

# MD ABU QUWSAR OHI

@ [quwsarohi@gmail.com](mailto:quwsarohi@gmail.com)

LinkedIn [quwsarohi](#)

📍 Dhaka, BD

Github [QuwsarOhi](#)

Google Scholar [AQ Ohi](#)

Academia [QuwsarOhi](#)

Website <https://quwsarohi.github.io>



## RESEARCH INTERESTS

Artificial Intelligence Deep Learning Computer Vision Pattern Recognition Reinforcement Learning

## PROGRAMMING SKILLS & TOOLS

Python C++ Latex Tensorflow Pytorch Sklearn Matplotlib NumPy Git Linux Docker  
Django Bootstrap

## ACADEMIC EXPERIENCE

Lecturer

**Bangladesh University of Business & Technology**

📅 April 15, 2021 – Ongoing

📍 Mirpur, Dhaka, Bangladesh

## RESEARCH EXPERIENCE

Research Assistant

**Bangladesh University of Business & Technology**

📅 August 1, 2020 – Ongoing

📍 Mirpur, Dhaka, Bangladesh

- Researching new architectural and mathematical strategies to reduce the current limit of deep learning based approaches.
- Developing and improving handwriting recognition systems to classify writers based on their handwriting.
- Researching and developing real-world speaker recognition systems.

Researcher

**Advanced Machine Learning Lab**

📅 August, 2020 – Ongoing

📍 Mirpur, Dhaka, Bangladesh

- Assisting fellow researchers for research and writing papers.
- Collaborating with labs and team-based research tasks.

## PUBLICATIONS

### 📄 Journals (6 Total)

- “Exploring optimal control of epidemic spread using reinforcement learning”  
Ohi, Abu Quwsar, M. F. Mridha, Muhammad Mostafa Monowar, and Md. Abdul Hamid  
*Scientific Reports* 10.1. Nature Publishing Group, 2020

DOI: [10.1038/s41598-020-79147-8](https://doi.org/10.1038/s41598-020-79147-8)

- “AutoEmbedder: A semi-supervised DNN embedding system for clustering”  
Ohi, Abu Quwsar, MF Mridha, Farisa Benta Safir, Md Abdul Hamid, and Muhammad Mostafa Monowar  
*Knowledge-Based Systems* p. 106190. Elsevier, 2020

DOI: [10.1016/j.knosys.2020.106190](https://doi.org/10.1016/j.knosys.2020.106190), URL: <https://arxiv.org/abs/2007.05830>

- “FabricNet: A Fiber Recognition Architecture Using Ensemble ConvNets”  
Ohi, A. Q., M. F. Mridha, M. A. Hamid, M. M. Monowar, and F. A. Kateb  
*IEEE Access* 9 pp. 13224–13236. 2021  
DOI: [10.1109/ACCESS.2021.3051980](https://doi.org/10.1109/ACCESS.2021.3051980)
- “BanglaWriting: A multi-purpose offline Bangla handwriting dataset”  
Mridha, MF, Abu Quwsar Ohi, M Ameer Ali, Mazedul Islam Emon, and Muhammad Mohsin Kabir  
*Data in Brief* p. 106633. Elsevier, 2020  
DOI: [10.1016/j.dib.2020.106633](https://doi.org/10.1016/j.dib.2020.106633)
- “A Lightweight Speaker Recognition System Using Timbre Properties”  
Ohi, Abu Quwsar, MF Mridha, Md Abdul Hamid, Muhammad Mostafa Monowar, Dongsu Lee, and Jinsul Kim  
*The Journal of Contents Computing* 2.1 pp. 139–151. 2020  
DOI: [10.9728/jcc.2020.06.2.1.139](https://doi.org/10.9728/jcc.2020.06.2.1.139), URL: <https://arxiv.org/abs/2010.05502>
- “Full Dynamic Transmission Model and Threat Analysis of COVID-19”  
Ohi, Abu Quwsar, MF Mridha, Md Abdul Hamid, Muhammad Mostafa Monowar, Md Ferdous Mridha, and AKM Ashiquzzaman  
*The Journal of Contents Computing* 2.1 pp. 127–138. 2020  
DOI: [10.9728/jcc.2020.06.2.1.127](https://doi.org/10.9728/jcc.2020.06.2.1.127)

## Conference Proceedings (3 Total)

- “Human Abnormality Detection Based on Bengali Text”  
Mridha, MF, Md Saifur Rahman, and Abu Quwsar Ohi  
*IEEE Region 10 Symposium (TENSYMP)* pp. 1102–1105. 2020  
DOI: [10.1109/TENSYMP50017.2020.9230629](https://doi.org/10.1109/TENSYMP50017.2020.9230629), URL: <https://arxiv.org/abs/2007.10718>
- “An Evolution of CNN Object Classifiers on Low-Resolution Images”  
Kabir, Md Mohsin, Abu Quwsar Ohi, Md Saifur Rahman, and MF Mridha  
*IEEE 17th International Conference on Smart Communities: Improving Quality of Life Using ICT, IoT and AI (HONET)* pp. 209–213. 2020  
DOI: [10.1109/HONET50430.2020.9322661](https://doi.org/10.1109/HONET50430.2020.9322661)
- “End-to-End Optical Character Recognition for Bengali Handwritten Words”  
Safir, Farisa Benta, Abu Quwsar Ohi, MF Mridha, Muhammad Mostafa Monowar, and Md. Abdul Hamid  
*National Computing Colleges Conference (NCCC)*. 2021

## Book Chapters (1 Total)

- A Multi-Plant Disease Diagnosis Method Using Convolutional Neural Network  
Kabir, Muhammad Mohsin, Abu Quwsar Ohi, and M. F. Mridha  
*Computer Vision and Machine Learning in Agriculture* pp. 99–111. Springer Singapore, 2021  
DOI: [10.1007/978-981-33-6424-0\\_7](https://doi.org/10.1007/978-981-33-6424-0_7), URL: <https://arxiv.org/abs/2011.05151>

## Under Review (1 Total)

- U-vectors: Generating clusterable speaker embedding from unlabeled data  
Mridha, MF, Abu Quwsar Ohi, M Ameer Ali, Muhammad Mostafa Monowar, Md Hamid, et al.  
*arXiv preprint arXiv:2102.03868*. 2021  
URL: <https://arxiv.org/abs/2102.03868>

# ACHIEVEMENTS

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 **Programming Contest Winner**  
Total 5 times champion in BUBT Intra University Programming Contest

 **National Collegiate Programming Contest (NCPC)**  
Placed among top **31**

 **International Collegiate Programming Contest - Dhaka Regional Contest**  
Attended ICPC Dhaka Regional 2 times and placed among top 70

 **Inter University Programming Contest**  
Attended more than 5 contests and conquered highest rank **7**

 **Problem Solver**  
Solved around **2000** problems in various online judges

# ONLINE PROGRAMMING PROFILES

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- Solved 470+ problems in [UVA online judge](#).
- Solved 220+ problems in [LightOJ](#).
- [CodeForces](#) highest rating 1581.
- [CodeChef](#) highest rating 1948.

# EDUCATION

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B. Sc in Computer Science and Engineering  
**Bangladesh University of Business & Technology**

 June 2016 – June 2020  Mirpur, Dhaka, Bangladesh  
• CGPA - 3.71 (out of 4)

Higher Secondary School Certificate  
**Savar Cantonment Public School & College**

 2013 – 2015  Savar, Dhaka, Bangladesh  
• GPA - 4.83 (out of 5)

# INDUSTRY EXPERIENCE

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Software Engineer (Intern)

**KloverCloud**

 From November, 2020 – January, 2021  
• Designing and developing web applications.  
• Deploying and testing application in Kubernetes.

# VOLUNTEER EXPERIENCE

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Problem Setter & Judge

**Bangladesh University of Business and Technology**

 From 2019 – Present  
• Planning & managing intra-university programming contests.  
• Writing & collecting problem-sets and conducting critical problem-set selection tasks.

Convenor

**Competitive Programming Community (BUBT)**

 From 2019 – Present

- Planning semester-wise schedule for training classes.
- Training & guiding junior competitive programmers.

## REFEREES

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**Prof. Muhammad Firoz Mridha**

@ Bangladesh University of Business and Technology

✉ firoz@bubt.edu.bd

**Prof. Md. Abdul Hamid**

@ King Abdulaziz University

✉ mabdulhamid1@kau.edu.sa