Adam Kocsis

Filter: Filters are a two dimensional sheet that pans over the pixels in each image and looks for different features, these features can be simple such as lines or more complex shapes specific to pictures. The speed or how many piel the filter scans at once can also be changed along with the size of the filter. Or how many pixels it covers.

Feature: Features are specific visual identifiers that the filter looks through in an image. Features can be simple or complex, mainly depending on the layer of the network that it is in. Once the filter identifies the feature and how “featury” the identified part of the image, it can be reflected by a percentage of how the feature matches the image.

Feature Map: a feature map is simply a 2d representation of an image that has as many values as the image has pixels. The values of each pixel can represent the color of the pixel, in convolutional neural networks this is used to see how close a feature matches a characteristic in the image.

Pooling: Pooling is taking the average value passed from layer to layer by the filter to compress an image that is, for example; 28*28 pixels by a filter that is 5*5 to a lower set of values. This way the network looks for more and more complex features in an images such as hands or the color green.