PROJECT DEVOLPMENT PHASE :

DELIVERY OF SPRINT-2

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| Team ID | IBM-Project-29170-1660121813 |
| Project Name | Emerging methods for the early  detection of forest fires |

Executable Program Model Building:

model.add(Dense(150,activation='relu')) model.add(Dense(1,activation='sigmoid')) model.compile(loss='binary\_crossentropy',optimizer='adam',metrics=['accuracy']) len(x\_train)

len(x\_test) model.fit\_generator(x\_train,steps\_per\_epoch=len(x\_train),epochs=10, validation\_data=x\_test,validation\_steps=len(x\_test)) import

tensorflow as tf

from keras.models import load\_model

from tensorflow.keras.preprocessing import imageimport numpy as np

import cv2 model.save('forestfire.h5') model=load\_model('forestfire.h5')testImg =

image.load\_img(r'C:\Users\win\Desktop\Project\_NT\test\_set\forest\\_101542074\_g ettyimages\_956391468.jpg')

testImgarrayImg = image.img\_to\_array(testImg) arrayImg

x = np.expand\_dims(arrayImg , axis = 0)X images = np.vstack([x]) pred=model.predict(images)

Pred x\_train.class\_indicesif (pred[0] > 0.5):

print("forest with fire")else: print("forest without fire")



