PROJECT DEVELOPMENT PHASE
Delivery of Sprint -3

Date	16 November 2022
Team ID	PNT2022TMID30863
Project Name	Emerging methods for the early detection of forest fires

Executable

Program Video

Analysis:

```
import cv2 import numpy as np
from keras.preprocessing import
image from keras.models import
load_model from twilio.rest import
Client
!pip install twilio
 model=load_model('forestfire.
h5') video=cv2.VideoCapture(r'C:\Users\win\Desktop\Project_NT\video.mp
4')          name=['forest','with          fire']
#predict=model.predi  ct(x)  import  keras
from tensorflow.keras.utils import load_img,
img_to_array while(1):
    success,frame=video.read()
    cv2.imwrite("image.jpg",frame)
    img=keras.utils.load_img("image.jpg")
    img= cv2.resize(frame, (128,128))
    x=keras.utils.img_to_array(img)
    x=np.expand_dims(x,axis=0)
    dim=(128,128)
   # x=x.reshape(128,
   128, 3) # x=
```

```
   cv2.resize(x, (128,128))
   pred = model.predict(x)

    #pred=model.predict_clas
    s es(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)
if pred[0]==1:
    account_sid='AC63518ea0e5f8e919ee2a4dc4dc17cdb6'
    auth_token='e5413a0fd6c65647ca88e8cb0cd33fac'
    client=Client(account_sid,auth_token)

    message=client.messages.create(body='Forest Fire is
    detected,stay alert', from_='+1 989 762 1639', to='+91
    9344394743') print(message.si d) print('Fire Detected') print('SMS
    sent!')
else:
    print("No Danger")
cv2.imshow("image",fra
me)
#if cv2.waitkey(1) & 0xFF==
   ord('a'): #break
video.release()
cv2.destroyAllWindows()
```

In [37]:
```
#predict=model.predict(x)
if pred[0]==0:
    account_sid='AC63518ea0e5f8e919ee2a4dc4dc17cdb6'
    auth_token='e5413a0fd6c65647ca88e8cb0cd33fac'
    client=Client(account_sid,auth_token)
    message=client.messages.create(body='Forest Fire is detected,stay alert',
    from_='+1 989 762 1639',
    to='+91 9344394743')
    print(message.sid)
    print('Fire Detected')
    print('SMS sent!')
else:
    print("No Danger")
cv2.imshow("image",frame)
#if cv2.waitkey(1) & 0xFF== ord('a'):
    #break
video.release()
cv2.destroyAllWindows()
```

```
SMb6dd721ea1b8b7da9ef4ced9d83c3294
Fire Detected
SMS sent!
```