PROJECT DEVELOPMENT PHASE:

Delivery of Sprint -3

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| Team ID | IBM-Project-29170-1660121813 |
| 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\_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()

