***Required Packages***

For this project we will require a web cam to capture the live input image frame, and we will be implementing the algorithm in Jupyter Notebook using Python Scripting Language. The main packages or libraries we will be mainly using is OpenCV, Keras, TensorFlow and PyGame. These can be installed with the help of “pip install”.

* OpenCV: It’s a programming library geared primarily toward real-time computer vision.
* TensorFlow: It may be used for a variety of applications, but it focuses on deep neural network training, prediction and inference.
* Keras: Acts as an interface for the TensorFlow library. It is an API designed for humans and not machines.
* Pygame: It is actually a module used for writing games, but here we will be using it to play an alarm sound that will indicate when the
* Dlib: A C# library that is used for Machine Learning purposes like, regression, clustering, etc.

***Execution of Code***

Conda create -n env\_DDYD

conda install -c conda-forge dlib

pip install tensorflow

pip install keras

pip install opencv-python

Firstly, we executed the code on Jupyter Notebook. Then, we had to create an environment for dlib as it does not operate on the base root of Jupyter, so environment DDYD was created. After the initial process, we install the above-mentioned prerequisite packages , i.e., we installed Tensor Flow, Keras and OpenCV. Once that installation process is done we have to import the required documentation and data files, which is used to predict the features of the face and the alarm system. We also imported a CNN model that trains data to detect facial features automatically so as to make our work easy.