Image Classification with Convolutional Networks

strides

strides determine how much the convolution operation simplifies or compresses the input data

- examples
  - Stride = 1 (default): the kernel moves one pixel at a time horizontally or vertically. High degree of overlap receptive fields but usually retains more spatial details.

  - Stride > 1: The kernel skips pixels as it moves, reducing overlap between receptive fields. This leads to a smaller output size and down-sampling of the input image.

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pooling

- Downsample feature maps

- Max pooling works best because when looking for a feature it is better to look at the maximal presence rather than the average presence

- It's best practice to do un-strided convolutions then downsample with maxpooling rather than using strides to downsample