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A feature is a specific thing that the filter looks for and it’s supposed to distinguish a certain object in a picture from other images that aren’t the certain object. During the first layers, the features being looked for are simpler than later features. Features like horizontal lines may be looked for earlier on while the outline of an eye is looked for later.

The function of a filter is to recognize specific features in a picture. To do this, it is trained to learn to detect spatial features through weights and biases. The spatial features that the filter finds can make the image into a more specific representation of an object, such as an eye outline.

Learning the features will help it to identify what the object is and label the object accordingly. Pooling is the process that helps with identifying and actually labeling the image. The pooling layer works similarly to the convolutional layer because they both show the result of a filter and that result can be filtered again to get a more specific result.

The filtered result is called a feature map. This is the output after the filter goes over the image to identify the features. Based on the values that are found, it will show an outline of the object that it has seen.