What are Stride, Padding, and Pooling? Explain with an example.

Stride is a component of convolutional neural networks or neural networks tuned for the compression of images and video data. Stride is a parameter of the neural network's filter that modifies the amount of movement over the image or video.

Stride is a parameter of the neural network's filter that modifies the amount of movement over the image or video. For example, if a neural network's stride is set to 1, the filter will move one pixel, or unit, at a time.

Convolutional layers induce spatial hierarchy. That is, generally speaking, they reduce the size of your input data for every layer the data passes through - allowing neural networks to learn both very specific and very abstract aspects of your input data. However, sometimes you don’t want this to happen: you want the size of your input data to stay the same. In that case, padding can help by adding zeros, constants, or different numbers around the reduced input.