**PROJECT DEVOLPMENT PHASE DELIVERY OF SPRINT-2**

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| Date | 13 November 2022 |
| Team ID | PNT2022TMID17141 |
| 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")



