# Mosaddeq Hossain

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A Dhaka, Bangladesh

GitHub

Portfolio: www.mosaddeq.me Google Scholar in LinkedIn

# EDUCATION

Master of Science in Mathematics

Department of Mathematics

Jahangirnagar University, Bangladesh

Session: Jan 2017-Dec 2017 GPA: 3.29 out of 4.00

#### Bachelor of Science in Mathematics

Department of Mathematics

Jahangirnagar University, Bangladesh

Session: Jan 2013 - Dec 2016 GPA: 3.33 out of 4.00

#### STANDARDIZED TEST SCORES

#### Graduate Record Examination (GRE)

Total Score: 306

Verbal: 143, Quantitative: 163 Analytical Writing: 3.0

TOEFL

Overall Score: 89

Reading: 26, Listening: 23 Writing: 21, Speaking: 19

# TEACHING EXPERIENCE

#### Lecturer (Adjunct Faculty)

Department of Computer Science and Engineering,

Department of Electrical and Electronics Engineering (EEE),

Manarat International University (MIU), Dhaka, Bangladesh.

Conducting Courses: Differential Equations and Numerical Methods. Co-ordinate Geometry, Differential and Integral Calculus, Linear Algebra, Vector Analysis, Complex Variables, Fourier and Laplace Transformation, and Basic Statistics.

## Private Tutor (High School Mathematics)

Instructed more than 150 high-school students individually.

Conducting Courses: Basic of Differential and Integral Calculus, Algebra, Matrix, Statistics.

## RESEARCH EXPERIENCE

# MS research project on "Fuzzy Relation," supervised by Dr. Abeda Sultana Project Description and Findings:

2017

- 1. Using Multiquantization Boolean algebra and fuzzy relation techniques, I submitted a probabilistic project on the decision to lend money to the customer of a financial organization.
- 2. Whether a customer can be trusted to return the loan by formulating a model with his previous history.

# Research Assistant in Professor Md. Abdur Rahman's Research Group Responsibilities and Outcomes:

Feb 2020-Jan 2021

Jan 2021-Present

May 2014-June 2018

- 1. Worked on energy consumption prediction projects using PDE and Dynamical Equations.
- 2. Model simulation using Pplane8 in MATLAB.
- 3. Wrote Scikit-learn codes in Python language to train Deep Learning models.
- 4. Authored a scientific article that was accepted at an international conference.
- 5. Co-authored a review article on detecting brain tumors from MRI images using deep learning (DL) [under review].

## Research collaborator at Dr. Arafat's Deep Learning Research Group Responsibilities and Outcomes:

July 2022-Present

- 1. Using LaTex, contributed, as a co-author, to write three review articles on finding Covid-19 using DL from CT scans, Chest X-rays, and Ultrasound imaging, respectively [in preparation].
- 2. Worked as a sub-team leader of 5 people to review 650 articles on Covid-19 detection using DL.

## Research collaborator at Applied Maths In Nature Project Description:

Oct 2022-Present

Around 50 people die yearly during the winter in the northern part of Bangladesh due to the decreasing temperature of an average of 10 degree Celsius compared to 50 years ago. We are working on a project to develop a model using Dynamical PDE for weather prediction in this region to reduce the number of death [Ongoing].

#### Publications

#### 1. Conference Paper:

Mosaddeq Hossain, Md. Abdur Rahman, Brain Tumor Detection Using Deep Network EfficientNet-B0, Machine Intelligence and Emerging Technologies 2022 (MIET 2022), Noakhali Science and Technology University (NSTU), Noakhali, Bangladesh, September 23–25 (2022), LNICST Series of Springer Nature. [Oral presentation] [Accepted, PaparID:494]

2. Journal Article: Mosaddeq Hossain, Md. Abdur Rahman, Md. Rafiqul Islam, A Review paper on Brain Tumors Detection Till 2022, IEEE Latin America Transactions, 2023. [Under Review]

# ACADEMIC ACHIEVEMENTS & AWARDS

- University Merit Scholarship: Got three times for academic excellence provided by Jahangirnagar University.
- Education Board Merit Scholarship: Awarded by National Education board for achieving more than 90% marks in High School final examination.
- Best Presentation award: Two times for presenting posters at national conferences.
- Got Elite Member award: Awarded by Badhan for donating blood more than ten times.

#### ATTENDED SEMINARS AND WORKSHOPS

- "Mathematics in Real Life," a national conference organized by the Bangladesh Mathematical Society (BMS), on August 22, 2015.
- Attended A F Mujibur Rahman-Bangladesh Mathematical Society (BMS) National Mathematics Conference, 21-22 December 2018, organized by BMS in the Department of Mathematics, University of Dhaka, Bangladesh.
- Attended a workshop on "Academic Scientific Writing," organized by ePortico, March 2022.
- Attended a 3-day long workshop in the wiring in LaTeX March 2017

## PROJECTS AND TECHNICAL SKILLS

- 1. Python Project: Done some projects using Python Graphical User Interface (GUI).

  √ simple calculator ✓ age calculator ✓ electric billing system ✓ super shop billing system
- 2. LaTeX Template: Worked as a freelance typewriter to write, organize, and customize to a specific format of three articles in LaTeX.
- 3. Website Making: Developed my own portfolio using HTML, CSS, and JavaScript.
- 4. Programming Languages and Tools: MATLAB, C, C++, Python, Mathematica, Pplane, Microsoft Office.

#### CERTIFIED ONLINE COURSES FROM COURSERA

1. Data Analysis with Python	2. Data Visualization with Python	3. Databases and SQL for Data Science

4. What is Data Science?

5. Data Science Methodology

6. Python for Data Science and AI

7. Programming for Everybody (Python) 8. Tools for Data Science

# EXTRA CO-CURRICULAR ACTIVITIES

_	Joint Secretary at Jahangirnagar University Science Club	Savar, Dhaka
•	Conducted meetings and implemented clubs decisions.	Session: 2014

## Convener at Jahangirnagar University Science Club

Organized events, conducted workshops, and delivered workshops for the member of this club.

Session: 2015

Savar, Dhaka

• Convener of 3<sup>rd</sup> Mathematics Olympiad
• Organized this event with 3000 participants from school and college.

Savar, Dhaka
April 2016