Jaypee Institute of Information Technology, Noida

Major Project-1

Odd Semester, 2021

Progress Report-2

1. Group No.: 17

2. Group Members Name and Enrollment Number:

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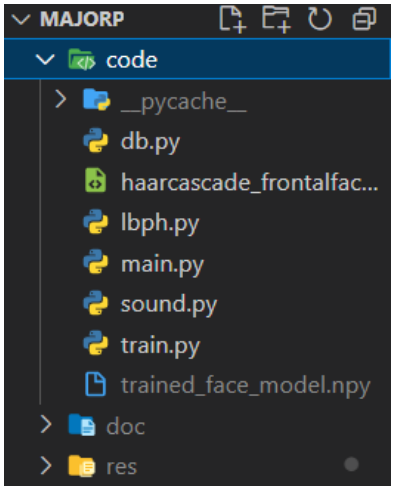
4. Title: Smart Attendance System

5. Objectives in Points:

- To reformat the existing code and provide clean code structure
- To remove the old csv handling code
- To add speech to text support along with auditory output functionality

6. Work done:

- Our old code was unstructured and had no easily understandable format. All the functions were implemented in a single Jupyter notebook which had now become too lengthy to read and handle. So we first separated the data into a few directories like 'code' ,'docs' and 'res' which stands for resources.
- We also uploaded our code on Github to manage changes more easily.
- 

  All unstructured code is now split into main.py, train.py, lbph.py, sound.py and db.py.
- CSV handling functionality was no longer required hence removed because in the upcoming days we will incorporate a centralized database solution for maintaining attendance record using SQL based

database management systems like SQLite3 which is preferred because of its Serverless functionality and also because it is now a core module in python and does not require separate installation.

- Now our system uses ‘Google Text to speech’ Library to generate Voice output and Another python module ‘Playsound’ is used which is able to play sound files in the background without opening any Graphical User Interface and returning back control to the main controller file, main,py. So Now, we have auditory output including a person’s name, for eg. “Person A is Marked Present” which is absolutely beneficial for visually impaired persons and we already had visual output on the screen (terminal) which may be beneficial for persons with hearing disabilities. Below is the code for above functionality.

```
if (prediction[1])<=100 and (prediction[1])>85:
    print('%s - %s' % (names[prediction[0]],"marked PRESENT"))
    cv2.putText(im,'%s - %.0f%s' % (names[prediction[0]],prediction[1],"%"),(x-10, y-10),
    s = str(names[prediction[0]]) + "marked PRESENT"
    play__sound(s)
else:
    cv2.putText(im,'not recognized',(x-10, y-10), cv2.FONT_HERSHEY_PLAIN,1,(0, 255, 0))
```

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```
from playsound import playsound

from train import TrainFromSavedPhotos,TrainFromWebcam

savedModelLocation = 'C:\\Users\\Rishabh Rajpurohit\\Documents\\majorP\\code\\trained_face_model.npy'
baseDir = 'C:\\Users\\Rishabh Rajpurohit\\Documents\\majorp\\res\\data'
fn_haar = 'C:\\Users\\Rishabh Rajpurohit\\Documents\\majorp\\code\\haarcascade_frontalface_default.xml'
fn_dir = 'C:\\Users\\Rishabh Rajpurohit\\Documents\\majorp\\res\\database'


def play__sound(s):
    mytext = s
    language = 'en-us'
    myobj = gTTS(text=mytext, lang=language, slow=False)
    filename = 'C:\\Users\\Rishabh Rajpurohit\\Documents\\majorp\\testvoice.mp3'
    myobj.save(filename)
    playsound(filename)
    os.remove('C:\\Users\\Rishabh Rajpurohit\\Documents\\majorp\\testvoice.mp3')
```

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