Model Building
Adding CNN Layers

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Adding CNN Layers

❖ For information regarding CNN Layers refer to the link

   https://www.upgrad.com/blog/basic-cnn-architecture/

❖ As the input image contains three channels, we are specifying the input shape as (64,64,3).

❖ We are adding a two convolution layer with activation function as "relu" and with a small filter size (3,3) and the number of filters (32) followed by a max-pooling
   layer.

❖ Max pool layer is used to down sample the input.(Max pooling is a pooling operation that selects the maximum element from the region of the feature map covered by the filter).

❖ Flatten layer flattens the input. Does not affect the batch size.

Creating the model

```
[ ]  # Initializing the CNN
     classifier = Sequential()

     # First convolution layer and pooling
     classifier.add(Conv2D(32, (3, 3), input_shape=(64, 64, 3), activation='relu'))
     classifier.add(MaxPooling2D(pool_size=(2, 2)))

     # Second convolution layer and pooling
     classifier.add(Conv2D(32, (3, 3), activation='relu'))

     # input_shape is going to be the pooled feature maps from the previous convolution layer
     classifier.add(MaxPooling2D(pool_size=(2, 2)))

     # Flattening the layers
     classifier.add(Flatten())
```