### 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.

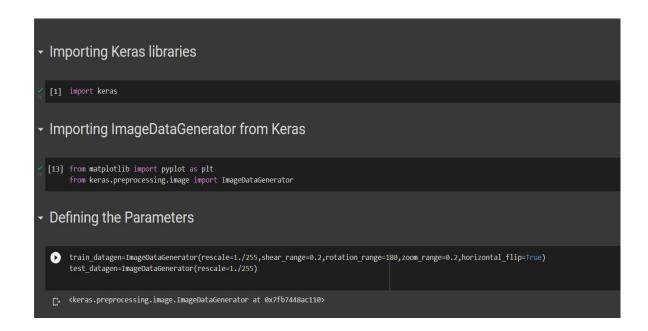
11/7/22, 12:35 AM Untitled8.ipynb - Colaboratory

Importing Keras libraries

import keras

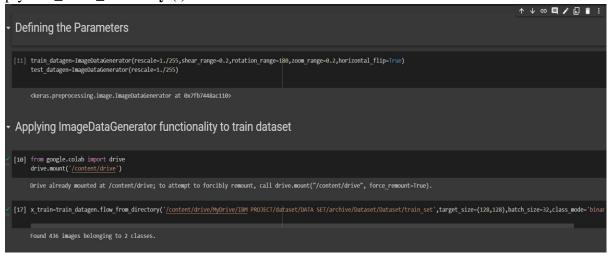
Importing ImageDataGenerator from Keras

from keras.preprocessing.image import ImageDataGenerator



# **APPLYING ImageDataGenerator to train dataset:**

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 - Colaborator

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()