

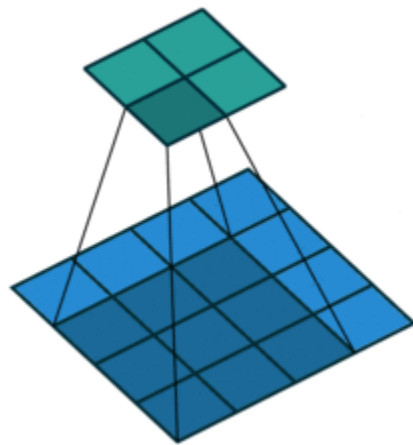


Convolutional Autoencoder

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tf.nn.conv2d

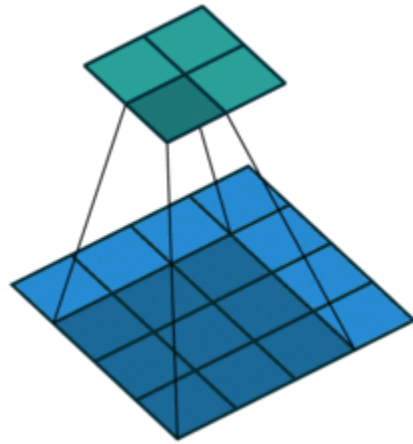
- encoder
- padding



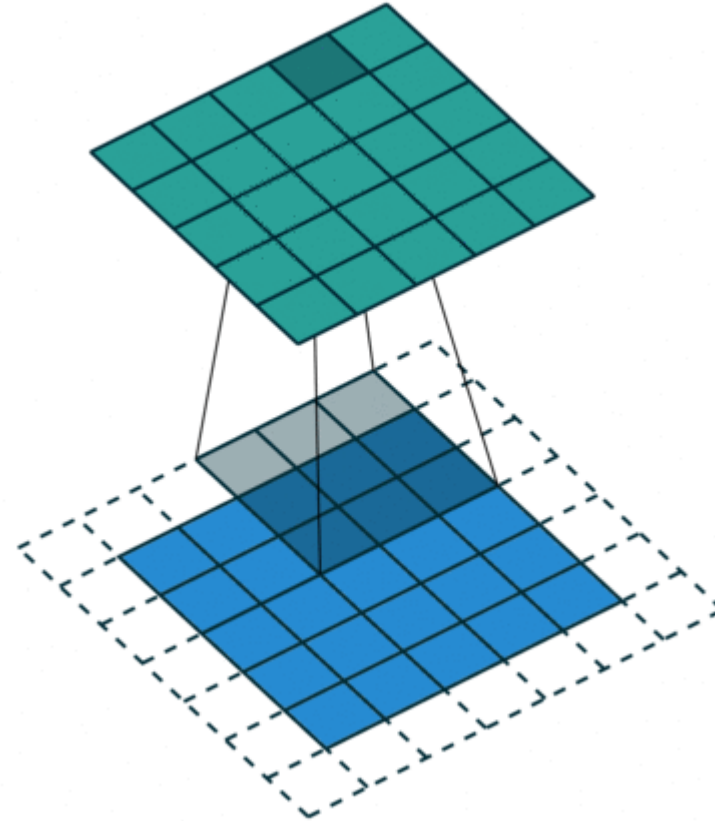
padding = 'VALID'
strides = [1, 1, 1, 1]

tf.nn.conv2d

- encoder
- padding



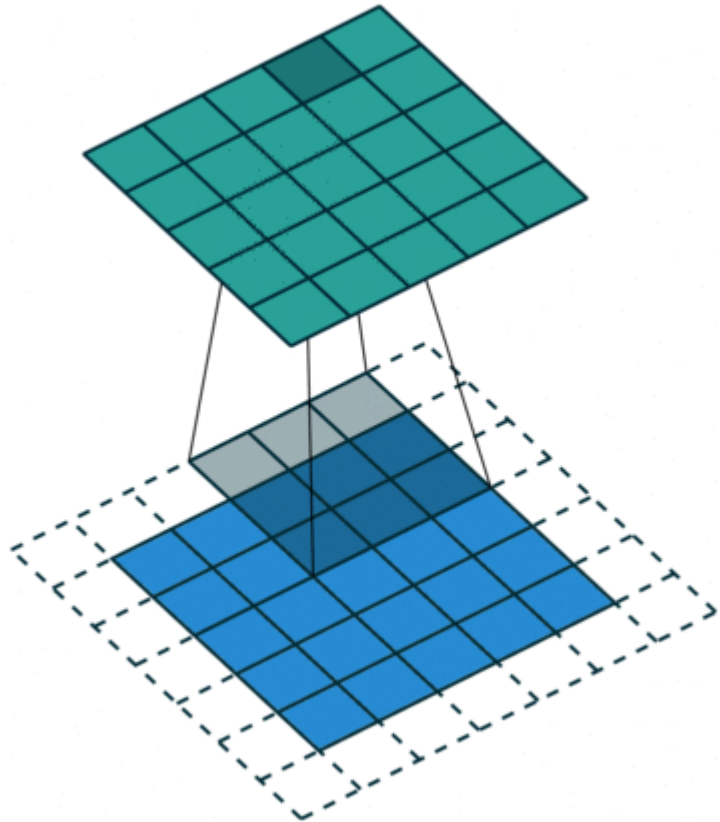
padding = 'VALID'
strides = [1, 1, 1, 1]



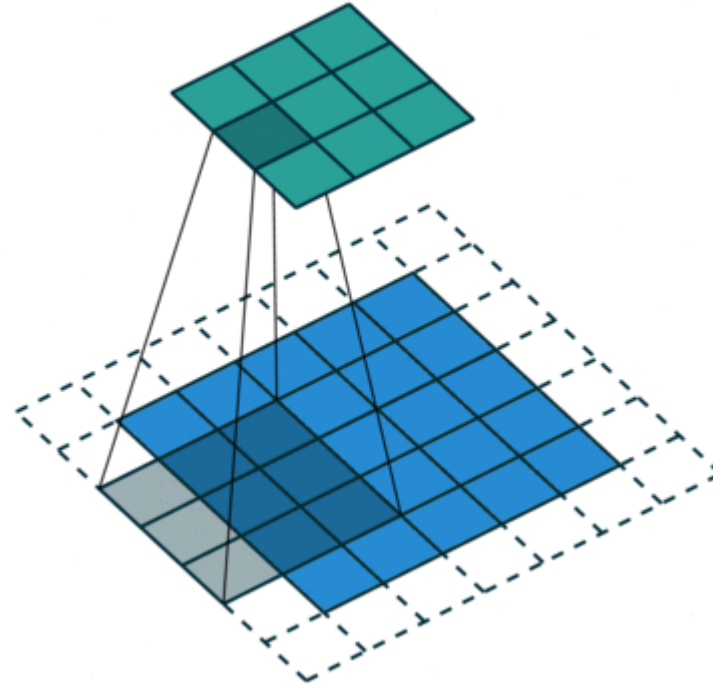
padding = 'SAME'
strides = [1, 1, 1, 1]

tf.nn.conv2d

- encoder
- stride



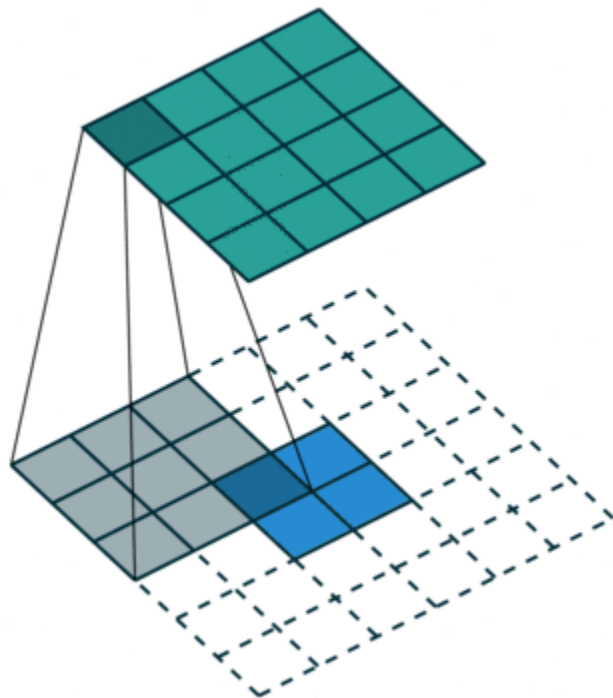
padding = 'SAME'
strides = [1, 1, 1, 1]



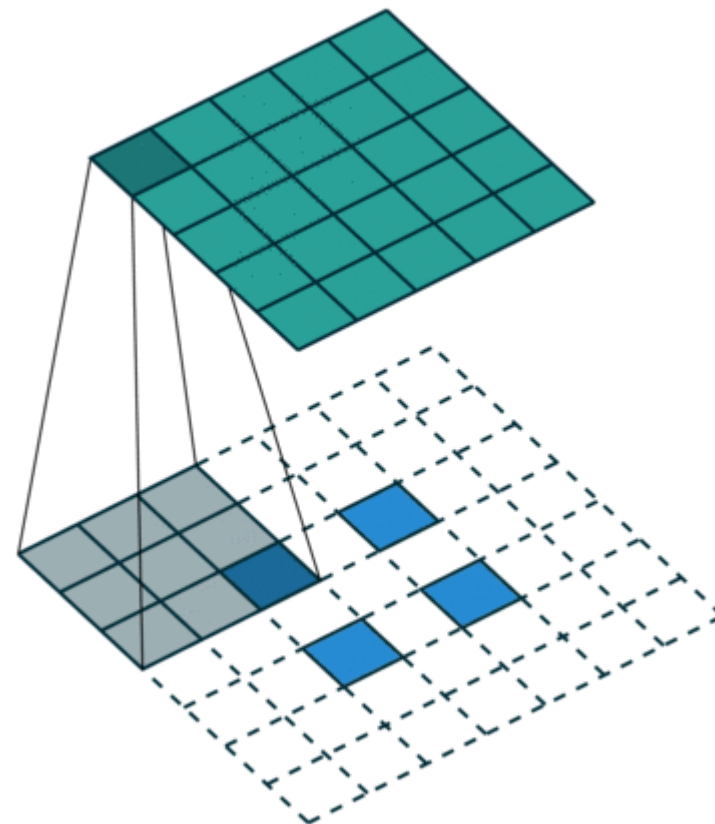
padding = 'SAME'
strides = [1, 2, 2, 1]

tf.nn.conv2d_transpose

- decoder
- stride



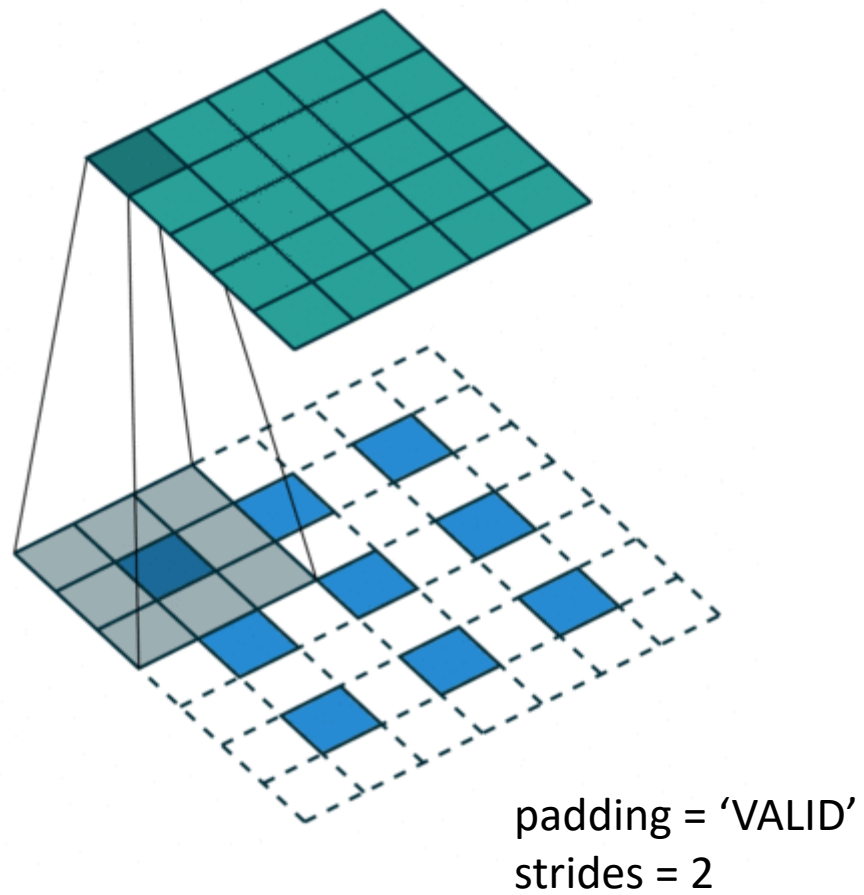
padding = 'VALID'
no strides



padding = 'VALID'
strides = 2

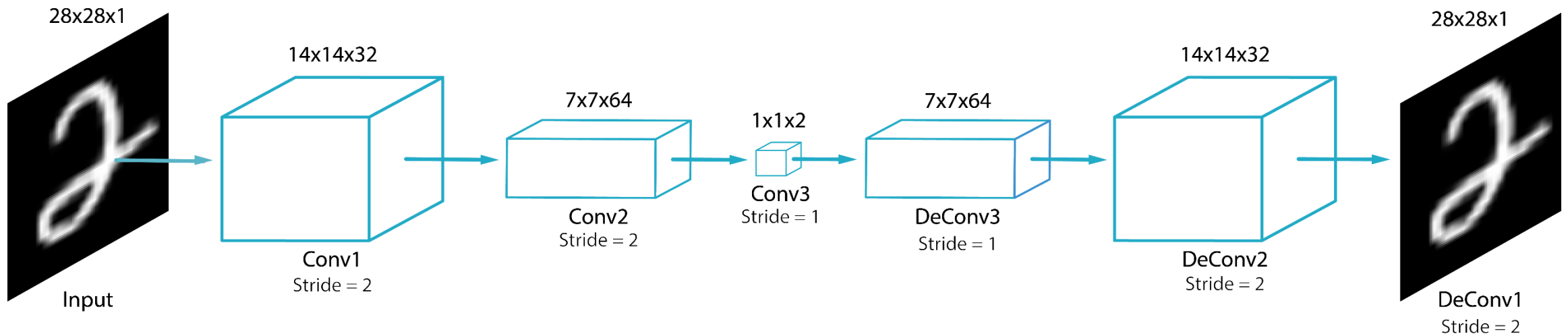
tf.nn.conv2d_transpose

- decoder
- stride



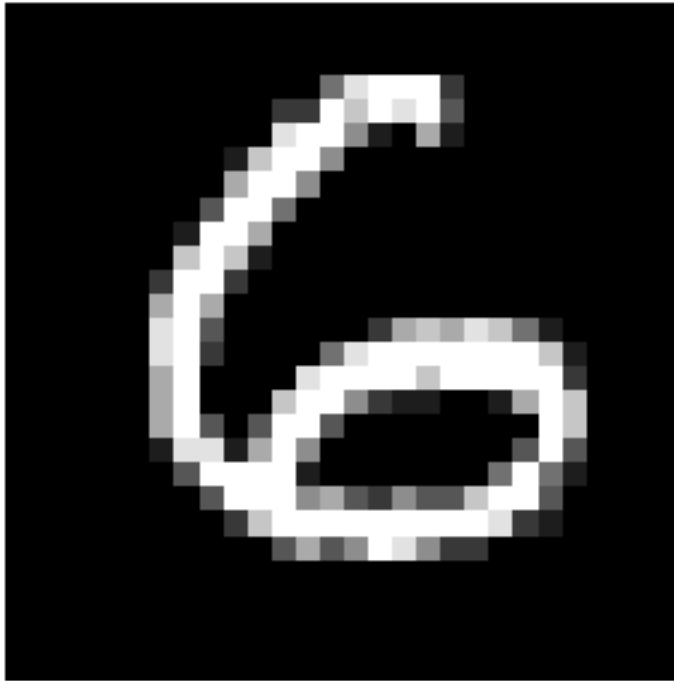
CAE Implementation

- Fully convolutional
- Note that no dense layer is used



Reconstruction Result

Input image



Reconstructed image

