

MODEL BUILDING

ADDING CNN LAYER

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Project Name	Emerging Method for Early Detection Of Forest Fires

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

Found 121 images belonging to 2 classes.

```
[ ] #Applying ImageDataGenerator functionality to trainset
x_train=train_datagen.flow_from_directory('/content/drive/MyDrive/Dataset/Dataset/train_set', target_size=(128,128), batch_size=32, class_mode='binary')
```

Found 454 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()
```

```
[ ] #add convolutional layer
    model.add(Convolution2D(32,(3,3),input_shape=(128,128,3),activation='relu'))
    #add maxpooling layer
    model.add(MaxPooling2D(pool_size=(2,2)))
    #add flatten layer
    model.add(Flatten())
```