Cairo University
Faculty of Computers & Artificial Intelligence
Machine Learning

NN Project

(Total 8 Marks)

You will collect your own dataset and use it to make a model to detect the person name in the given image.

1. Dataset:

Each member in the team should collect 50 images for him/her, and the team will collect all these images for the dataset.

2. Split the dataset:

You will split the dataset into 70% training and 30% testing.

3. Preprocessing:

Do preprocessing steps (Normalization) for your dataset (ex: Convert each image to grayscale / RGB image, resizing the images, …)

4. NN Model:

Build **2 different Neural Network architectures** that can detect the class name/ the person name of a given image (change number of hidden layers, number of neurons in each hidden layer….)

5. Evaluation:

Test your 2 different NN architectures on the testing set, calculate the accuracy of the 2 architectures, and show 10 random results from the testing set.

Note: you can train your models on google colab or kaggle kernel.

Submission Remarks:

- Deadline will be Monday 22 May @11:59 PM.
- The number of students in a team is **min 5, max 6**.
- Team members can be from different labs (but they must all attend the discussion together). If anyone did not attend the discussion will take zero in the assignment. You should understand every point in your code.
- No late submission is allowed.

- You will upload your dataset on drive and you will submit this link.
- You will record a video (screen recording) and in the video, you will show your collected dataset, explain your code in detail, run the 2 different models, and show your results. All team members must collaborate in this video. You will upload your video on drive.
  The video must be **min 10 minutes, max 15 minutes**.
- You should submit one .zip file with naming convention: **ID1_ID2_ID3_ID4_ID5_ID6.zip**
  This zip file contains:
    - A python file that contains your code: **ID1_ID2_ID3_ID4_ID5_ID6.py**
    - A txt file contains: **ID1_ID2_ID3_ID4_ID5_ID6.txt**
        - Names and IDs for all the team members.
        - The link for your dataset.
        - The link for your video.

  You will lose 0.5 mark from the assignment grade if you did not write the correct naming convention.
- We will run a plagiarism tool to check any cheating. Cheaters will take ZERO in the assignment and no excuses will be accepted.

Grading Criteria:

1) Dataset	5
2) Splitting the dataset	5
3) Preprocessing	10
4) NN model	15
5) Evaluation	5
Total (40/5)	**8**