

MODEL\_BUILDING

Loading The Model

```
In [ ]: from tensorflow.keras.preprocessing.image import ImageDataGenerator
```

```
In [ ]: spatial_dropout=0.05  
recurrent_dropout=0.1
```

```
In [ ]: # Training Datagen  
train_datagen = ImageDataGenerator(rescale=1/255, zoom_range=0.2, horizontal_flip=True, vertical_flip=False)  
# Testing Datagen  
test_datagen = ImageDataGenerator(rescale=1/255)
```

```
In [ ]: # Training Dataset  
x_train=train_datagen.flow_from_directory(r'/content/drive/MyDrive/Dataset/training_set', target_size=(64, 64))  
# Testing Dataset  
x_test=test_datagen.flow_from_directory(r'/content/drive/MyDrive/Dataset/test_set', target_size=(64, 64))
```

Found 15760 images belonging to 9 classes.  
Found 2250 images belonging to 9 classes.

```
In [ ]: print("Len x-train : ", len(x_train))  
print("Len x-test : ", len(x_test))
```

Len x-train : 18  
Len x-test : 3

```
In [ ]: # The Class Indices in Training Dataset  
x_train.class_indices
```

```
Out[ ]: {'A': 0, 'B': 1, 'C': 2, 'D': 3, 'E': 4, 'F': 5, 'G': 6, 'H': 7, 'I': 8}
```

Model Creation

```
In [ ]: # Importing Libraries  
from tensorflow.keras.models import Sequential  
from tensorflow.keras.layers import Convolution2D, MaxPooling2D, Flatten, Dense
```

```
In [ ]: # Creating Model  
model=Sequential()
```