

## INTRODUCTION

We can have an advanced way of life. Be that as it may, it is likewise officeholder on us to consider the security of these benefits and our family too. In this way, alongside the advanced method for living, security has a prime worth. A visual observation framework, in view of PC vision innovation, can be useful to accomplish this goal. The way to security is consistent checking.

Moving location, successive pictures are contrasted with recognize contrasts between them bringing about movement recognition dependent on the rate distinction between these pictures

Registration of the faces of citizens and verification can be done by using Machine learning.

### Source of the Data

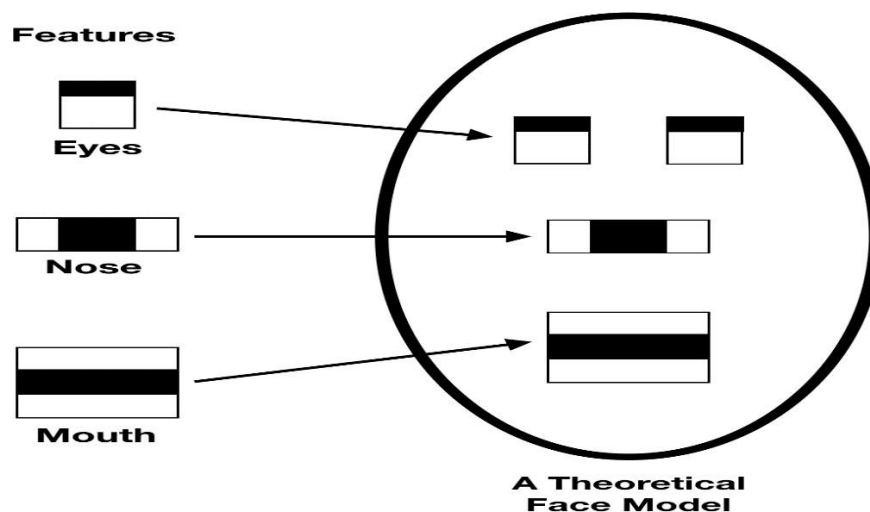
To identify and track criminals based on Police records.

To help in supporting and accelerating the investigations and forensics.

Mapping of new or unknown users through Aadhaar.

### Methodology section

#### **5.1 Haar-like Feature Extraction for Face Detection**

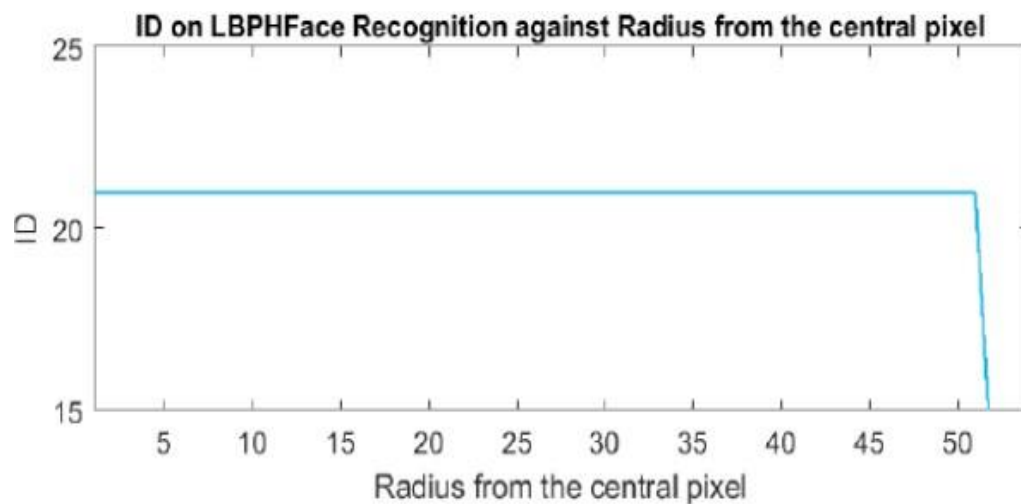
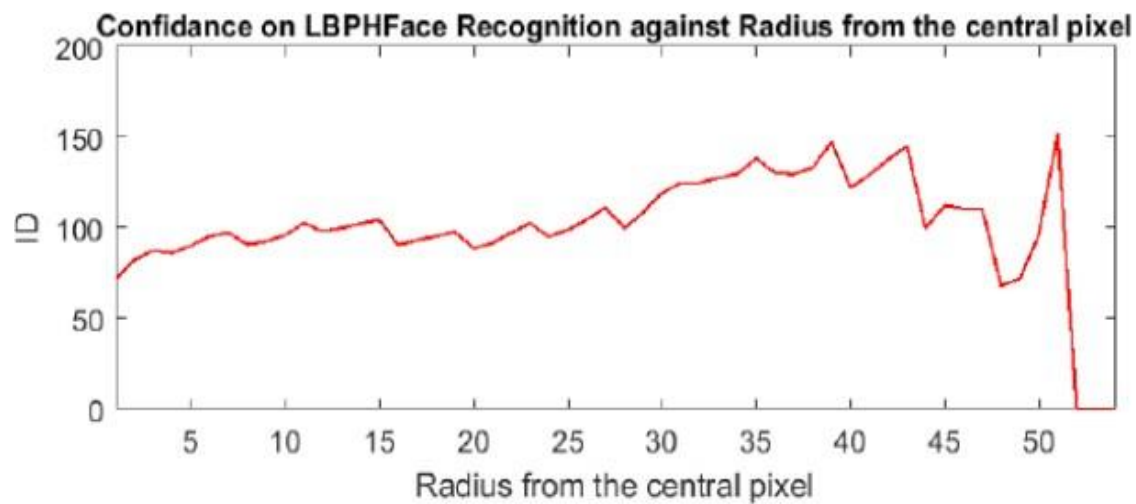


### **Local Binary Pattern Histogram (LBPH)**

Local binary patterns were proposed as classifiers , The combination of LBP with

histogram-oriented gradients was introduced in 2009 that increased its performance in certain datasets . For feature encoding, the image is divided into cells (4 x 4 pixels). Using a clockwise or counter-clockwise direction surrounding pixel values are compared with the central . The value of intensity or luminosity of each neighbour is compared with the centre pixel. Depending if the difference is higher or lower than 0, a 1 or a 0 is assigned to the location. The result provides an 8-bit value to the cell. The advantage of this technique is even if the luminosity of the image

## **Results**



## **Discussion and Conclusion**

All factors considered, LBPH combined with Haar-cascades can be implemented as a cost effective face recognition platform. An example is a system to identify known troublemakers in a mall or a supermarket to provide the owner a warning to keep him alert or for automatic attendance taking in a class.