SUMMER FINAL PROJECT

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import tkinter as tk
import smtplib
import os
import cv2
import mediapipe
from cvzone.HandTrackingModule import HandDetector
import time
import boto3
from twilio.rest import Client
import pyttsx3
import pywhatkit

root = tk.Tk()
root.configure(bg="lightblue")
root.title("ML project ")
root.geometry("1200x900")
root.resizable(False,False)



def ec2launch():
    myec2 = boto3.client("ec2")                  # connected with ec2 service in aws directly

    response = myec2.run_instances(ImageId='enter your ami',
                        InstanceType="t2.micro",
                        MaxCount=1,
                        MinCount=1
    )

def create_s3_bucket():
    # Create a new S3 client with the specified region
    bucket_name = input("Enter bucket Name :")
    region = "ap-south-1"
    s3 = boto3.client('s3', region_name=region)

    # Create the bucket with the specified region
    s3.create_bucket(Bucket=bucket_name, CreateBucketConfiguration={'LocationConstraint': region})

    print(f"Bucket '{bucket_name}' created successfully in region '{region}'.")



def simple_message():
    account_sid = 'enter your account sid'
    auth_token = 'enter your auth_token'
    client = Client(account_sid, auth_token)

    message = client.messages.create(
    from_='enter number',
    to='enter number',
    body="hlw"
            )

    print(message.sid)

def sns():
     sns = boto3.client("sns")
     sns.publish(
        Message = "S3 bucket object message ",
        Subject = "Regarding to s3 bucket file",
        TopicArn = "enter arn"
        )

def whatsapp():
         pywhatkit.sendwhatmsg_instantly("enter number","HLW")



def sendEmail():
    from email.message import EmailMessage
    EMAIL_ADDRESS =  os.environ.get('EMAIL_USER')
    EMAIL_PASSWORD = os.environ.get('EMAIL_PASS')

    msg = EmailMessage()
    msg['Subject'] = "holla holla!!"
```

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    msg['From'] = "abc@gmail.com"
    msg['To'] = "xyz@gmail.com"
    msg.set_content(" enter message")

    with smtplib.SMTP_SSL("smtp.gmail.com", 465) as smtp:
     smtp.login("abc@gmail.com",'enter passcode')
     smtp.send_message(msg)

def clickPhoto():
    cap = cv2.VideoCapture(0)
    status , photo = cap.read()
    cv2.imshow("photo", photo)
    cv2.waitKey(3000)
    cv2.destroyAllWindows()

def liveVideoCrop():
    cap = cv2.VideoCapture(0)
    while True:
        status , photo = cap.read()
        photo[:300,:350] = photo[100:400,200:550]
        cv2.imshow("photo", photo)
        if cv2.waitKey(13)==ord('q'):
            break
    cv2.destroyAllWindows()
    cap.release()

def cvzone_control():
    model = HandDetector()
    cap = cv2.VideoCapture(0)
    while True:
        status, photo= cap.read()
        cv2.imshow("photo",photo)
        hand = model.findHands(photo)
        lmlist = hand[0]
        try:
                if model.fingersUp(lmlist[0]) == [0,1,0,0,0]:
                    ec2launch()

                    time.sleep(2)
                elif model.fingersUp(lmlist[0]) == [0,1,1,0,0]:
                    ec2launch()
                    ec2launch()
                else:
                    pass
        except:
            pass
        if cv2.waitKey(16) == 13:
            break
    cv2.destroyAllWindows()
    cap.release()

def openFirefox():
    os.system("wt")


label = tk.Label(text="Team",bg='green',fg='white',pady=13,padx=94,font="comicsansms' 25 bold",borderwidth=3,relief="sunken"
          )  # user cannot interact with label
label.pack()

label = tk.Label(text="Scripting Serpants",bg='lightgrey',fg='blue',pady=13,padx=94,font="comicsansms' 25
bold",borderwidth=3,relief="sunken"
          )  # user cannot interact with label
label.pack()
label = tk.Label(root, text="LinuxXpress")
btn = tk.Button(root, text="Open Terminal", width="20",
height="2",fg="#FFFFFF",bg="#00008B",command=openFirefox).place(x=50,y=430)
btn = tk.Button(root, text="Send Mail", width="20", height="2",fg="#FFFFFF",bg="#00008B",command=sendEmail).place(x=650,y=530)
btn = tk.Button(root, text="Click Photo", width="20",
height="2",fg="#FFFFFF",bg="#00008B",command=clickPhoto).place(x=410,y=430)
btn = tk.Button(root, text="Live Video Crop", width="20",
height="2",fg="#FFFFFF",bg="#00008B",command=liveVideoCrop).place(x=650,y=430)
btn = tk.Button(    root, text="CVZONE_control", width="20",
height="2",fg="#FFFFFF",bg="#00008B",command=cvzone_control).place(x=930,y=430)
btn = tk.Button(root, text="Launch EC2", width="20",
height="2",fg="#FFFFFF",bg="#00008B",command=ec2launch).place(x=210,y=530)
btn = tk.Button(root, text="simple_message", width="20",
height="2",fg="#FFFFFF",bg="#00008B",command=simple_message).place(x=210,y=430)
btn = tk.Button(root, text="sns", width="20", height="2",fg="#FFFFFF",bg="#00008B",command=sns).place(x=410,y=530)
btn = tk.Button(root, text="Whatsapp", width="20", height="2",fg="#FFFFFF",bg="#00008B",command=whatsapp).place(x=50,y=530)
btn = tk.Button(root, text="S3_bucket", width="20",
height="2",fg="#FFFFFF",bg="#00008B",command=create_s3_bucket).place(x=930,y=530)



root.mainloop()
```