Webstreaming.py

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from flask import Flask,render_template
from flask import Flask,render_template,request
import cv2
from keras.models import load_model
from keras.preprocessing import image

import numpy as np
from gtts import gTTS
from skimage.transform import resize

import os


from playsound import playsound


model=load_model("aslpng1.h5")

vals = ['A', 'B','C','D','E','F','G','H','I']


app = Flask(__name__)

@app.route('/', methods=['GET'])
def index():
    return render_template('index.html')


# @app.route('/home', methods=['GET'])
# def home():
#   return render_template('index.html')

@app.route('/predictions', methods=['GET', 'POST'])
def predictions():
        print("[INFO] starting video stream...")
        vs = cv2.VideoCapture(0)
        (W, H) = (None, None)

        while True:
            (grabbed, frame) = vs.read()

            if not grabbed:
                break

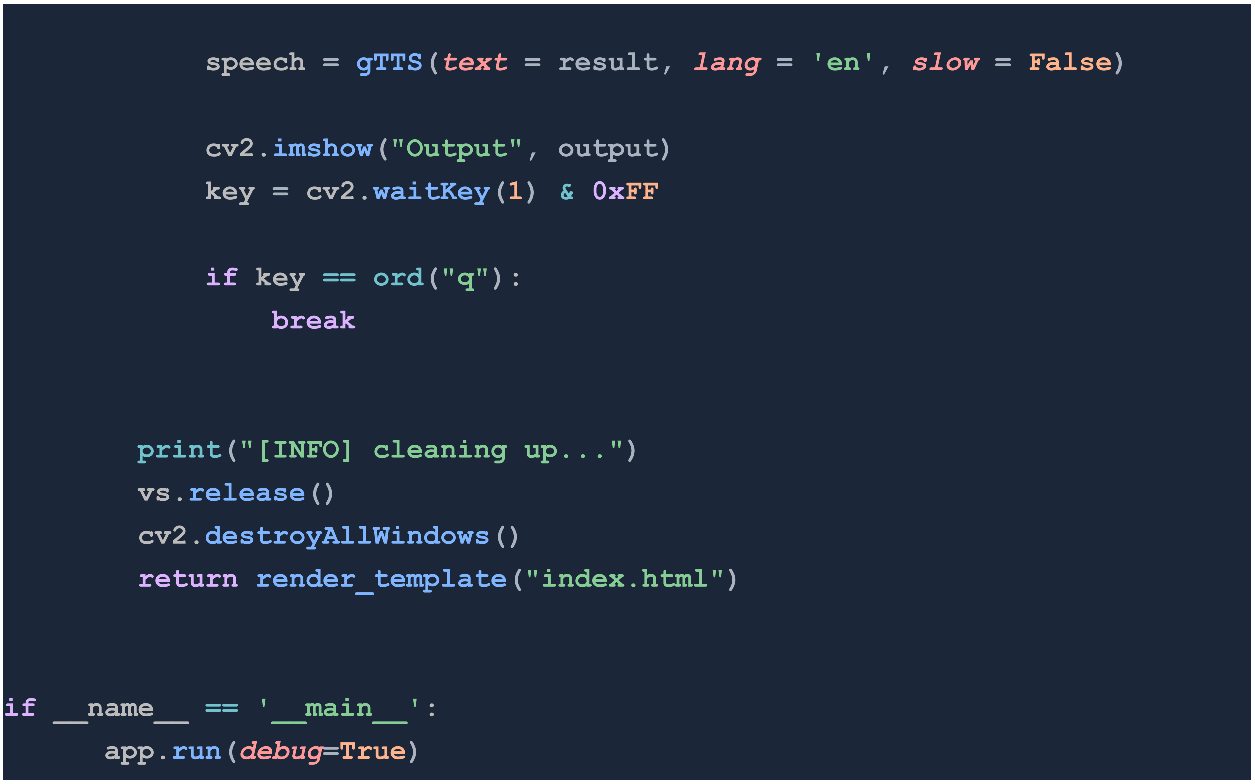
            if W is None or H is None:
                (H, W) = frame.shape[:2]
            output = frame.copy()
            # r = cv2.selectROI("Slect", output)
            # print(r)
            cv2.rectangle(output, (81, 79), (276,274), (0,255,0), 2)
            frame = frame[81:276, 79:274]
            frame = cv2.cvtColor(frame, cv2.COLOR_RGB2GRAY)
            _, frame = cv2.threshold(frame, 95, 255,
cv2.THRESH_BINARY_INV)
            frame = cv2.cvtColor(frame, cv2.COLOR_GRAY2RGB)


            img = resize(frame,(224, 224, 3))
            img = np.expand_dims(img,axis=0)
            if(np.max(img)>1):
                img = img/255.0

            # print("[INFO] Code passed till here...")

            result = np.argmax(model.predict(img))
            # result = 1
            index=['A', 'B','C','D','E','F','G','H','I']
            result=str(index[result])


            cv2.putText(output, "The Predicted Letter :
{}".format(result), (10, 50), cv2.FONT_HERSHEY_PLAIN,
                        2, (150,0,150), 2)
            cv2.putText(output, "Press q to exit", (10,450),
cv2.FONT_HERSHEY_PLAIN, 2, (0,0,255), 2)
```



```
            speech = gTTS(text = result, lang = 'en', slow = False)

            cv2.imshow("Output", output)
            key = cv2.waitKey(1) & 0xFF

            if key == ord("q"):
                break


        print("[INFO] cleaning up...")
        vs.release()
        cv2.destroyAllWindows()
        return render_template("index.html")


if __name__ == '__main__':
      app.run(debug=True)
```