EMERGING METHODS FOR EARLY DETECTION OF FOREST FIRES

MODEL BUILDING

INITIALIZING THE MODEL

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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/Colab Notebooks/Dataset/train_set',
target_size=(128,128),batch_size=32, class_mode='binary')
```

Found 117 images belonging to 2 classes.

Applying ImageDataGenerator functionality to testset

x_test=test_datagen.flow_from_directory(r'/content/drive/MyDrive/Colab Notebooks/Dataset/test_set', target_size=(128,128),batch_size=32, class_mode='binary') Found 117 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')
```

Initializing the model

model=Sequential()