

# Asadullah Bin Rahman



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in/asadullah007



Google Scholar

**Research Interests:** Quantum Optimization, Quantum Key Distribution, Quantum Machine Learning

## 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. 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](https://doi.org/10.1109/ECCE64574.2025.11013062).
2. **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](https://doi.org/10.1109/ICCIT60459.2023.10441064).

## Employment

- 07/2023 – Present      ♦ **Research Assistant (RA) at IoThink Lab**, Department of Computer Science and Engineering, HSTU  
**Supervisor:** Dr. Md. Abdulla Al Mamun
- 03/2023 – 09/2023      ♦ **Lecturer of Computer Science and Engineering**, Govt. Shahid Akbar Ali Science and Technology College (Affiliated to HSTU), Bangladesh  
**Taught:** Theory of Computation, Computer Graphics, Machine Learning.  
**Reference:** Masud Ibn Afjal

## Research and Projects

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

## Research and Projects (continued)

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