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Course: Smart Bridge IoT

Assignment 6

Task:

Develop a python code to detect any object using Haar cascade classifier.

Python Code:

```
import cv2

import os

data_file_path = "available_objects"

i=0

classifiers = {

    file_name.replace(".xml", ""):cv2.CascadeClassifier(

        os.path.join(data_file_path,file_name)

    )

    for file_name in os.listdir(data_file_path)

}

cam = cv2.VideoCapture(0)

assert cam.isOpened(),"Camera is not available."

while cam.isOpened():

    is_frame, frame = cam.read()

    for classifier_name in classifiers.keys():

        pred = classifiers[classifier_name].detectMultiScale(

            frame, 1.3, 5

        )

        for (x,y,w,h) in pred:

            frame = cv2.rectangle(frame,(x,y),

                (x+w,y+h),(0,255,0), thickness=2)

            frame = cv2.putText(frame,classifier_name,(x,y-3),

                cv2.FONT_HERSHEY_SIMPLEX,fontScale=0.5,

                thickness=2,
```

```

        color=(0,0,255))

cv2.imshow("Object Detection System",frame)

cv2.imwrite(f"scrnshts_{i}.png",frame,)

if cv2.waitKey(2) & 0xFF == ord('q'):
    break

i+=1

cam.release()

cv2.destroyAllWindows()

```

Working Prototype:

