

# Sending Alert Message

To play **alert sounds**, you need to

install **the** "playsound" library.

To install this library,

open **an** anaconda **command** prompt

and **run the following command**:Type "pip

**install playsound"** click enter.Combining all codes

```
#import opencv library
import cv2
#import numpy
import numpy as np
#import image and load_model function from keras
from keras.preprocessing import image
from keras.models import load_model
#import Client from twilio API
from twilio.rest import Client
#import playsound package
from playsound import playsound

#load the saved model
model = load_model(r'forest1.h5')
#define video
video = cv2.VideoCapture(0)
#define the feautres
name = ['forest','with fire']
```

```
while(1):
    success, frame = video.read()
    cv2.imwrite("image.jpg",frame)
    img = image.load_img("image.jpg",target_size = (64,64))
    x = image.img_to_array(img)
    x = np.expand_dims(x,axis = 0)
    pred = model.predict_classes(x)
    p = pred[0]
    print(pred)
    cv2.putText(frame, "predicted class = "+str(name[p]), (100,100),
                cv2.FONT_HERSHEY_SIMPLEX, 1, (0,0,0), 1)
```

```

pred = model.predict_classes(x)
if pred[0]==1:
    #twilio account ssid
    account_sid = 'ACa56253bf3f2e2918b550b1c2bfc05353'
    #twilio account authentication token
    auth_token = 'a10cb957a1b8bc17abba1e1de952d4b4'
    client = Client(account_sid, auth_token)
    message = client.messages \
        .create(
            body='Forest Fire is detected, stay alert',
            #use twilio free number
            from_=' +150351xxxx',
            to='+919160xxxx')
    print(message.sid)
    print('Fire Detected')
    print('SMS sent!')
    playsound(r'C:\Users\DELL\Downloads\Tornado_Siren_II-Delilah-0.mp3')

```

```

else:
    print("No Danger")
    #break
    cv2.imshow("image",frame)
    if cv2.waitKey(1) & 0xFF == ord('a'):
        break

    video.release()
    cv2.destroyAllWindows()

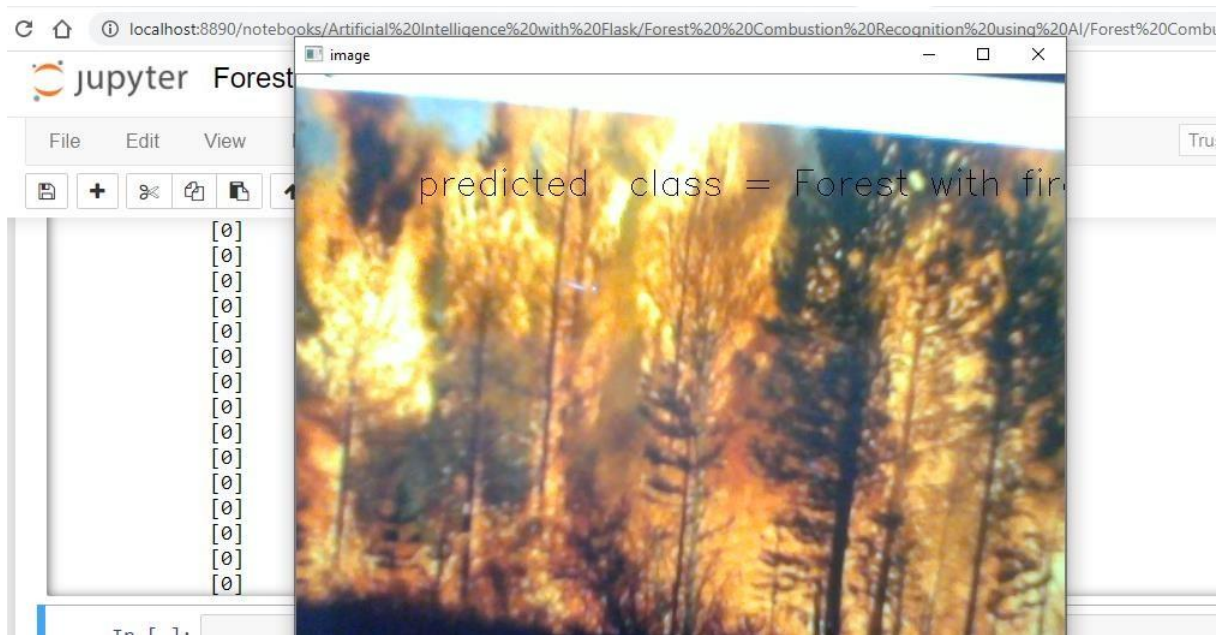
```

Running the above code will open a video frame popup on your desktop/laptop screen after executing the model and label name (class) you considered in your project, as well as your Twilio auth token and account SID.

Now, when you feed a forest fire or a test image that differs from a normal forest image, the model will recognize if there is a forest fire in the video stream. When a forest fire is detected, an alarm message will be sent to higher authorities and sent with sound. Otherwise the danger will not recur.

You can see the output in the below images.

You can see the output in the console.



```
[0]
no danger
[0]
no danger
[0]
no danger
[1]
SMf7d7e45c610646738a0ed86c87c9a70a
Fire Detected
SMS sent!
```