

# **EMERGING METHODS FOR EARLY DETECTION OF FOREST FIRES**

## **MODEL BUILDING**

### **IMPORTING THE MODEL BUILDING LIBRARIES**

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<b>Project Name</b>	Emerging Methods for Early Detection of Forest Fires

#### ***Importing The ImageDataGenerator Library***

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

#### ***Define the parameters/arguments for ImageDataGenerator class***

```
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)
```

#### ***Applying ImageDataGenerator functionality to trainset***

```
x_train=train_datagen.flow_from_directory(r'/content/drive/MyDrive/Dataset/train_set', target_size=(128,128), batch_size=32,  
class_mode='binary')
```

Found 436 images belonging to 2 classes.

### ***Applying ImageDataGenerator functionality to testset***

```
x_test=test_datagen.flow_from_directory(r'/content/drive/MyDrive  
/ Dataset/test_set',target_size=(128,128),batch_size=32,  
class_mode='binary')
```

Found 121 images belonging to 2 classes.

### ***Import model building libraries***

```
#To define Linear initialisation import Sequential  
from keras.models import Sequential  
#To add layers import Dense  
from keras.layers import Dense  
#To create Convolution 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')
```