

# **PREVENTION OF IMPERSONATION IN EXAMINATION**

## **ABSTRACT**

Impersonation is the act of pretending to be another person for the purpose of entertainment or fraud. Lately, impersonation is mainly happening in schools or colleges by doing things like cheating on attendance, writing others exams, etc. Impersonating not only affects the person impersonated, but also the impersonator. This leads to academic misconduct and affects the student record .

There have been several advancements in technology which helps in preventing impersonation. Deep learning and computer vision can be used to solve this. These technologies uniquely recognize a person and thus, help in preventing impersonation.

## 1.1 INTRODUCTION

Traditional methods in taking attendance or student verification in exams can be easily cheated through impersonation. So, in this Prevention of Impersonation project, we uniquely recognize a person using advanced technologies. It can be achieved through Biometrics. It include: Face, Voice, palm print, Hand Geometry, Iris, Retinal Scan, DNA, Signature, Gait and Keystrokes and Finger Print [2]. However, in this project we use Finger print and Face recognition. By using finger print and face recognition concepts we prevent impersonation in school or college attendance, in exams, etc.

In this project, the source of data is students information in a class. Students information include their name, id number, finger print and their photo. In our project, we take students finger print at the time they enter college. And students face photo is captured when they enter the classroom. Uniquely we identify a student based on their finger print and face recognition and their entry time is written in a excel file. Now we can use this process to prevent impersonation.

## 1.2 TOOLS AND TECHNOLOGIES

In this project, we use the data present in student folders. So this is a file based system project. Many Deep learning concepts are used in Finger Print and Face Recognition sysyems. To perform this task, we used predefined methods in python modules. Those modules are:

- **os module:** This module is used to automatically perform many operating system tasks. The OS module in Python provides functions for creating and removing a directory (folder), fetching its contents, changing and identifying the current directory, etc. We use it for handling and training the images
- **NumPy module:** It is the core library for scientific computing, which contains a powerful n-dimensional array object. In this project we use it for handling image array.
- **Pandas module:** Pandas is an open-source python library that is used for data manipulation and analysis. It provides many functions and methods to speed up the data analysis process. In our project we used its methods to store time in files(xlsx or csv).
- **Datetime module:** It is used for retrieving the date and time information on any day.
- **Opencv module :**a great tool for image processing and performing computer vision tasks. It is an open-source library that can be used to perform tasks like face detection, objection tracking, landmark detection, and much more.

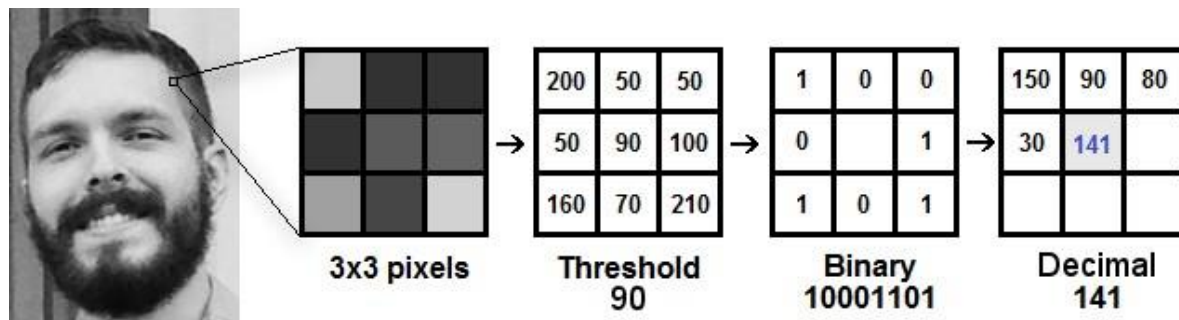
- **face\_recognition\_module:** It is used to recognize and manipulate faces from Python. Find and manipulate facial features in pictures.

## ALGORITHM: LBPH

LBPH (Local Binary Pattern Histogram) is a Face-Recognition algorithm it is used to recognize the face of a person. It is known for its performance and how it is able to recognize the face of a person from both front face and side face.

We chose LBPH for the following reasons:

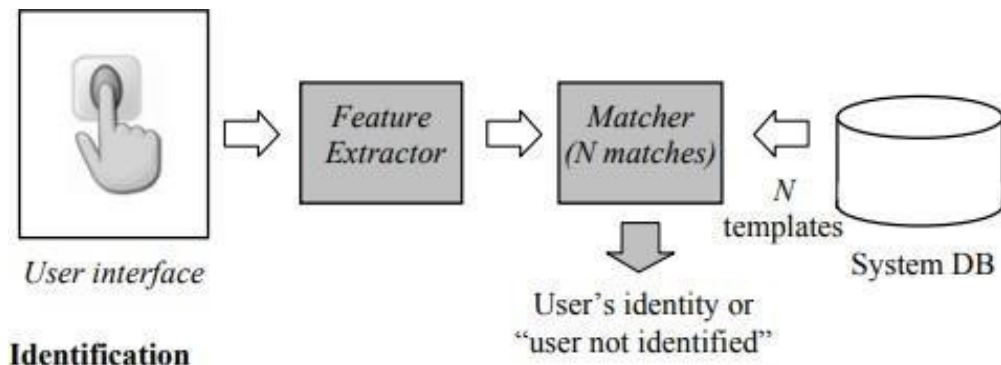
- LBPH is one of the easiest face recognition algorithms.
- It can represent local features in the images.
- It is possible to get great results (mainly in a controlled environment).
- It is robust against monotonic gray scale transformations.
- It is provided by the OpenCv library (Open Source Computer Vision Library).



## Face Recognition:



### Finger print identification:



[5]

## CONCLUSION

Our project, Prevention of Impersonation helps in solving the problem by analysing the time they entered college and classroom. This helps in maintaining a good attendance system, healthy environment while conducting exams, etc.

## REFERENCES

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