Face Detection and Recognition

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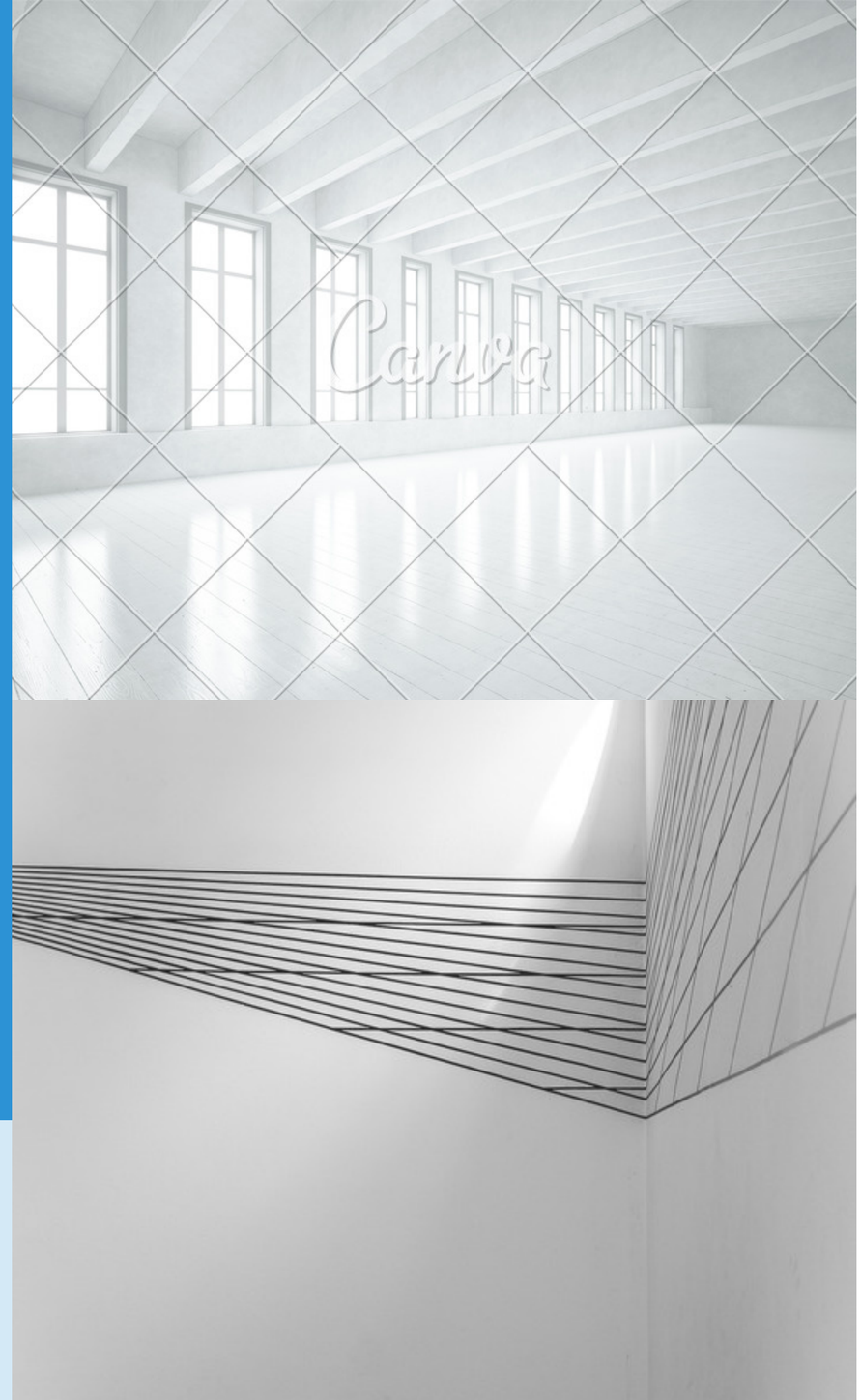


BY OPENCV

What we will use?

05 *Trainer(LBPH COMPUTED MODEL)*

LBPH is an algorithm used for face Recognition.

04 *OpenCV*

OpenCV is a cross-platform library using which we can develop real-time computer vision applications. It mainly focuses on image processing, video capture and analysis including features like face detection and object detection.

03 *Haarcascade*

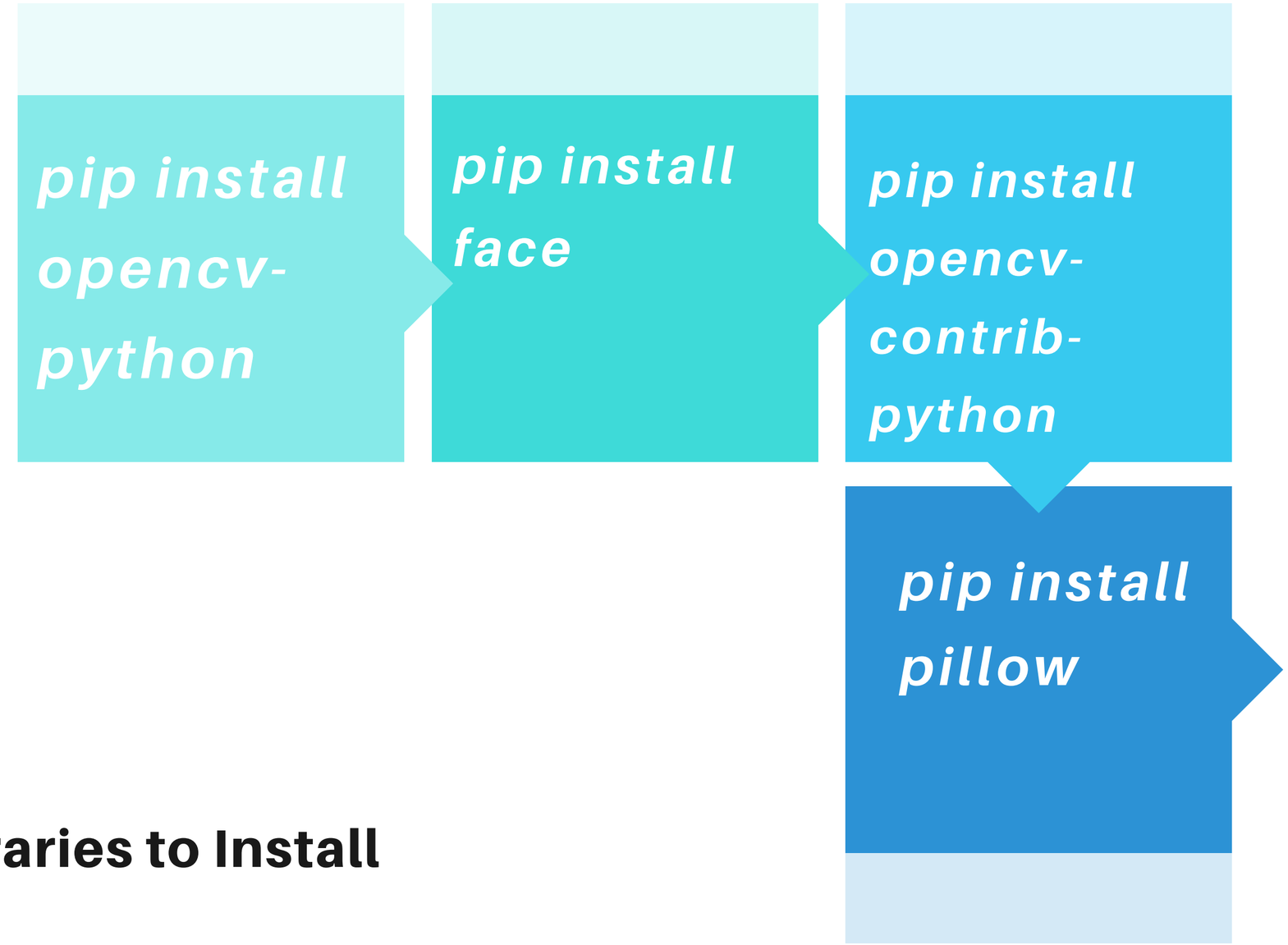
Haar Cascade is a machine learning-based approach where a lot of positive and negative images are used to train the classifier. We Use it for face detection and recoginition.

02 *Python*

Recommended Versions: 3.6-3.8

01 *Research Paper*

We will study some research paper for face detection



Libraries to Install

LBPH FACE RECOGNIZER ALGORITHM

- The Local Binary Pattern Histogram(LBPH) algorithm is a simple solution on face recognition problem, which can recognize both front face and side face.
- In this Project, we will used the pre-trained model stored in the form of .yml file

HAARCASCADE

- Haar Cascade is a Machine Learning Object Detection Algorithm used to identify in an image or video.
- In this project we will used Haarcascade Frontal Face detection to detect faces in the image.

Resources

1. *Face detection By OpenCV Documentation*
   https://docs.opencv.org/3.4/db/d28/tutorial_cascade_classifier.html

2. *Github*
   https://github.com/informramiz/Face-Detection-OpenCV

3. https://www.udemy.com/course/building-a-face-detection-and-recognition-model-from-scratch/learn/lecture/21094260?start=675#overview

4. *LBHP Face Recoginition*
   https://towardsdatascience.com/face-recognition-how-lbph-works-90ec258c3d6b

5. *Refer documentation of OpenCV for anything*

WHAT SHOULD BE OUR NEXT STEP ?

Studying Research Paper

Face Detection
or
for next step in the project

Understanding Haarcascade and LBPH ALGO

ML Algorithms

Mathematics behind ML and Neural Networks

Understanding OpenCV

THANK YOU!