

Md. Mushfiqur Rahman

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🌐 <https://mushfiqur11.github.io>

in mushfiqur11

AI | ML/DL Research | Computer Vision Research

Incoming Ph.D. student at George Mason University for Fall 2021

Education

Islamic University of Technology

BSc. Engg. in Computer Science and Engineering

2017 Jan – 2021 Mar

CGPA: 3.79/4.00

Thesis: **StructGAN: Image restoration maintaining structural consistency using two step Generative Adversarial Networks**

Notre Dame College

Higher Secondary School Certificate (HSC): 5.00/5.00

2016

St. Joseph Higher Secondary School

Secondary School Certificate (SSC): 5.00/5.00

2014

Work Experience

Military Institute of Science and Technology

Lecturer

2021 Mar – Present

Courses Taught: "Artificial Intelligence Sessional", "System Analysis, Design and Development Sessional", and "Data Communications Sessional"

Dhaka University of Engineering and Technology

Research Assistant

2020 Feb – 2020 Dec

I was involved in an AI research on automated class scheduling under the supervision of Dr. Fazlul Hasan Siddiqui.

Samsung R&D Institute Bangladesh

Research Intern

2019 Nov – 2020 Jan

I was part of a research team that was tasked to generate equirectangular images from 3-D models using GAN.

M-World

Game Development Team Lead

2019 Jul – 2019 Sept

I led a team to develop 2 android-based games using **Unity** for a nutrition awareness project funded by **GAIN** and **BSMMU**.

Notable Projects

Machine Learning or Deep Learning

Random Doodle Generator

with Pytorch

Comparative Study between YOLO v3, v4, and EfficientDet for Object Detection

with Pytorch

Bengali Hand-written Digit Classification [[Link](#)]

with Tensorflow

Parameter Optimization of CIFAR-10

with Pytorch

Android and PC Games

Pothe Pothe [[Link](#)], **Radhuni Ami** [[Link](#)], **White Space** [[Link](#)]

with Unity and C#

App/Software Development

Travel Management Desktop App

with Java and JDBC

Online Cricket Scoring App [[Link](#)]

with C++ and Qt

Robotics

Remote-Controlled Vehicle

with Android and Raspberry Pi

Line-follower Robot

with C++ on Arduino

Courses and Certifications

Collaborative Institutional Training Initiative (CITI) Program

Data or Specimens Only Research (Basic Course) [[Verify](#)]

2021 Mar

Coursera offered courses

Deep Learning Specialization [[Verify](#)]

by DeepLearning.AI

Front-End JavaScript Frameworks: Angular [[Verify](#)]

by HKUST

Introduction to Psychology [[Verify](#)]

by University of Toronto

Machine Learning [[Verify](#)]

by Stanford University

Research Experience

Publications

[1] **Md. Mushfiqur Rahman**, Nahian Muhtasim Zahin, Kazi Raiyan Mahmud, Md. Azmaeen Bin Ansar. "Automated Intersection Management with MiniZinc." *2020 2nd International Conference on Sustainable Technologies for Industry 4.0 (STI)*, 19-20 December, Dhaka (DOI 10.1109/STI50764.2020.9350408) [[Paper](#)]. (2020).

[2] **Md. Mushfiqur Rahman**, Sabah Binte Noor, Fazlul Hasan Siddiqui. "Automated Large-scale Class Scheduling in MiniZinc." *2020 2nd International Conference on Sustainable Technologies for Industry 4.0 (STI)*, 19-20 December, Dhaka (DOI 10.1109/STI50764.2020.9350485) [[Paper](#)]. (2020).

On-going/Under review

[3] Ali Abir Shuvro, Md Ashfak Raiyan, **Md. Mushfiqur Rahman**, Sabbir Ahmed, Md. Hasanul Kabir. "A comparative study of object detection algorithms for vehicle detection." *On-going Research*. (2021).

[4] **Md. Mushfiqur Rahman**, Kazi Raiyan Mahmud, Nahian Muhtasim Zahin, Md. Hasanul Kabir. "StructGAN: Image restoration maintaining structural consistency using two step Generative Adversarial Networks." *Submitted for peer-review*. (2021).

[5] Mashrur Mahmud Morshed, **Md. Mushfiqur Rahman**. "Approximating Activation Functions with Linear Interpolation." *Submitted for peer-review*. (2021).

[6] **Md. Mushfiqur Rahman**, Thasin Abedin, Khondokar S. S. Prottoy, Ayana Moshruha, Fazlul Hasan Siddiqui. "Video captioning with stacked attention and semantic hard pull." *Under review at PeerJ CS* [[Paper](#)]. (2020).

Notable Awards and Accolades

Silver Medal in "Bengali.AI Handwritten Grapheme Classification"

Kaggle Competition

2020

App/Idea Development Competitions

Champion of "Intra IUT App Development Contest"

2019

We developed a QR-based medicine supply-chain tracking system that can eradicate counterfeit medicines

Runner-up of "Inter University App Development Contest" at 10th IUT ICT Fest

2019

Champion of "ICT4D Competition" at 4th AUW ICT Fest

2018

International Assessment for Schools (IAS) by UNSW

Country Topper and Gold Medalist in Maths (x2)

2007 – 2014

Olympiads

Medalist in National Mathematical Olympiads (x4)

2008, '11, '12, '13

Medalist in Divisional Mathematical Olympiads (x5)

2008, '11, '12, '13, '15

Medalist in Divisional Physics Olympiads (x2)

2012, '13

Voluntary Work Experience

Neural Intelligence in Tech - Research Organization (NITRO)

Co-Founder and Sr. Executive Researcher

2011 - Present

In 2011, I co-founded a research group. The group facilitates inter-university collaborative research in AI field.

Bangladesh Mathematical Olympiad Committee

Academy Team Member

2016 - 2017

Extra-Curricular Activities

Cricket

Played for IUT CSE (Champion in '19 and '20; Runner-up in '17 and '18)

Currently playing for the Josephites Cricket Team