

## REAL TIME FACE ATTENDACE SYSTEM

Face recognition is a biometric recognition technique. Biometric recognition is an information system that allows the identification of a person based on some of its main physiological and behavioural characteristics. Face recognition is a broad problem of identifying or verifying people in photographs and videos, a process comprised of detection, alignment, feature extraction, and a recognition task.

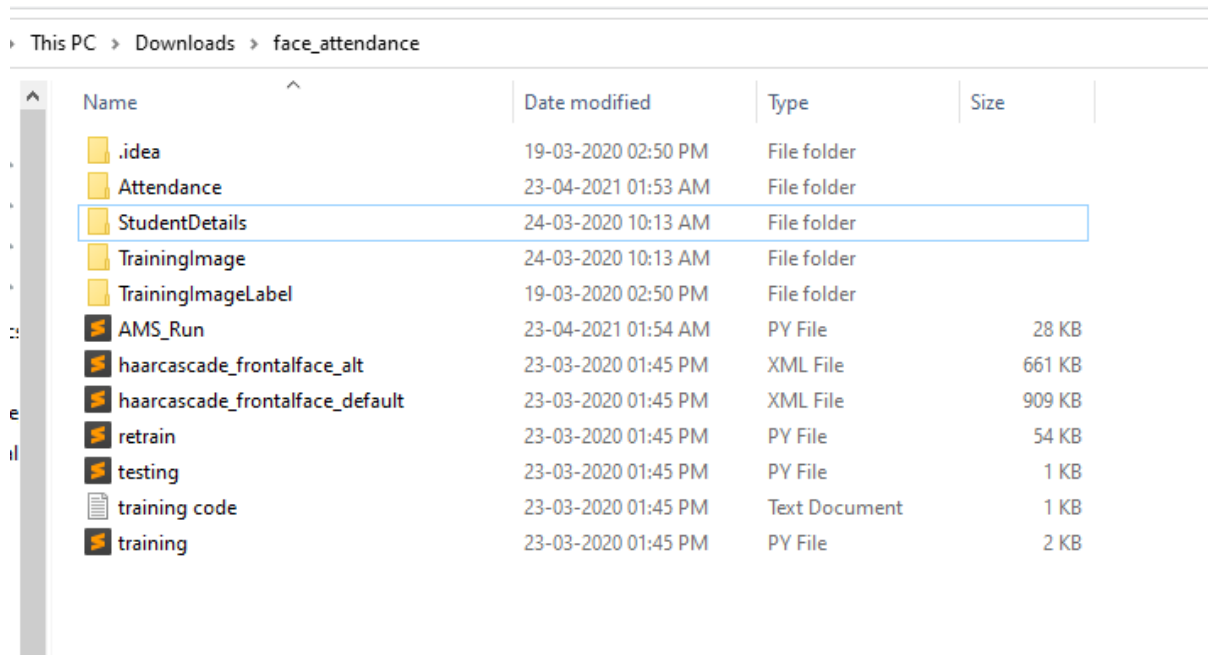
### STEP 1 : DOWNLOAD THE SOURCE CODE (Valid for 7 Days to download)

Download source code (click on text)

[Download Source Code](#)[YouTube Video](#)

and un-zip

After successful unzip, folder structure will be look like as below



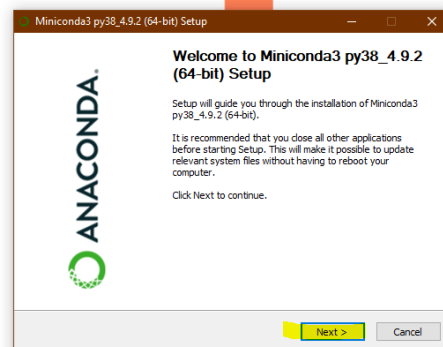
| Name                            | Date modified       | Type          | Size   |
|---------------------------------|---------------------|---------------|--------|
| .idea                           | 19-03-2020 02:50 PM | File folder   |        |
| Attendance                      | 23-04-2021 01:53 AM | File folder   |        |
| StudentDetails                  | 24-03-2020 10:13 AM | File folder   |        |
| TrainingImage                   | 24-03-2020 10:13 AM | File folder   |        |
| TrainingImageLabel              | 19-03-2020 02:50 PM | File folder   |        |
| AMS_Run                         | 23-04-2021 01:54 AM | PY File       | 28 KB  |
| haarcascade_frontalface_alt     | 23-03-2020 01:45 PM | XML File      | 661 KB |
| haarcascade_frontalface_default | 23-03-2020 01:45 PM | XML File      | 909 KB |
| retrain                         | 23-03-2020 01:45 PM | PY File       | 54 KB  |
| testing                         | 23-03-2020 01:45 PM | PY File       | 1 KB   |
| training code                   | 23-03-2020 01:45 PM | Text Document | 1 KB   |
| training                        | 23-03-2020 01:45 PM | PY File       | 2 KB   |

## STEP 2 : DOWNLOAD MINICONDA FROM BELOW LINK

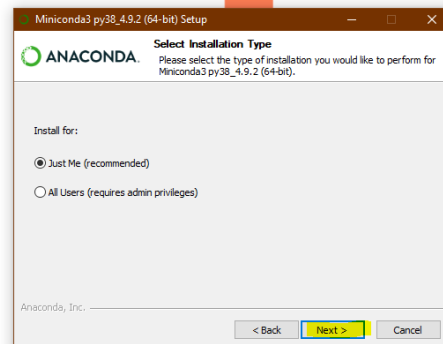
Download Miniconda

After downloading, double click on setup file and install

**Extrinsic**  
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[www.extrinsictechnology.com](http://www.extrinsictechnology.com)

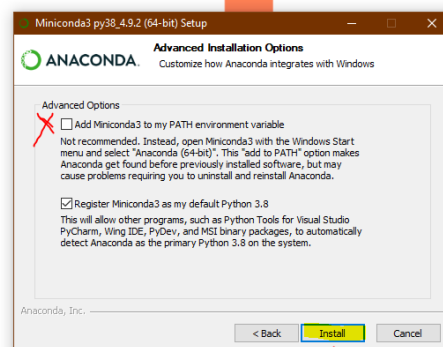


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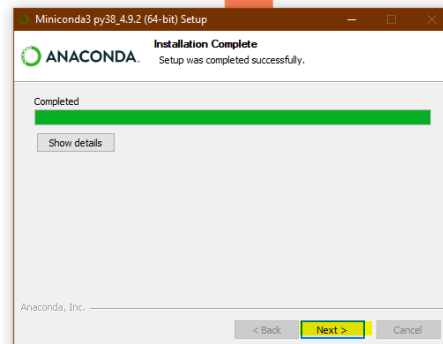


Do **not tick** the checkbox

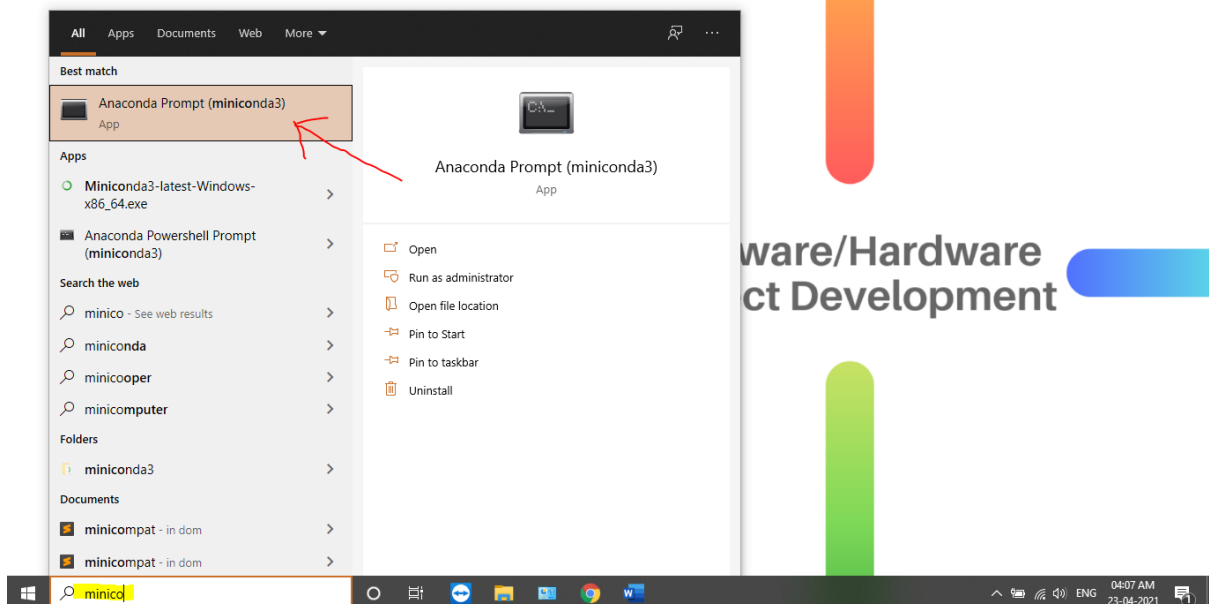
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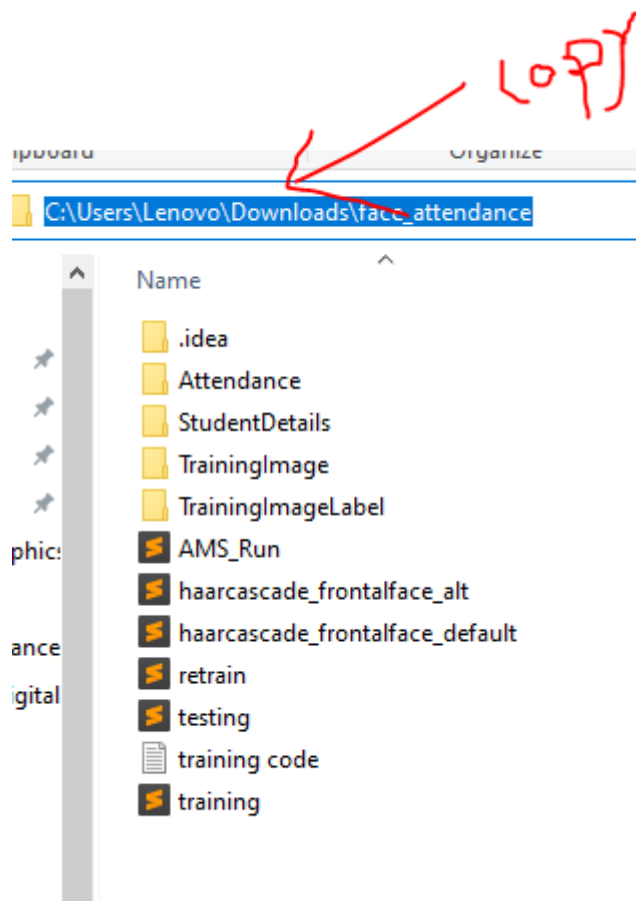


**Step 3 :** Launch Miniconda/Anaconda PROMPT and Navigate to the project folder





Copy the path of source code as shown below



Paste the path in Ananconda prompt with typing cd

*CD C:\Users\Lenovo\Downloads\face\_attendance*

(Above path can be different for you, so copy only that path where your project stored)

```
Anaconda Prompt (miniconda3)

(base) C:\Users\Lenovo>cd C:\Users\Lenovo\Downloads\face_attendance_
```

Hit Enter.

```
Anaconda Prompt (miniconda3)

(base) C:\Users\Lenovo>cd C:\Users\Lenovo\Downloads\face_attendance
(base) C:\Users\Lenovo\Downloads\face_attendance>
```

#### Step 4 : Install Required packages by using below command

*Pip install opencv-python pillow pandas opencv-contrib-python pymysql*

```
Anaconda Prompt (miniconda3)

(base) C:\Users\Lenovo\Downloads\face_attendance>Pip install opencv-python pillow pandas opencv-contrib-python pymysql
```

Hit enter

In my system these packages are already installed so you will get different installation window. Don't panic, it will be same

```
(base) C:\Users\Lenovo\Downloads\face_attendance>Pip install opencv-python pillow pandas opencv-contrib-python pymysql
Requirement already satisfied: opencv-python in c:\users\lenovo\miniconda3\lib\site-packages (4.5.1.48)
Requirement already satisfied: pillow in c:\users\lenovo\miniconda3\lib\site-packages (8.2.0)
Requirement already satisfied: pandas in c:\users\lenovo\miniconda3\lib\site-packages (1.2.4)
Requirement already satisfied: opencv-contrib-python in c:\users\lenovo\miniconda3\lib\site-packages (4.5.1.48)
Requirement already satisfied: pymysql in c:\users\lenovo\miniconda3\lib\site-packages (1.0.2)
Requirement already satisfied: numpy>=1.17.3 in c:\users\lenovo\miniconda3\lib\site-packages (from opencv-python) (1.20.2)
Requirement already satisfied: python-dateutil>=2.7.3 in c:\users\lenovo\miniconda3\lib\site-packages (from pandas) (2.8.1)
Requirement already satisfied: pytz>=2017.3 in c:\users\lenovo\miniconda3\lib\site-packages (from pandas) (2021.1)
Requirement already satisfied: six>=1.5 in c:\users\lenovo\miniconda3\lib\site-packages (from python-dateutil>=2.7.3->pandas) (1.15.0)

(base) C:\Users\Lenovo\Downloads\face_attendance>
```

## Step 5 : Launch the Actual Application

Run command

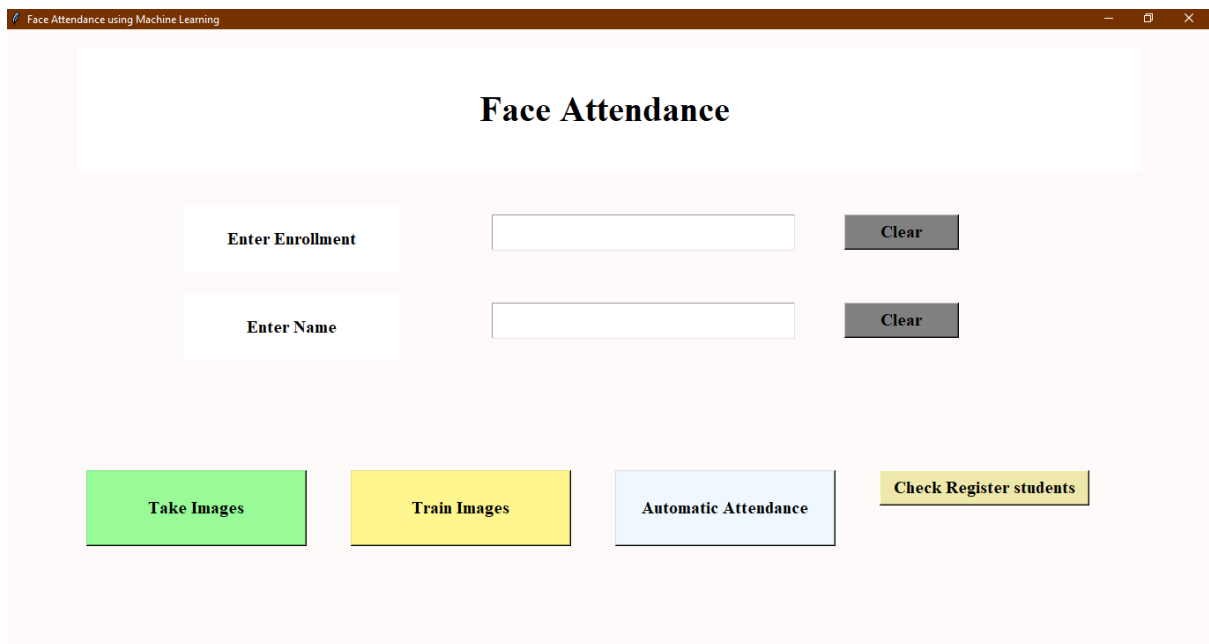
*Python AMS\_Run.py*

Hit enter

```
Anaconda Prompt (miniconda3)

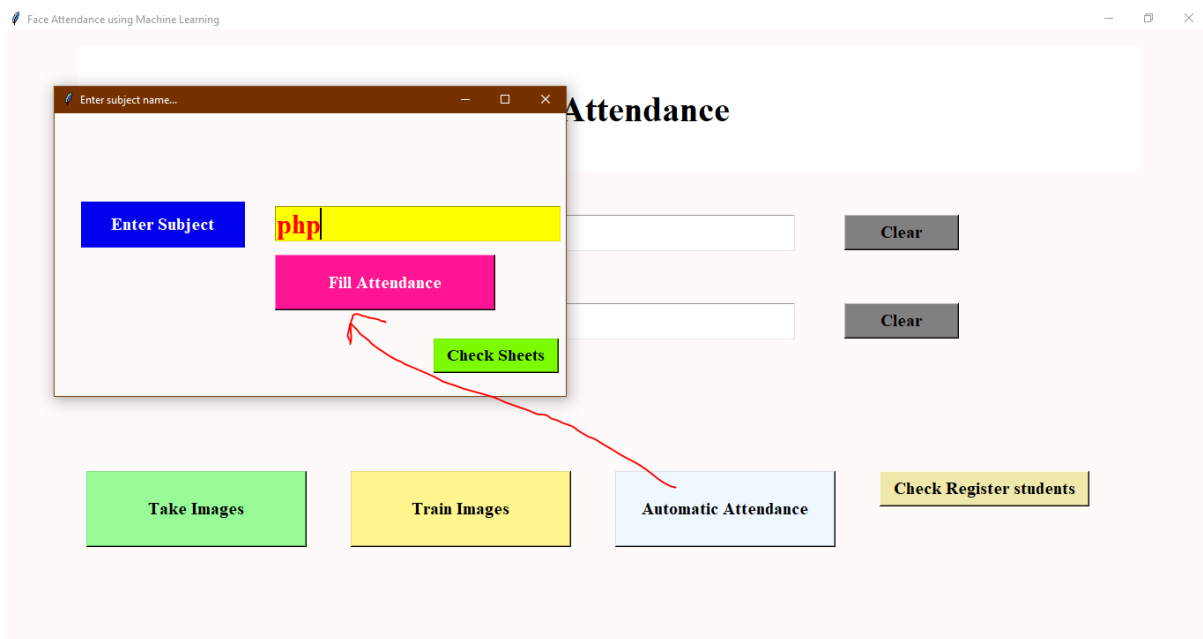
(base) C:\Users\Lenovo\Downloads\face_attendance>python AMS_Run.py_
```

Python Tkinter UI page will open automatically

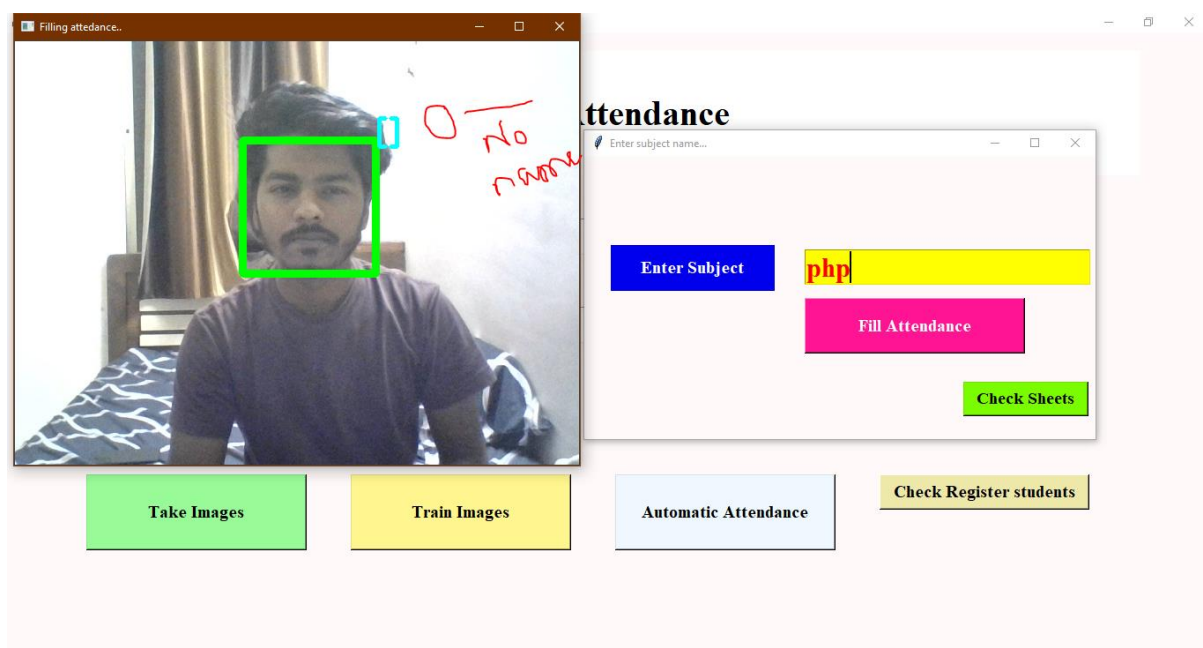


The screenshot shows a Python Tkinter window titled "Face Attendance using Machine Learning". The window has a light pink background and a white title bar. The main content area is titled "Face Attendance" in bold black text. Below the title, there are two input fields for "Enter Enrollment" and "Enter Name", each with a corresponding "Clear" button. At the bottom, there are four buttons: "Take Images" (green), "Train Images" (yellow), "Automatic Attendance" (light blue), and "Check Register students" (yellow).

Click on Automatic Attendance and check your name should not be come first.



Camera will open but person cannot be identified/unknown.

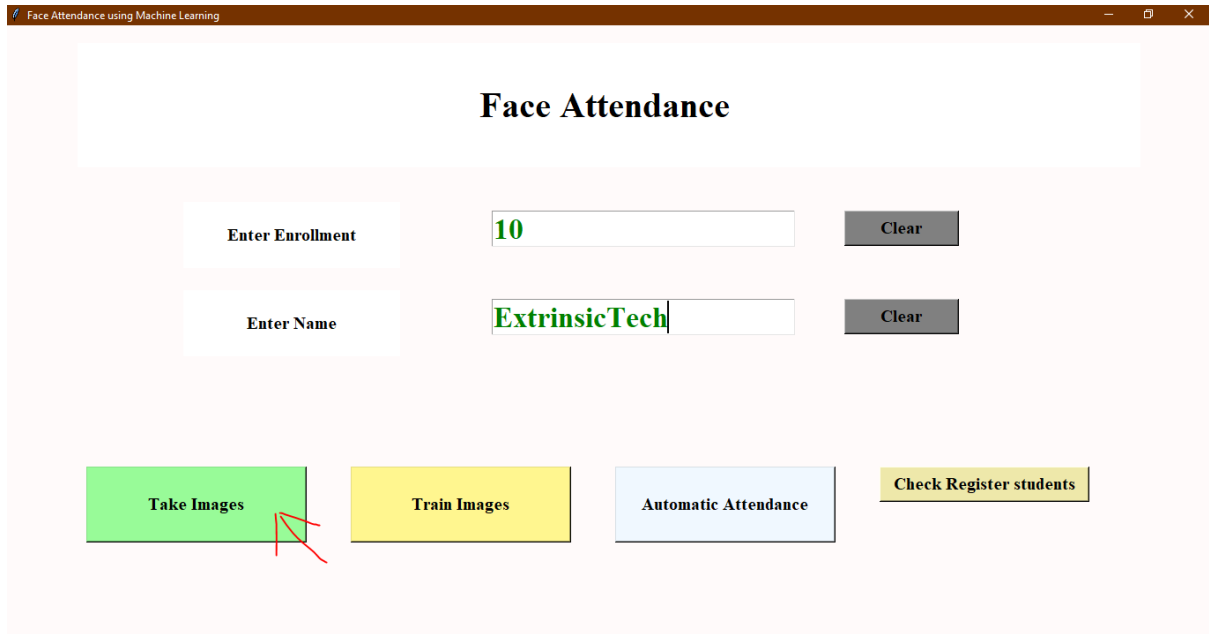


As your face is not registered in Application, it will not mark you as present.

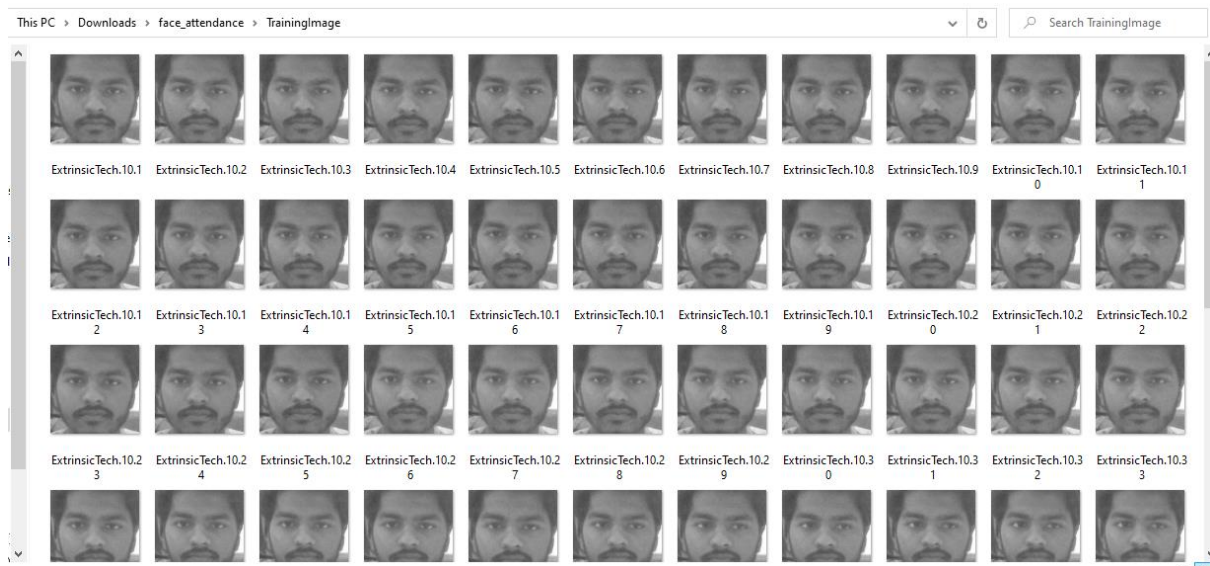


## Step 6 : Add Student Face to database

1. Enter Roll Number and Name
2. Click on Take Images



You will see that camera will open and will multiple shots will be stored in `.\face_attendance\TrainingImage` path



After capturing your face images, it will be stored and on UI you will see this message

## Face Attendance

Enter Enrollment

10

Clear

Enter Name

ExtrinsicTech

Clear

Images Saved for Enrollment : 10 Name : ExtrinsicTech

Take Images

Train Images

Automatic Attendance

Check Register students

Now Click on Train images so your face model will be ready.  
After successful training of the model you will get below msg

## Face Attendance

Enter Enrollment

10

Clear

Enter Name

ExtrinsicTech

Clear

Model Trained

Take Images

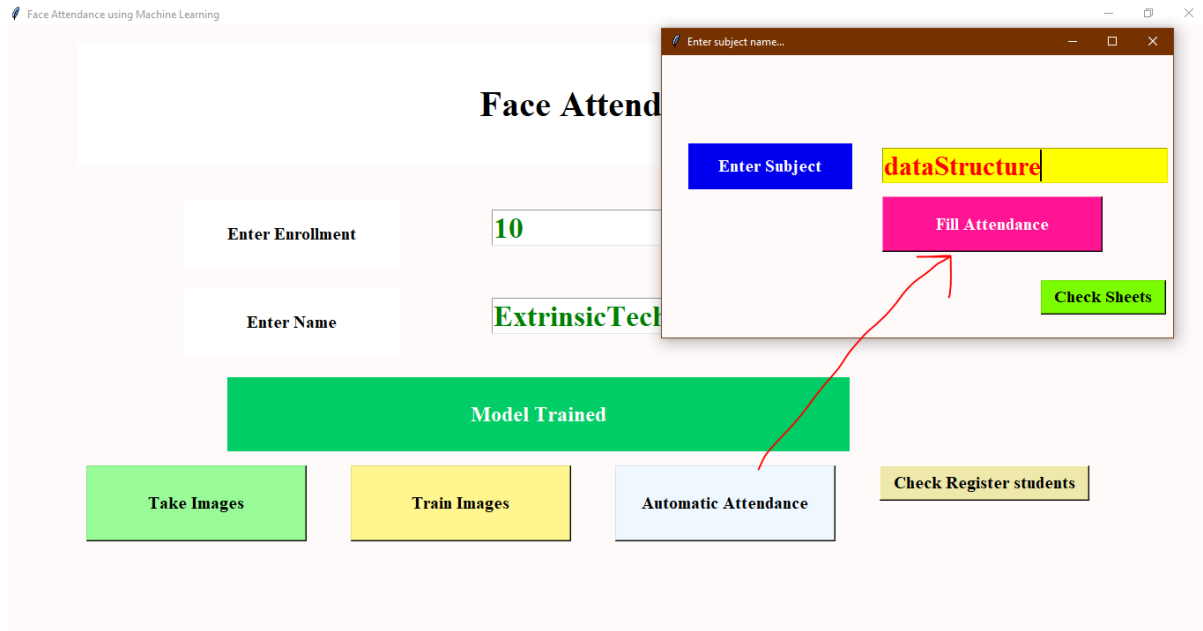
Train Images

Automatic Attendance

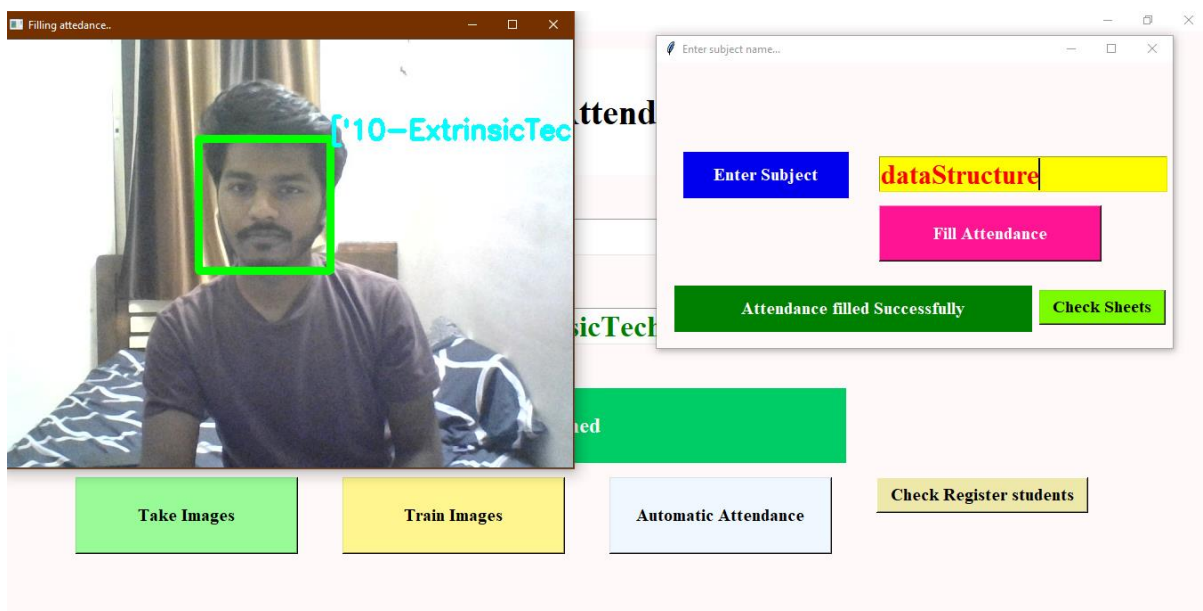
Check Register students

## Step 7 : Real Time attendance

Click on Automatic Attendance, select subject and start.



Roll Number and Name will be displayed on Face



You can also see the all attendees after taking attendance on pop up screen

Face Attendance using Machine Learning

| Enrollment | Name         | Date       | Time     |
|------------|--------------|------------|----------|
| 10         | ExtrinsicTec | 2021-04-23 | 04:59:21 |

## Face Attendance

Enter Enrollment

10

Enter Name

ExtrinsicTec

Model Trained

Take Images

Train Images

Automatic Attendance

Check Register students

Enter subject name...

Enter Subject

dataStructure

Fill Attendance

Attendance filled Successfully

Check Sheets

Excel sheet is also created

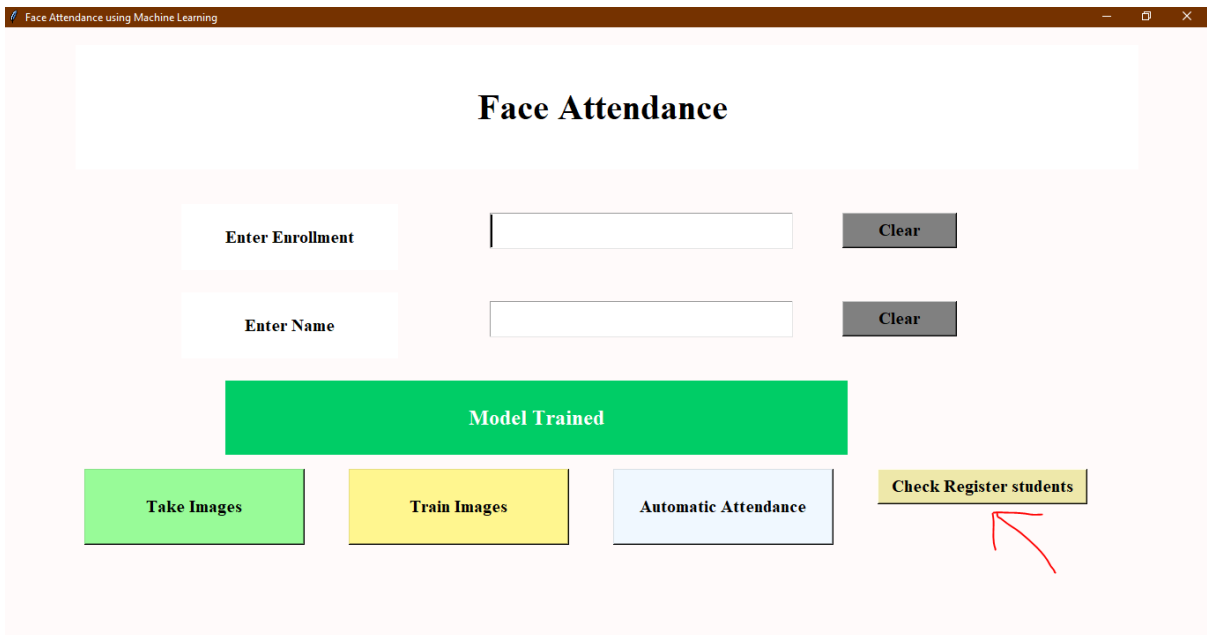
This PC > Downloads > face\_attendance > Attendance

| Name                              | Date modified    |
|-----------------------------------|------------------|
| Manually Attendance               | 24-03-2020 10:15 |
| dataStructure_2021-04-23_04-58-35 | 23-04-2021 04:58 |

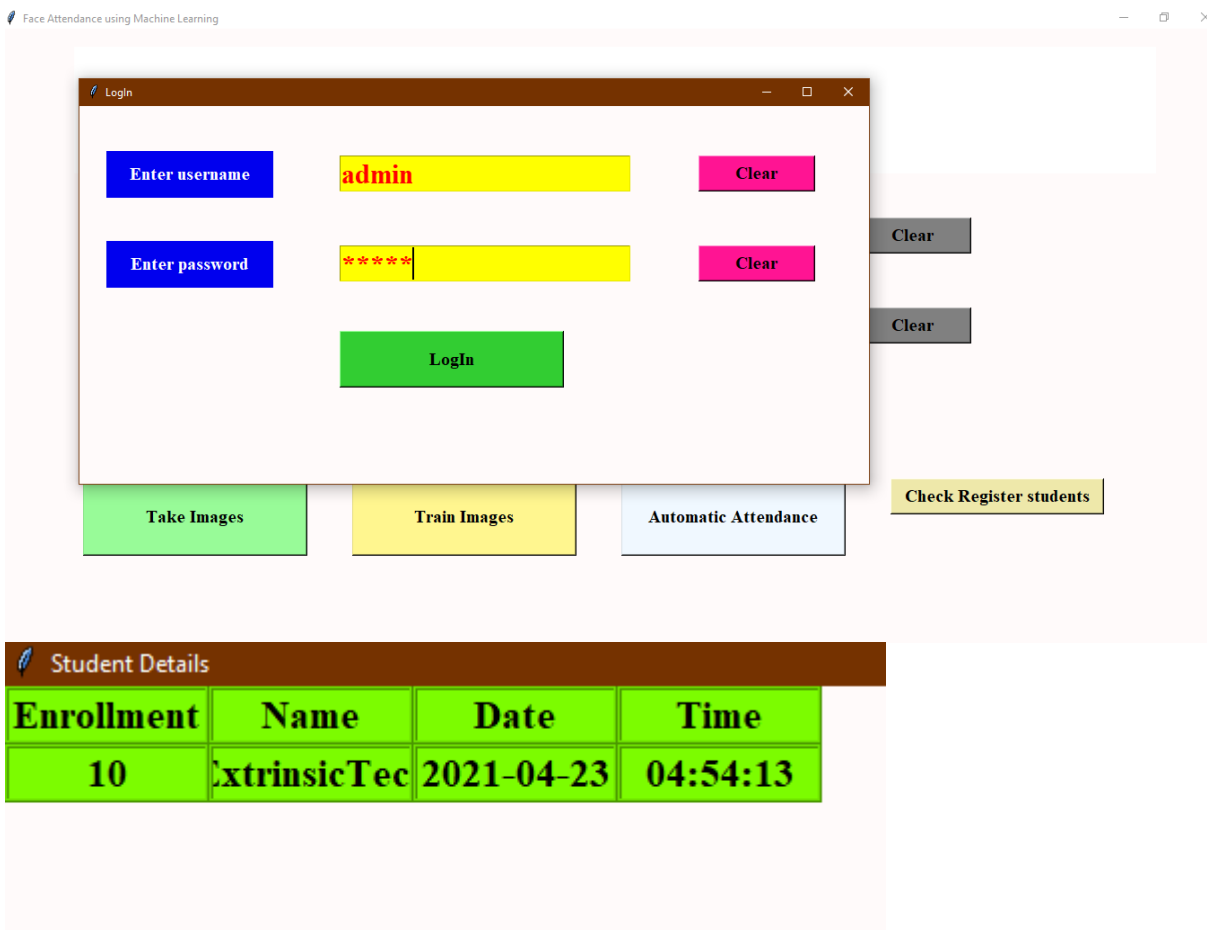
| Enrollment |            |                   |            |          |
|------------|------------|-------------------|------------|----------|
| A          | B          | C                 | D          | E        |
| 1          | Enrollment | Name              | Date       | Time     |
| 2          | 10         | ['ExtrinsicTech'] | 23-04-2021 | 04:58:21 |
| 3          |            |                   |            |          |

**Step 8 :** You can also check the details of registered student here



Username : admin

Password : admin



| Enrollment | Name         | Date       | Time     |
|------------|--------------|------------|----------|
| 10         | ExtrinsicTec | 2021-04-23 | 04:54:13 |

Thanks and Regards,  
Extrinsic Technology

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