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In [1]: import keras
        from keras.preprocessing.image import ImageDataGenerator
```

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In [8]: #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)
```

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In [11]: #Applying ImageDataGenerator functionality to trainset
        x_train=train_datagen.flow_from_directory('/content/Dataset/Dataset/train_set', target_size=(128,128), batch_size=32, class_mode='binary')

        Found 436 images belonging to 2 classes.
```

```
In [12]: #Applying ImageDataGenerator functionality to testset
        x_test=test_datagen.flow_from_directory('/content/Dataset/Dataset/test_set', target_size=(128,128), batch_size=32, class_mode='binary')

        Found 121 images belonging to 2 classes.
```

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In [27]: #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')
```

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In [28]: #initializing the model
        model=Sequential()
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In [29]: #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())
```

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In [34]: #add hidden layer
        model.add(Dense(150,activation='relu'))
        #add output layer
        model.add(Dense(1,activation='sigmoid'))
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In [38]: #configure the Learning process
        model.compile(loss='binary_crossentropy', optimizer="adam", metrics=["accuracy"])
```

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In [ ]:
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