor Classification from MRI Images Using Deep Learning Model," in *2023 26th International Conference on Computer and Information Technology (ICCIT)*, 2023, pp. 1–6. DOI: 10.1109/ICCIT60459.2023.10441064

Hyperlinks are embedded in this CV. Please click anywhere with for details!

## Research and Projects

11/2024 ◇ **Guava Fruit Disease Dataset @ IoThink Lab :** Collaborated on dataset collection for interdisciplinary research.

08/2024 ◇ **Quantum Variational Classifier @ Womanium Program :** Implemented a quantum classifier for Penguin Species Classification.

◇ **Quanvolutional Neural Networks @ Womanium Program :** Developed a hybrid quantum convolutional model for MNIST Digit Classification.

◇ **Quantum Regression Model @ Womanium Program :** Implemented a Quantum Machine Learning Model to learn and predict the sine function on the interval $[0, 2\pi]$.

◇ **Quantum Machine Learning for Anomaly Detection @ Womanium Program :** Developed a hybrid model for anomaly detection, leading to project finalist recognition.

## Professional Development

09/2024 – 12/2024 ◇ **QClass24/25 Fall Semester :** Achieved 96% in 3 ECTS graduate-level program on Quantum Algorithms and QKD.

06/2024 – 08/2024 ◇ **Womanium Quantum + AI 2024 :** Coursework on Quantum Computing and AI.

08/2024 ◇ **QGSS 2024 – Quantum Excellence :** Intensive quantum computing boot camp by IBM Qiskit.

◇ **Classiq Diploma :** Advanced Quantum Algorithm design.

◇ **Pennylane Diploma :** Quantum Machine Learning Challenge completion.

07/2024 ◇ **QNickel Diploma :** Quantum Algorithms workshop.

◇ **QBronze Diploma :** Introductory Quantum Computing and Programming.

09/2020 ◇ **Python for Everybody Specialization :** Coursera specialization on Python fundamentals and data structures.

## Awards and Achievements

06/2025 ◇ **Unitary Hack 2025 :** For open source contributions to the quantum software ecosystem.

04/2025 ◇ **YQuantum 2025 :** Solved BlueQubit's Peaked Circuits Challenge.

02/2025 ◇ **MIT iQuHACK 2025 :** Solved IONQ's Max Cut problem.

08/2024 ◇ **Womanium Quantum + AI 2024 :** Program finalist and QSL fellowship nominee.

06/2024 ◇ **IBM Quantum Challenge 2024 :** Ranked 11th globally.

01/2016 ◇ **6th BAS Science Olympiad :** Division 3rd and National level nominee.

09/2015 ◇ **5th DSA Physics Olympiad :** 7th Place.

## Volunteering Work

04/2025 – Present ◇ **Mentor, QBangladesh (QWorld):** Mentoring students and promoting quantum literacy in Bangladesh.

## Hobbies

◇ Chess

◇ Gardening