EARLY DETECTION OF FOREST FIRE USING DEEP LEARNING

MODEL BUILDING

IMPORTING THE MODEL BUILDING LIBRARIES

Team ID	PNT2022TMID33734
Project Name	Project-Early detection of forest fire using deep
	learning

IMPORTING THE MODEL BUILDING LIBRARIES:

Import the libraries that are required to initialize the neural network layer, create and add different layers to the neural network model. The below libraries are imported and executed.

11/7/22, 12:35 AM

Untitled8.ipynb - Colaboratory

Importing Keras libraries

import keras

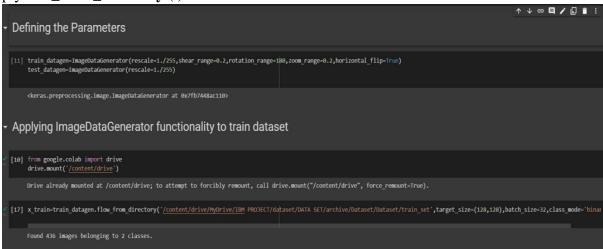
Importing ImageDataGenerator from Keras

 $from \ keras.preprocessing.image \ import \ Image Data Generator$

•	Importing Keras libraries	
√ 35	[1] import keras	
•	Importing ImageDataGenerator from Keras	
√ 0s	[13] from matplotlib import pyplot as plt from keras.preprocessing.image import ImageDataGenerator	
•	Defining the Parameters	
	train_datagen=ImageDataGenerator(rescale=1./255,shear_range=0.2,rotation_range=180,zoom_range=0.2,horizontal_flip=True) test_datagen=ImageDataGenerator(rescale=1./255)	
	C→ <keras.preprocessing.image.imagedatagenerator 0x7fb7448ac110="" at=""></keras.preprocessing.image.imagedatagenerator>	

APPLYING ImageDataGenerator to train dataset:

plyflow_from_directory ()methodfor Train folder.



APPLYING ImageDataGenerator to test dataset:

Applying the **flow_from_directory** () methodfortest folder.



IMPORTING MODEL BUILDING LIBRARIES:

11/8/22, 1:16 AM Main code - Colaboratory

Importing Model Building Libraries

```
#to define the linear Initialisation import sequential
from keras.models import Sequential
#to add layers import Dense
from keras.layers import Dense
#to create Convolutional kernel import convolution2D
from keras.layers import Convolution2D
#import Maxpooling layer
from keras.layers import MaxPooling2D
#import flatten layer
from keras.layers import Flatten
import warnings
warnings.filterwarnings('ignore')
```