from keras.preprocessing.image import ImageDataGenerator

train\_datagen=ImageDataGenerator(rescale=1./255,shear\_range=0.2,zoom\_range=0.2,horizontal\_flip=T

rue)

test\_datagen=ImageDataGenerator(rescale=1./255)

x\_train =

train\_datagen.flow\_from\_directory(&#39;/content/Dataset/training\_set&#39;,target\_size=(64,64),batch\_size=300,

class\_mode=&#39;categorical&#39;,color\_mode=&quot;grayscale&quot;)

Found 15750 images belonging to 9 classes.

x\_test =

test\_datagen.flow\_from\_directory(&#39;/content/Dataset/test\_set&#39;,target\_size=(64,64),batch\_size=300,class

\_mode=&#39;categorical&#39;,color\_mode=&quot;grayscale&quot;)

Found 2250 images belonging to 9 classes.

from keras.models import Sequential

from keras.layers import Dense

from keras.layers import Convolution2D

from keras.layers import MaxPooling2D

from keras.layers import Dropout

from keras.layers import Flatten

model = Sequential()

model.add(Convolution2D(32,(3,3),input\_shape=(64,64,1), activation=&#39;relu&#39;))

#no. of feature detectors, size of feature detector, image size, activation function

model.add(MaxPooling2D(pool\_size=(2,2)))

model.add(Flatten())

model.add(Dense(units=512, activation = &#39;relu&#39;))

model.add(Dense(units=9, activation = &#39;softmax&#39;))

model.compile(loss=&#39;categorical\_crossentropy&#39;, optimizer = &#39;adam&#39;, metrics = [&#39;accuracy&#39;])