EARLY DETECTION OF FOREST FIRE USING DEEP LEARNING

MODEL BUILDING

INITIALIZING THE MODEL

Team ID	PNT2022TMID45404
Project Name	Project-Early detection of forest fire using deep
	learning

INITIALILIZING THE MODEL: keras has 2

ways to define a neural network:

- Sequential
- Function API

The Sequential class is used to define linear initializations of network layers which then, collectively, constitute a model. In our example below, we will use the Sequential constructor to create a model, which will then have layers added to it using the add () method.

Now, will initialize our model.

11/7/22, 12:35 AM

Untitled8.ipynb - Colaboratory

Importing Keras libraries

import keras

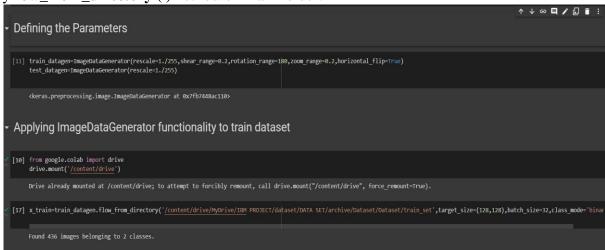
Importing ImageDataGenerator from Keras

from keras.preprocessing.image import ImageDataGenerator

*	Importing Keras libraries
1	[1] import keras
*	Importing ImageDataGenerator from Keras
V Os	[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')
```

INITIALIZING THE MODEL: Initializing the model model=Sequential()