Tahsin Mostafa

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EDUCATION

Bachelor of Science in Computer Science and Engineering, Spring 2016-Fall 2019
Department of Computer Science and Engineering(CSE)
BRAC University, Dhaka, Bangladesh
CGPA: 3.96/4.00
Thesis Topic: Analyzing Ensemble Learning Algorithms using Cluster Analysis of Binary Classification Problems. Fall 2018 - Summer 2019
Supervised by: **Professor Mahbub Alam Majumdar**
Short description can be found here: researchgate link.
Relevant Courses: Machine Learning, Algorithms, Numerical Methods, Elements of Statistics and Probabiity, Probability Theory and Stochastic Processes, Linear Algebra.
Research Interest: Machine Learning, Computer Vision

International Advanced Level, 2015
Results: A in Mathematics, Physics, Chemistry, Economics

International General Certificate of Secondary Education 2013
Results: A* in Mathematics, Pure Mathematics, Physics, Chemistry, Economics, English Language, A in Accounting, Bengali.

EXPERIENCE

BRAC University: Course-Contractual Lecturer, CSE Jan 2020 - Present
Courses: Numerical Methods (Theory & Lab) and **Artificial Intelligence** (Lab)
Contribution for Spring 2020: Developed **five** lab contents for the Artificial Intelligence course.

BRAC Skill Development Programme, Technology for Development Unit: Machine Learning Intern February 2020 - Present
Role: Mine data from the backend of projects conducted by BRAC, analyse data, and use Machine Learning to come up with predictions that would help managers to optimise their field operations. Main goal of the programs conducted are to increase the job placement rate of disadvantaged people.

BRAC University: Student Tutor May 2018 - August 2019
Courses Tutored: Algorithms, Discrete Mathematics, Digital Logic Design
Role: In addition to tutoring students, I assisted faculty members in conducting labs, checked assignments and invigilated exams.

BRAC University: Student Advisor for Freshers January 2017 - January 2018
Role: Mentored freshers to make sure they have a smooth transition into the university; help with study schedules, and follow up on their academic progress.

SELECTED PROJECTS

Can-aware: An interactive digital system for cancer awareness, screening, and referral. July 2018 - June 2019
Role: Leading a team of researchers, software developers, graphic designers and medical students, and carry out research related to the system.
Goal: Create awareness and early diagnosis of cancer through a m-health application which includes infographics, questionnaire based screening method, and referrals to doctors upon cancer detection especially for people in rural areas of Bangladesh.
Funding: ICT division of Ministry of Posts, Telecommunications and IT, Bangladesh.

Smart Stove Hazard Prevention System Summer 2019
The system detects fire through image processing using the AWS Rekognition platform

and level of gas through sensors, and automatically turns off the burner if there is any risk of a fire. It also warns the owner through SMS and sprays water if there is a fire.

Firebot: Assisting fire fighters   Spring 2018
Paper accepted in ICIEV-IVPR 2018 Student Conference in Japan
A RC car that can be maneuvered into a building on fire, with the help of a camera and controller. It includes fire, smoke and temperature sensors. Data is collected and sent to a nearby fire station through remote desktop in real time. This allows fire fighters to understand the situation even before they arrive at the scene.

Soul Food: Spring 2018
An e-commerce web application that allows the buy and sell of home cooked food.

TECHNICAL SKILLS

Programming Languages :   JAVA, Python, C/C++, TeX
Familiar with: MySQL, HTML, CSS, PHP, NumPy, Pandas, TensorFlow, AWS cloud platform, Arduino, Raspberry Pi

AWARDS AND HONOURS

Highest Distinction, BRAC University
Awarded to students graduating with CGPA greater than 3.8

VC's list, BRAC university
Awarded to students with CGPA greater than 3.9
Awarded for 7 semesters

Dean's list, BRAC university
Awarded to students with CGPA greater than 3.7
Awarded for 3 semesters

Performance-based Scholarship, BRAC University 2017-2019
75 per cent tuition waiver

Merit-based Scholarship, BRAC University 2016-2017
70 per cent tuition waiver

ADDITIONAL ACTIVITIES

Conducted Data Science Workshop   Summer 2019
Goal: Introduce university juniors to the Python programming language, Data Cleaning, Exploratory Data Analysis, Data Modelling, and Result Analysis.
YouTube Link: Data Science Workshop (the first voice in the video is mine).

University Rover Challenge 2019
Member of Research and Writing Team of Mongol Tori
Mongol Tori is a next generation mars rover developed by students. It has participated in numerous mars rover competitions in the USA, India and Bangladesh.
Role: Write system and design reviews, and carry out research on how to optimize the different aspects of the robot.

Participated in BRACU Programming Contests

Participated in Kaggle Competitions
Notable Competition: Digit Recognizer (Top 20 percent on public leaderboard as of 5th Oct '19). Also, worked on several datasets from Kaggle as part of projects & thesis.

Co-formed AI Reading Group   Fall 2018 - Summer 2019
This was a weekly meeting of AI enthusiasts where we discussed book chapters from:
Deep Learning by Ian Goodfellow et al.

BRAC University Computer Club: Senior Executive   May 2017 - May 2018