Lock-Unlock-PC-Screen-Using-Face-Recognition

Kindly Note that this program cannot be used as a serious authentication system for your PC. This has been designed only for general purposes for understanding of OpenCV.

I have been using this program and it works just fine for me. This program basically adds a cool feature in your PC.

Your PC will be able to recognize difference between you and any stranger(only to your laptop,PC maybe not for you) and lock unlock itself depending on who is in front of its webcam.

Requirements :

- •Webcam and requisite hardware to run Python 3.6.

- •Python Modules -

1. OpenCV

2. Numpy

3. PIL(Python Image Library),pyautogui(Used to operate mouse and keyboard using python script).

- •Windows/Ubuntu Task Sheduler must be working.

Program has been divided into three Script :

1.**create_face_datasets.py** - Script that is meant to create dataset. This will capture 400 photos from webcam and will save them in a folder named dataset.(You dont need to create dataset folder, python script will create one on its own).

2.**training_model.py** - Script which will train the model using dataset which has been already create using above mentioned script.This script will create a folder named trainer and will save a .yml file in it. On successful creation of .yml file model is now trained.

3.**lock_unlock_face_recognition.py** - Script which will recognize face from webcam and check whether the model is trained for this face or not. If model is trained for this face then process will get terminate with says that Verified User. But if the face seems to be strangers then your PC Screen will get locked(simple Lock Screen will appear depending on your Lock Screen Setting of Windows/Ubuntu and user will have to open it again and same process will occur).

How to run script?

Steps to setup :

1.Download all the files,Modules required to run this Program. Firstly you need to run create_face_datasets.py and verify the path of your Directory where your file is saved. Make sure you have changed the address of xml file in script otherwise you will get an error.

2.Now run training_model.py. You can check trainer folder has been created and yml file is inside it. While running check the path & correct it according to your directory.

3.Now run lock_unlock_face_recognition.py and run. This will run this will give the output that is lock or unlock screen accoding to our input face and trained face.

Comments has been added in scripts to understand codes.