PROJECT DEVELOPMENT
PHASE
Delivery of Sprint -3

Team ID	PNT2022TMID29323
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=
```

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

    #pred=model.predict_class
    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()
```

```python
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!
```