

PROJECT DEVELOPMENT PHASE

SPRINT-IV

VIDEO ANALYSIS

Date	18 November 2022
Team ID	PNT2022TMID23189
Project Name	Emerging Methods for Early Detection of Forest Fires
Maximum Marks	4 Marks

Creating_an_Account_in_Twilio_Service

pip install twilio pip install playsound pip install pygobject

#load the saved model

model=load_model('/content/forest1.h5')

#define video

video = cv2.VideoCapture(0)

#define the features name =

['forest','with fire']

#Creating An Account in Twilio Service

account_sid='AC793bc11a38751a7b2a8c3fc7f18105c5'

auth_token=' 26391d62b2b327c5a97725cad8a769ef'

client=Client(account_sid,auth_token)

message=client.messages \

.create(

body='forest fire is detected,stay alert',

#use twilio free number

from_='+18176708550',

```
#to          number
to='+918754125453')
print(message.sid)
```

Sending_Alert_Message

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

import cv2 import
numpy as np
from google.colab.patches import cv2_imshow
from matplotlib import pyplot as plt import
librosa
from tensorflow.keras.preprocessing import image from
keras.models import load_model

# Create a VideoCapture object and read from input file # If the input is
the camera, pass 0 instead of the video file name cap =
cv2.VideoCapture('/content/drive/MyDrive/Forest with fire.mp4')

# Check if camera opened successfully
```

```

if (cap.isOpened()== False):  print("Error
opening video stream or file")

# Read until video is completed
while(cap.isOpened()):      #
    Capture frame-by-frame    ret,
    frame = cap.read()    if ret ==
True:
        x=image.img_to_array(frame)
        res=cv2.resize(x,dsize=(128,128),interpolation=cv2.INTER_CUBIC)
        #expand the image shape
        x=np.expand_dims(res,axis=0)
        model=load_model("/content/forest1.h5")
        cv2_imshow(frame)
        pred=model.predict(x)    pred =
        int(pred[0][0])
        pred
        int(pred)    if
        pred==0:
            print('Forest fire')
            break
        else:
            print("danger")
        break

# When everything done, release the video capture object cap.release()

# Closes all the frames
cv2.destroyAllWindows() from
twilio.rest import Client from
playsound import playsound if
pred==0:

```

```
account_sid='AC793bc11a38751a7b2a8c3fc7f18105c5'
auth_token='26391d62b2b327c5a97725cad8a769ef'
client=Client(account_sid,auth_token) message=client.messages \
    .create(
        body='forest fire is detected,stay alert',
#use twilio free number
        from_='+18176708550', #to number
        to='+918754125453') print(message.sid)
print("Fire detected") print("SMS
Sent!")
```