PROJECT DEVELOPMENT PHASE
Delivery of Sprint -3

Date	07 November 2022
Team ID	PNT2022TMID31216
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
imagefrom 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_arraywhile(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!
```