SAADAT HASAN KHAN

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Education

Brac University — Fall, 2015 – Summer, 2019
Bachelor of Science in Computer Science and Engineering — CGPA – 3.98/4.00

Mastermind School — August, 2013 – July, 2015
Advanced Level

Marie Curie School — Schooling Years
School and Ordinary Level

Experience

Brac University — September, 2019 – Present
Contractual Lecturer

- Conducted Microprocessors course and labs of Introduction to Programming Language, Database, Computer Graphics, Compiler Design, Data Structures and Microprocessors

Brac University — May, 2018 – August, 2019
Student Tutor

- Was selected for Teaching Assistantship for Discrete Mathematics, Data Structures and Algorithms courses.

Publications

Anomaly Detection in IoT Using Machine Learning Algorithms — September, 2020
Accepted, AICEC – 2020 (Undergraduate Thesis)

- An application layer of IoT data-set was created using environmental features in the context of Bangladesh. 4 Machine Learning algorithms were fit to detect anomalous values that were being stored in the server.

IoT Based Smart Water and Environment Management System of Paddy Rice at Different Growth Stages — November, 2019
Published, IEEE Xplore

- A smart system to water the paddy rice according to its different stages, maintain a suitable temperature and pH for growth, notify to Farmers' smartphones if any parameter got out of range. The sensors were connected to a Node- MCU microcontroller and data was sent to a cloud storage, which could also be used by researchers according to their need

Smart Security, Food and Environment Monitoring System for Cows using Micro-controller — June, 2019
Published, IEE Xplore

- A system which cleaned the environment where the cows lived in, checked the pH of their food and incorporated an anti-theft technology in it, all using an Arduino Uno Microcontroller

A Comparative Study on Pneumonia Detection Using Federated Learning
Under Revision

- A research to make a Global Model to predict whether a person has Pneumonia by training local models at different hospitals while keeping the hospital-user data private, in this trying time of Covid-19.

Projects

Pneumonia Detection web app Using Streamlit | *Python, StreamLit, HTML* — January 2021

- Developed a Deep Learning Model to detect Pneumonia from Chest X-ray Images

- Saved the model to predict Images by querying it
- Created a Webpage for Users to upload X-ray Images and simultaneously used the model for prediction on the image using Steamlit library

Predicting Car Prices | *Python, Scikit Learn, Numpy, Pandas* March, 2020

- Used Dataset from Kaggle, visualized the different characteristics of the dataset
- Preprocessed the dataset like replacing Null values with Median, converting Strings to Categorical Values, and Parsing dates
- Fit the data to a Random Forest Regressor for predicting car prices

Look Closely into the Olympics | *Python, Numpy, Pandas* March, 2020

- A Data Science Project to extract some lesser-known facts of the Olympic Games. *(Coursera Data Science Assignment)*

The Relation between GDP, Energy Supply and Citations | *Python, Numpy, Pandas* March, 2020

- A Data Science project to targeted to intersect different data-sets with common parameters to visualize how different countries with varying GDP also correlate with their Energy production and number of Citations. *(Coursera Data Science Assignment)*

Who pays for the tickets in Michigan | *Python, Scikit Learn, Numpy, Pandas* March, 2020

- Explored a dataset with many features of people who received different fines while driving and a target of the compliance to pay the fine. The dataset was fit to a MLP and a Random Forest Classifier to predict whether a person with a set of given features would comply to pay his/her fine. *(Coursera Machine Learning Assignment)*

Sad or Happy Face Classification Using Image Generator | *Python, Tensorflow, ImageGenerator*

- Made a Classifier to classify between Happy and Sad faces from a dataset using ImageGenerator for data augmentation. *(Coursera Deep Learning Assignment)*

BMI Calculator | *Flutter and Dart* February, 2021

- Made an Android and IOS application using Flutter to create an app that calculates BMI from Weight and Height

Instagram Clone | *Android Studio, Java* November, 2019

- Made a Social Media app to connect users through photos using AWS for cloud storage

Achievements

Vice Chancellor's Medalist – *For having the highest CGPA in the program I graduated from*

Lunch With Vice Chancellor – *An honor to be able to sit with the Vice Chancellor of Brac University for academic excellence*

Performance Based Scholarship – *Got 75% scholarship for consistently maintaining a high CGPA*

VC's List – *Got into the Vice Chancellor's list for 9/12 semesters*

Dean's List – *Got into the Dean's list in 1/12 semester*

Daily Star Awards – *Got awarded by Daily Star for having more than 6As in Ordinary Level*

Certifications

Applied Machine Learning in Python | Introduction to Data Science in Python | Introduction to TensorFlow For AI

Programming For Everybody (Python) | Python Data Structures

Extra-Curricular Activities

BracU Monon – Executive Member | Shikbe Shobai – Web Designing Course | MCSFF 2016, Football Champions

MCSFA 2018, Football Runners up | BracU RS – Table Tennis Champion