General overview:

The model has an accuracy of 99.38% on the [Labeled Faces in the Wild](http://vis-www.cs.umass.edu/lfw/) benchmark.

**Technique**

Extract features an present them as 128-d vector (128 real valued number) that is used to quantify face to be comparable

Compare encodings of known and required faces

**steps** (to identify a face in real time ):

1. Provide a sample picture and learn how to recognize it
2. Take video capture using a camera
3. Find all the faces that appear in the frame
4. Find and manipulate facial features in pictures:Get the locations and outlines of each person's eyes, nose, mouth and chin.
5. Identify faces in pictures: Recognize who appears in each photo.

#### Used libraries

**1**- Open cv

- Used to read video that contains faces to be recognized from webcam

- Resize frame of video for faster face recognition processing

- Pre-requirements: numpy – scipy- matplotlib

2- Face recognition

-Load train image files

-Encoding known and video frame images

- Pre-requirements: dlib – cmake

3-Gtts

-tool to interface with Google Translate text-to-speech API

- we use it to convert the name of recognized person into audio

4- playSound: used to play sound on python