MD MARUFI RAHMAN

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RESEARCH INTEREST

Artificial intelligence, Computer vision, Image processing

EDUCATION

Doctor of Philosophy in Computer Science and Engineering　　　　　August 2019 - present
University of North Texas
Denton,Texas, CGPA: 3.82/4.00

Masters of Science in Computer Science and Engineering　　　　August 2019 - December 2022
University of North Texas
Denton,Texas, CGPA: 3.75/4.00

Bachelor of Science in Electronics and Telecommunication Engineering　　　March 2013 - Dec 2017
Rajshahi University of Engineering and Technology.
Rajshahi,Bangladesh, CGPA: 3.32/4.00

EXPERIENCE

Graduate Teaching Assistant　　　　　　　　　　　　　　　　　　Aug 2022- present
I have been appointed as a teaching assistant working with the course instructor, Dr. Oh, for CSCE 5390 (Multimedia Computing)

Graduate Teaching Assistant　　　　　　　　　　　　　　　　　　May 2022- July 2022
I have worked with Dr. Ouda as a teaching assistant for course 5050 (Application of Cryptography). My responsibility is to assist the course instructor by grading, proctoring, and mentoring the students for course projects and exams

Graduate Research Assistant　　　　　　　　　　　　　　　　　　Jan 2022- May 2022
I am working as a research assistant for my doctoral supervisor Dr.Oh on solving image analysis challenge for gastrointestinal videos dataset)

Graduate Teaching Assistant　　　　　　　　　　　　　　　　　　Aug 2021- Dec 2021
I am assisting Dr.Oh with CSCE 5350 course for 10hr/week. The course is about the fundamentals of databases (Introduction to the design and use of database systems, including data models, database query languages, logical database design, and dependency theory)

Graduate Teaching Assistant　　　　　　　　　　　　　　　　　　Aug 2021- present
I am assisting Dr.Shirin with CSCE 2110 course for 10hr/week. The course is about computing foundation(data structures and formalisms used to both describe and evaluate those data structures simultaneously. The expected outcome is a solid foundation in conceptual and formal models, efficiency, and levels of abstraction as used in the field of computer science.)

Graduate Teaching Assistant　　　　　　　　　　　　　　　　　　June 2021- July 2021
I assisted instructor, Dr.Marty O'Neill, for CSCE 4355(Database Administration) course. The course included tuning a database; administering servers; managing and optimizing schemas, backup and recovery strategies, automation, maintenance, and more. Google Cloud platform was used here.

Graduate Research Assistant　　　　　　　　　　　　　　　　　　Aug 2020- May 2021
I am working on a research project under my supervisor Dr.Oh for 20hr/week. The project is auto detection of colonoscopy and endoscopy video.

Graduate Teaching Fellow
May 2020- Aug 2020

My responsibility was teaching Undergraduate students Fundamentals of Database Systems course(CSCE 4350). I was the summer instructor for this course.

Graduate Teaching Assistant
Aug 2019- May 2020

My responsibility is taking the sessional for CS1030(programming and problem solving using C++) ,grading their exams and assignments for 20hr/week.

House Tutor
Jul 2018- Aug 2019

My responsibility was mentoring students for Undergraduate Admission Test concentration on mathematics and physics preparation. I specially taught Probability,geometry, Calculus, Matrices,electromagnetism and optics.

Research Assistant
Dec 2016- Jul 2018

I worked under my thesis supervisor Dr. Md Kamal Hosain for 16hrs/week. My duty there was to instruct juniors for selecting the desired thesis and to collect and analyze data from other research groups while completing my own dissertation. My undergraduate thesis was on designing and analyzing transcranial magnetic coil to stimulate brain neuron for the various neurological disorder.

PUBLICATIONS

1. **M. M. Rahman**, M. K. Hosain, S. Ahmed and M. W. Al Azad, "Deep Transcranial Magnetic Stimulation Using Center Dense and Center Sparse Double Cone Coil on Realistic Head model," *2018 International Conference on Computer, Communication, Chemical, Material and Electronic Engineering (IC4ME2)*, Rajshahi, 2018, pp. 1-4.

2. **M. M. Rahman**, M. K. Hosain, S. Ahmed and M. W. A. Azad, "Investigation of coil designs for transcranial magnetic stimulation on realistic head model," *2017 IEEE Region 10 Humanitarian Technology Conference (R10-HTC)*, Dhaka, 2017, pp. 279-283

3. **M. M. Rahman**, J. R. Mou, K. Tara and M. I. Sarkar, "Real time Google map and Arduino based vehicle tracking system," *2016 2nd International Conference on Electrical, Computer Telecommunication Engineering (ICECTE)*, Rajshahi, 2016, pp. 1-4.

4. **M. M. Rahman**, JH Oh, Wallapak Tavanapong, Johnny Wong and Piet C. de Groen, "Automated Bite-block Detection to Distinguish Colonos-copy from Upper Endoscopy using Deep Learning," *2021 16th International Conference on Visual Computing (ISVC)*, virtual, 2021, pp. 216–228.

TECHNICAL SKILLS

Programming Skill	C plus plus, Python, R, Matlab, SQL
Framework and Tools	Tensorflow, Keras,Pythorch, OpenCV, NLTK, Pandas, Numpy, Scikit learn, Scipy
Cloud Platform	GCP
Application Software	Expert on Microsoft Office TM

PROJECT WORKS

- Identifying Single Cell RNA sequence Data Using supervised learning
- Kaggle competition: COVID19 Global Forecasting (Week 4)
- GSM GPS based vehicle tracking system using Arduino
- CCTV monitoring system by face detection using python package

UNDERGRADUATE COURSES

Design and Analysis of Signal and Systems Using MATLAB, **Data structure**, **C programming**, VLSI Design, **Numerical Methods in Engineering**, Digital Signal Processing, **Digital image processing**, **Engg. Mathematics- I(Differential calculus, Integral calculus, Matrix)**, **Engg. Mathematics-II(Ordinary differential equations, Partial differential equations, Series solution, Co-ordinate**

geometry), **Engg. Mathematics-III- (Vector analysis, Fourier analysis, Laplace transforms)**, **Engg. Mathematics-IV(Complex Variable, Statistical Analysis)**, Microprocessor and Microcomputer,

GRADUATE COURSES

Programing languages, **Deep learning**, **Multimedia Computing**, Bio Computing, Parallel and Distributed Database, **Feature Engg.**,Design and Analysis of Algorithm,Human/Machine Intelligence, Machine Learning for Precision in Medicine, **Empirical Analysis**

REFERENCE

(will provide upon request)