EMERGING METHODS FOR EARLY DETECTIONOFFORESTFIRE

MODEL

BUILDINGINITIALIZINGT

HEMODEL

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ProjectName	Project-Emerging methods for Early detection of forest fire

INITIALILIZINGTHEMODEL:

kerashas2waystodefineaneuralnetwork:

- Sequential
- FunctionAPI

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 constructortocreateamodel,whichwill thenhavelayersadded toit using theadd () method.
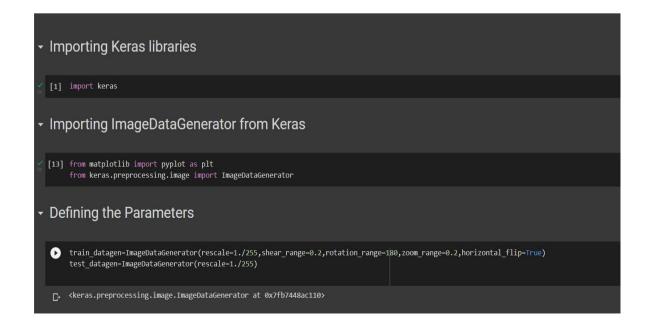
Now,willinitializeourmodel.

Importing Keras libraries

```
import keras
```

Importing ImageDataGenerator from Keras

```
from keras.preprocessing.image import ImageDataGenerator
```

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)
```

```
<keras.preprocessing.image.ImageDataGenerator at 0x7fb7448ac110>
```

APPLYINGImageDataGeneratortotraindataset:

ply**flow_from_directory** ()methodforTrainfolder.

APPLYINGImageDataGeneratortotestdataset:

Applyingthe**flow_from_directory**()methodfortestfolder.

IMPORTINGMODELBUILDINGLIBRARIES:

Importing Model Building Libraries

```python
#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')
```

INITIALIZINGTHEMODEL:

▾ Initializing the model

```
model=Sequential()
```