EARLY DETECTION OF FOREST FIRE USING DEEP LEARNING

MODEL BUILDING

IMPORTING THE MODEL BUILDING LIBRARIES

Team ID	PNT2022TMID03558
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

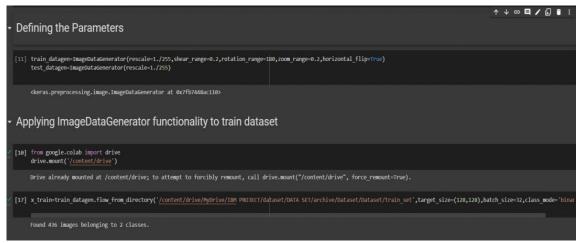
import keras

Importing ImageDataGenerator from Keras

from keras.preprocessing.image import ImageDataGenerator

*	lm	porting Keras libraries
>	[1]	import keras
*	lm	porting ImageDataGenerator from Keras
> 0	[13]	from matplotlib import pyplot as plt from keras.preprocessing.image import ImageDataGenerator
•	De	fining the Parameters
	0	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)
	₽	<pre><keras.preprocessing.image.imagedatagenerator 0x7fb7448ac110="" at=""></keras.preprocessing.image.imagedatagenerator></pre>

APPLYING ImageDataGenerator to train dataset:



plyflow_from_directory ()methodfor Train folder.

APPLYING ImageDataGenerator to test dataset:

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

÷	Ар	Applying ImageDataGenerator functionality to test dataset		
1	10000	T	√ Θ □ ‡ 🗓 🖥	
*	0	x_test=test_datagen.flow_from_directory('/content/drive/MyDrive/IBM PROJECT/dataset/DATA SET/archive/Dataset/Dataset/test_set',target_size=(128,128),batch_size	e=32,class_mode='bina	ary")
	C+	. Found 121 images belonging to 2 classes.		

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')
```