

Md Abu Quwsar Ohi

A computer science enthusiast & fast-learner interested in programming, development & research.

Location 1340 University Drive, Calgary, AB Website quwsarohi.github.io
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Education

University of Calgary Calgary, Canada
Masters, Computer Science Sep 2022 – Aug 2024

- Thesis topic : "Self-supervised open-set speaker recognition".
- Teaching assistant for: Information Security and Privacy, Theoretical Foundations of Computer Science.

Bangladesh University of Business & Technology Dhaka, Bangladesh
Bachelor, Computer Science 2016 – 2020

- Researched & published papers in deep learning, computer vision, self-supervised learning, & reinforcement learning.
- CGPA: 3.71, top 2% of the year.

Experience

Bangladesh University of Business & Technology Dhaka, Bangladesh
Lecturer & Programming Trainer Apr 2021 – Nov 2022

- Trained teams for international collegiate programming contests (ICPC).
- Courses taught: Structured Programming, OOP, Algorithms.

King Abdulaziz University Jeddah, Saudi Arabia
Research Assistant Apr 2021 – Jun 2022

- Worked on vision-based precision agriculture & image retrieval system.
- Engineered and published papers on: fast fruit detection, leaf clustering, and image retrieval.

Bangladesh University of Business & Technology Dhaka, Bangladesh
Research Assistant Aug 2020 – Jun 2022

- Collected Bengali handwriting data and engineered writer recognition system.
- Engineered unsupervised speaker clustering system.

KloverCloud Dhaka, Bangladesh
Software Engineering (Intern) Nov 2020 – Jan 2021

- Designing and developing Django based web applications.
- Developed company blog site using Echo, Angular, & Cloud object storage

Skills

Language	Python · C/C++ · SQL
Deep Learning	PyTorch · TensorFlow
Sci. Computing	NumPy · Matplotlib
Web	Django, Bootstrap
Algorithms	Dynamic Programming Graph Theory

Honors & Awards

2023	Research award.
2021	Annual publication award.
2021	Appeared in top newspaper for COVID-19 research.
2020	Vice chancellor appreciation.
2016-2018	4 academic scholarships.

Competitive Programming

2023	Calgary collegiate programming contest winner.
2017-2019	5x programming contest champion.
2018	Ranked 7th in inter-university programming contest.
2018	Top 30 in national collegiate programming contest.
2016	2nd runners up in programming contest.

Git Repositories

AutoEmbedder	Clusters images using graph relations.
U-vector	Unsupervised clusters speakers based on speech.
FruitDet	Fast fruit detection on top of YOLOv3.
Epidemic-RL	Lockdown forecasting during pandemic.

Volunteering

Graduate Student Association 2023 – Ongoing
Award Committee Reviewer

- Reviewing & electing students for GSA awards.

Schulich Ignite 2023 – Ongoing
Web-development Mentor & Content Developer

- Mentoring students for web-development course.
- Reviewing and creating contents for web-development course.

BUBT Intra-university Programming Contest 2019 – 2022
Problem Setter & Judge

- Planning & managing intra-university programming contests.
- Writing & collecting problem-sets and conducting critical problem-set selection tasks.

ICPC Dhaka Regional 2022
Organizing Committee Member

- Volunteered selecting the best teams from all over the country.
- Helped in planning and outlining overall event environment.

BUBT Programming Club 2019 – 2021
Convener

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

Selected Publications

- Abu Quwsar Ohi, M. F. Mridha, Muhammad Mostafa Monowar, and Md. Abdul Hamid: **Exploring Optimal Control of Epidemic Spread Using Reinforcement Learning**. Scientific Reports 10.1. Nature Publishing Group, 2020 [Paper: [link](#), Code: [link](#)].
 - My contributions: conceptualization, implementation, testing, visualization, writing draft paper.
- Abu Quwsar Ohi, M. F. Mridha, Farisa Benta Safir, Md Abdul Hamid, and Muhammad Mostafa Monowar: **AutoEmbedder: A Semi-supervised DNN Embedding System for Clustering**. Knowledge-Based Systems p. 106190. Elsevier, 2020 [Paper: [link](#), Code: [link](#)].
 - My contributions: conceptualization, implementation, testing, visualization, writing draft paper.
- Faris A. Kateb, Muhammad Mostafa Monowar, Md. Abdul Hamid, Abu Quwsar Ohi, and Muhammad Firoz Mridha: **FruitDet: Attentive Feature Aggregation for Real-Time Fruit Detection in Orchards**. Agronomy 11.12. 2021 [Paper: [link](#), Code: [link](#)].
 - My contributions: implementation, testing, visualization, writing draft paper.
- Abu Quwsar Ohi, M. F. Mridha, Md. Abdul Hamid, and Muhammad Mostafa Monowar: **Deep Speaker Recognition: Process, Progress, and Challenges**. IEEE Access pp. 1–1. 2021 [Paper: [link](#)].
 - My contributions: implementation, taxonomy, visualization, writing draft paper.

Note: All of my publications can be found [here](#).

BanglaWriting Bangla handwriting dataset.

Paper Reviewing

Actively reviewing research papers in:

- IEEE Access
- Remote Sensing
- Sensors
- Imaging Science Journal
- International Journal of Electrical and Computer Engineering
- Transactions on Computational Science

Language

- **English:** Professional proficiency [IELTS 7.5].
- **Bangla:** Native proficiency.