
welcome

“ARTIFICIAL INTELLIGENCE”

Course code:418

Course title : Artificial intelligence laboratory

PROJECT ON:

Image processing in face detection used open cv

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DEFINITION:

Artificial intelligence(AI) is the intelligence of machines and the branch of computer science that aims to create it.

INTRODUCTION:

The following document is a report on the mini project for Robotic visual perception and autonomy. It involved building a system for face detection using several classifiers available in the open computer vision library (OpenCV). Face detection is used to identify a face from an image. This is followed by the explanation of HAAR-cascades. Next, the methodology and the results of the project are described. A discussion regarding the challenges and the resolutions are described. Finally, conclusion is provided on the pros and cons of each algorithm and possible implementations.

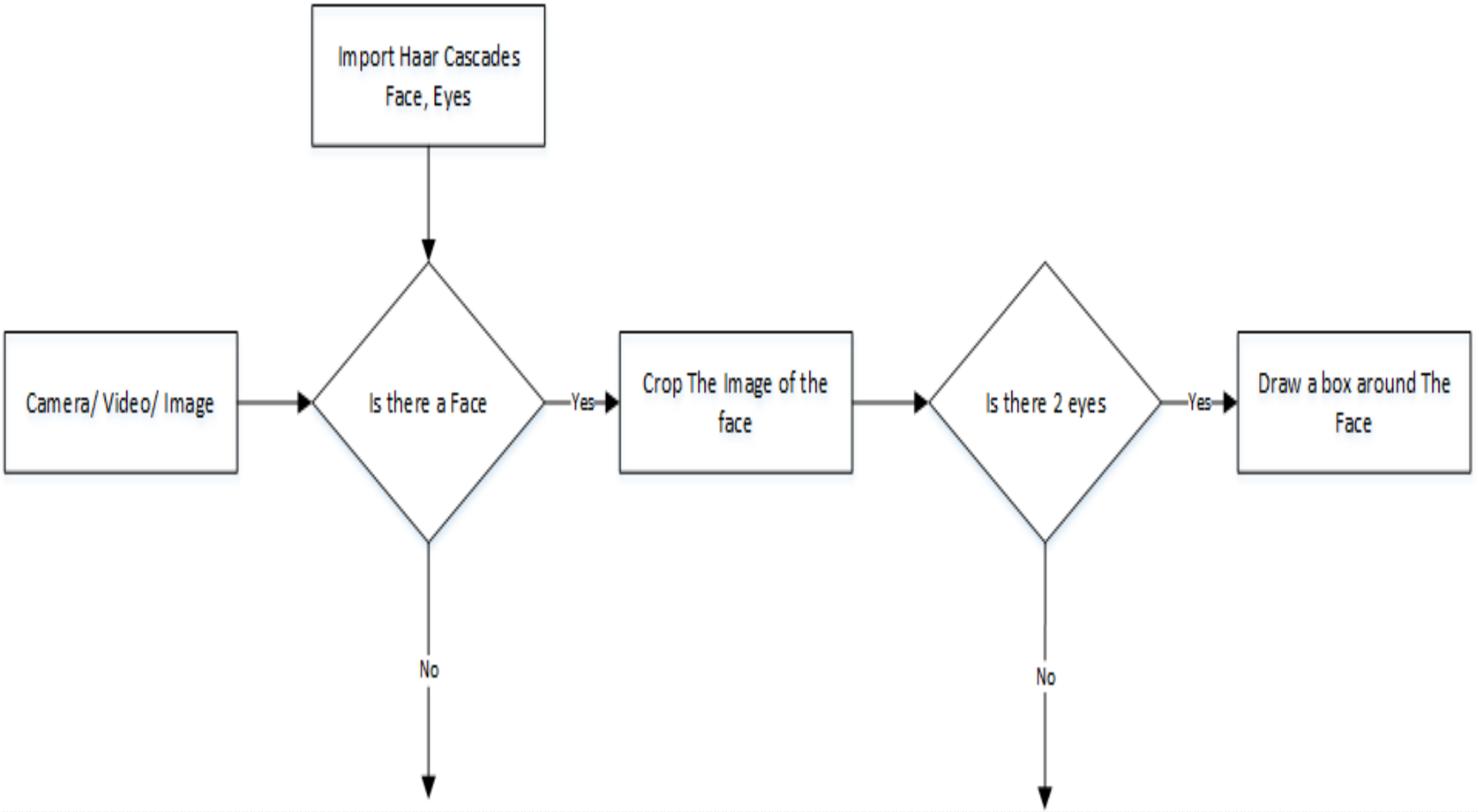
MOTIVATION:

- To identify a human face from an image is the main purpose
- To study Open CV and implement it in this project.
- To understand how face detection method works.

FEATURES:

- It can detect all the faces from an image.
- It is easy to use.
- It can work on low configured computer.
- It does not use too much disk space.
- Its requirement is easy to get and all software is free in online.

FLOW CHART DIAGRAM:



CODE:

```
import cv2
import numpy as np
img = cv2.imread('1.jpg')
face_csc = cv2.CascadeClassifier('haarcascade_frontalface_default.xml')
gray = cv2.cvtColor(img,cv2.COLOR_BGR2GRAY)
faces = face_csc.detectMultiScale(gray,1.1,4)
for(x,y,w,h) in faces:
    cv2.rectangle(img,(x,y),(x+w,y+h),(0,255,0),3)
cv2.imshow('img',img)
cv2.waitKey(0)
```

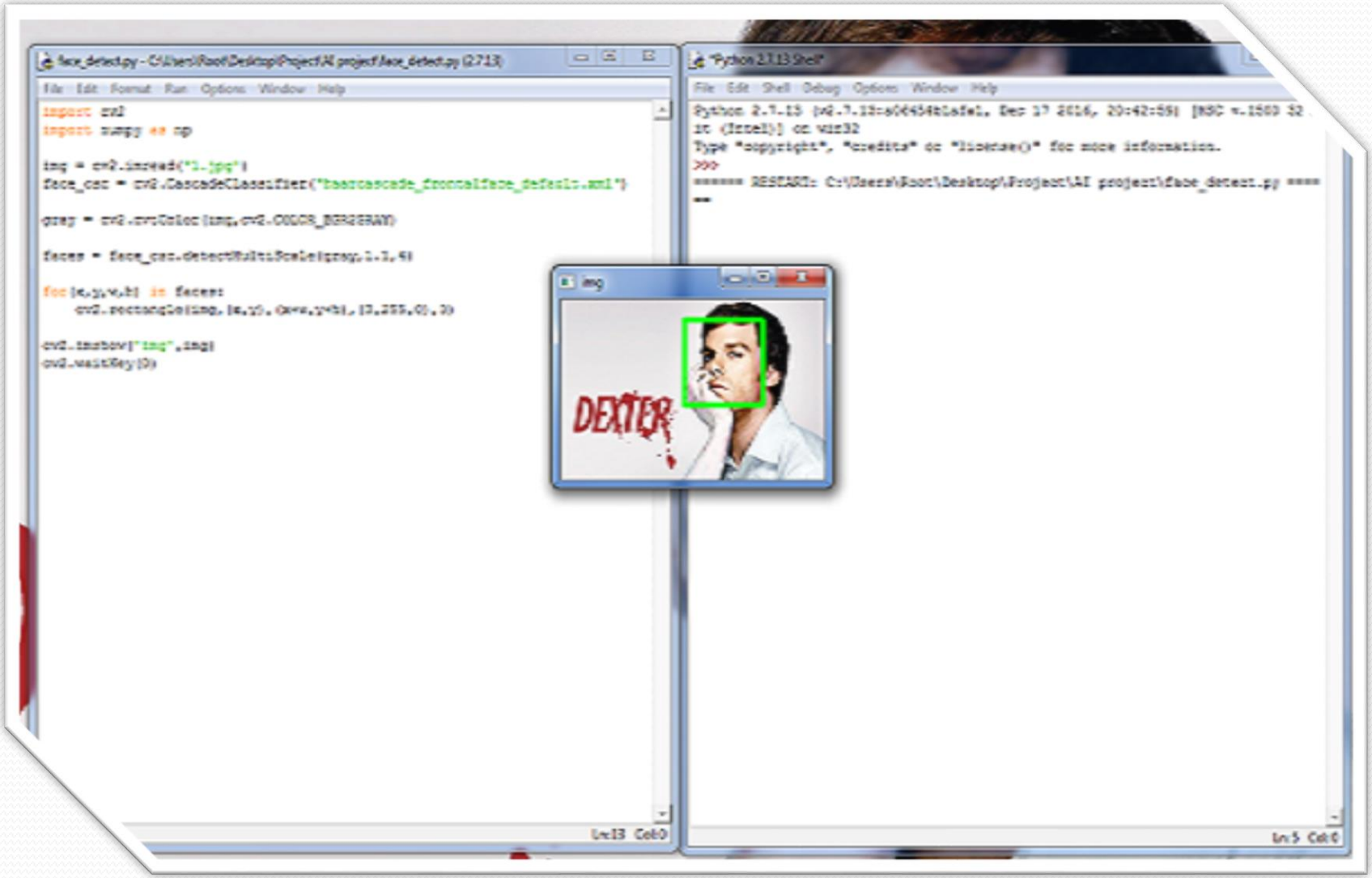
RESULT:

- Our project was able to detect the faces from any images successfully.

FUTURE SCOPE:

- We will add image recognition to our next update.
- We will make a device with camera which will able to detect and recognize the person.

IMPLEMENTATION IMAGE:




THANK
YOU