# EARLY DETECTION OF FOREST FIRE USING DEEP LEARNING MODEL BUILDING

#### INITIALIZING THE MODEL

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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

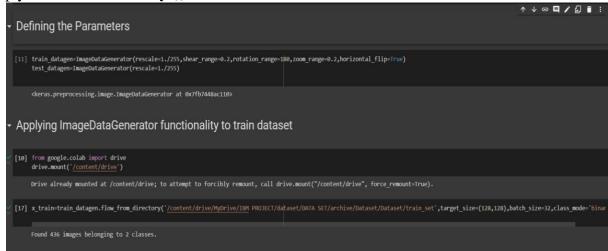
Importing ImageDataGenerator from Keras

from keras.preprocessing.image import ImageDataGenerator

#### **APPLYING ImageDataGenerator to train dataset:**

→ Importing Keras libraries	
[1] import keras	
→ Importing ImageDataGenerator from Keras	
[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>	

plyflow\_from\_directory ( )methodfor Train folder.



#### **APPLYING ImageDataGenerator to test dataset:**

Applying the **flow\_from\_directory** ( ) methodfortest folder.



#### **IMPORTING MODEL BUILDING LIBRARIES:**

#### **INITIALIZING THE MODEL:**

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

model=Sequential()