

# Instructions for code execution

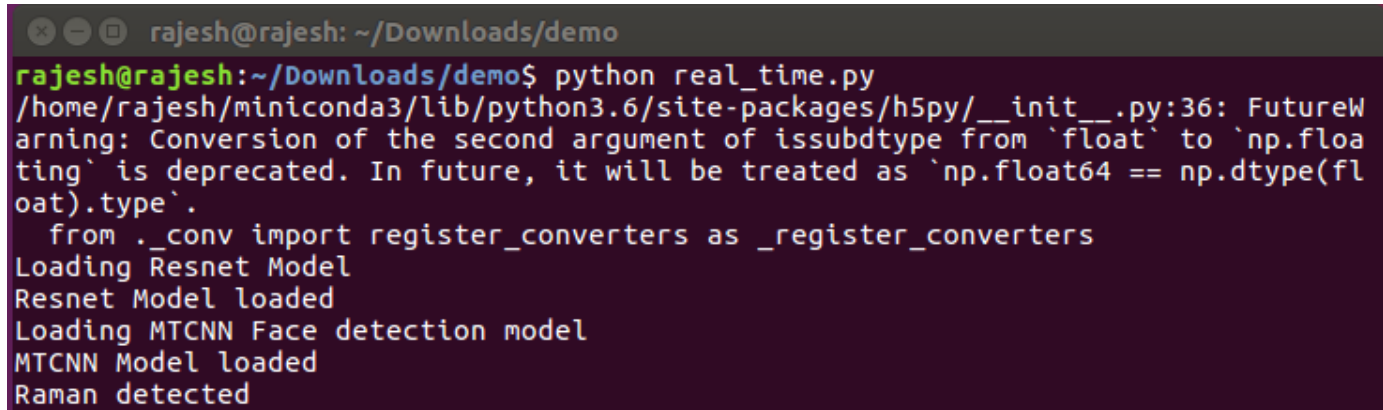
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## Running Face Recognition

1. Navigate to `/face` folder.
2. Right click and open terminal from that folder.
3. Type this (to start the program):

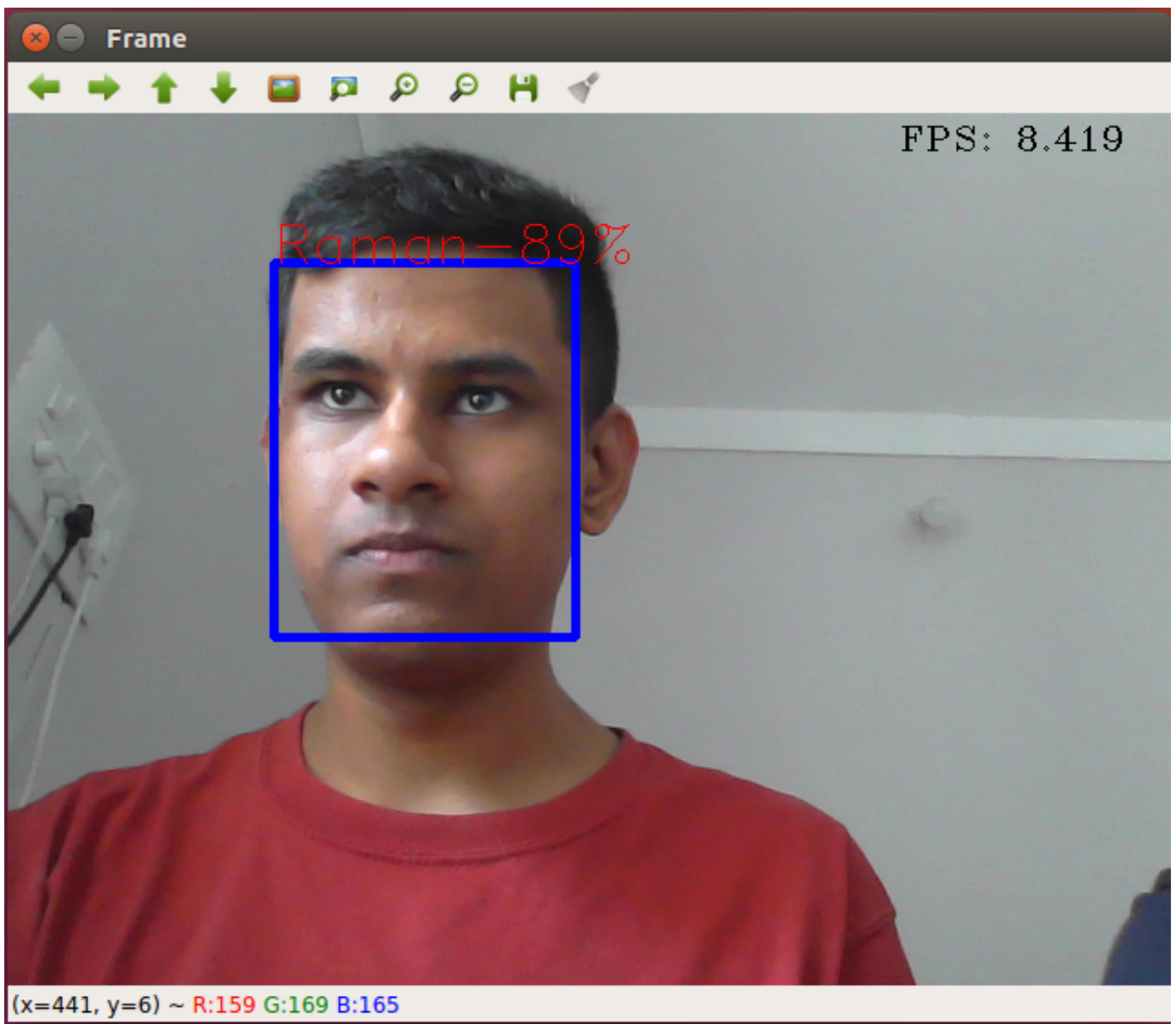
```
python real_time.py
```

You would get an interface like this:

A terminal window with a dark background. The title bar shows 'rajesh@rajesh: ~/Downloads/demo'. The command 'python real\_time.py' has been executed. The output shows a FutureWarning from h5py, followed by import statements, and then messages indicating that the Resnet and MTCNN models have been loaded successfully. The final line of output is 'Raman detected'.

```
rajesh@rajesh: ~/Downloads/demo$ python real_time.py
/home/rajesh/miniconda3/lib/python3.6/site-packages/h5py/__init__.py:36: FutureWarning: Conversion of the second argument of
issubdtype from `float` to `np.float64` is deprecated. In future, it will be treated as `np.float64 == np.dtype(float).type`.
  from ._conv import register_converters as _register_converters
Loading Resnet Model
Resnet Model loaded
Loading MTCNN Face detection model
MTCNN Model loaded
Raman detected
```

and output window like this:



To stop the program just click on the output window and press Q.

For image testing:

```
python real_time.py --mode image
```

## To train recognition to add people to the dataset

- 1) Make sure `/face` folder has the desired video of the person
- 2) In the `face_recognition.py` file, navigate to `add_faces()` function.
- 3) In the `cv2.VideoCapture()` function, enter the name of the video file as the parameter.
- 4) Navigate to `/face` folder.
- 5) Right click and open terminal from there.
- 6) Start the training process by typing this on terminal:

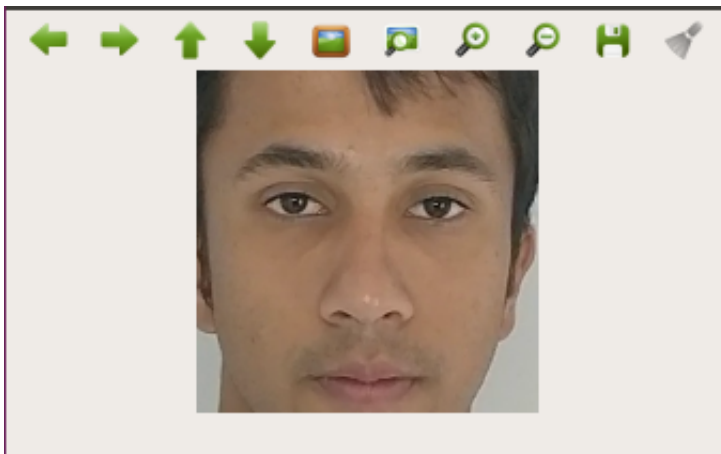
```
python real_time.py --mode input
```

7) Enter the name of the person when asked.

The terminal output of this would be:

```
rajesh@rajesh:~/Downloads/demo$ python real_time.py --mode input
/home/rajesh/miniconda3/lib/python3.6/site-packages/h5py/__init__.py:36: FutureWarning: Conversion of the second argument of issubdtype from `float` to `np.floating` is deprecated. In future, it will be treated as `np.float64 == np.dtype(float).type`.
  from ._conv import register_converters as _register_converters
Loading Resnet Model
Resnet Model loaded
Loading MTCNN Face detection model
MTCNN Model loaded
Please input new user ID:
Pranav
Please start turning slowly. Press 'q' to save and add this new user to the data set
█
```

And simultaneously training is visualised like this:



8) The training will automatically stop and the person will be added to the dataset