image dimension
128 x 128

6 filters (5x5)
stride = 2

Input → (128, 128, 1)

↓

Convolution → (6, 5, 5)

↓ → [6 x 63 x 63]

• Tensor size halved

Max Pooling → ~~(6, 32, 32)~~ (2x2)

↓ [6 x 32 x 32]

Conv → (6, 5, 5)

↓ [6 x 15 x 15]

$\frac{15}{2} = 7.5 = 8$

MaxPool → (2, 2)

↓ [6 x 8 x 8]

$\left[\frac{128 + 0 - 5}{2}\right] + 1$

Conv → (6, 5, 5)

$= 62.5$

$= 63$

↓ [6 x 3 x 3]

MaxPool → (2, 2)

$\frac{3}{2} = 1.5 = 2$

↓ [6 x 2 x 2]

$\left[\frac{32 + 0 - 5}{2}\right] + 1 = 14.5$

$= 15$

Conv → (6, 5, 5)

↓ [6 x 1 x 1]

MaxPool → (2, 2)

$\left[\frac{7 + 0 - 5}{2}\right] + 1 = 2$

[6 x 1 x 1]

$\left[\frac{1 - 5}{2}\right] + 1 = -1$

$\left[\frac{2 - 5}{2}\right] + 1 = -0.5 = 1$

Number of nodes in flattening layer = 6 nodes