

Assignment IX

ROS

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- Build the Simple use case to draw the shapes in the input video
- Build the face detection application using OpenCV

The Green and White lines are drawn and constant, whereas the blue/purple box recognizes the face.

```
import numpy as np
import cv2

fcascade = cv2.CascadeClassifier(cv2.data.harcascades +
'haarcascade_frontalface_alt.xml')
#Using xml files from OpenCV Git

video=cv2.VideoCapture(0)

while True:
    ret, frame= video.read()
    gray=cv2.cvtColor(frame,cv2.COLOR_BGR2GRAY)

    face=fcascade.detectMultiScale(gray,1.1,4)
    for (x, y, w, h) in face:
        cv2.rectangle(frame, (x, y), (x+w, y+h), (255, 0, 0), 2)
    #Making rectangles after detection
```

```
font=cv2.FONT_HERSHEY_DUPLEX
cv2.putText(frame,'Divyansh Agarwal',(10,400), font,2,(0,255,0))
cv2.line(frame, (50,20) , (500,20) , (255,255,255) , 2 )
cv2.line(frame, (75,30) , (475,30) , (255,255,255) , 1 )
cv2.rectangle(frame, (85,50) , (450,300) , (0,255,0) , 4 )
#Making drawings

cv2.imshow('Video', frame)
if cv2.waitKey(10) & 0xFF == ord('q'):
    break

video.release()
cv2.destroyAllWindows()
```

