DEEP LEARNING IN COMPUTER VISION - EXERCISE 4

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Exercise 4.1c

The `tf.nn.conv2d_transpose()` requires to define the output shape since it is not necessarily unique. For example, let the input shape for a convolution be

(a) 4×4,
(b) 3×3.

In both cases we use a filter of size 3×3, striding of 2 and the padding option SAME. Then, in both cases (a) and (b), performing a `conv2d()` yields an output of 2×2. Hence, if we want to go back using `tf.nn.conv2d_transpose()`, we have to tell tensorflow if we came from the 4×4 input or the 3×3 input.
The `tf.layers.conv2d_transpose()` uses the 4×4 output by default. See also our file ex_04_1_c.ipynb, where we implemented this example.

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