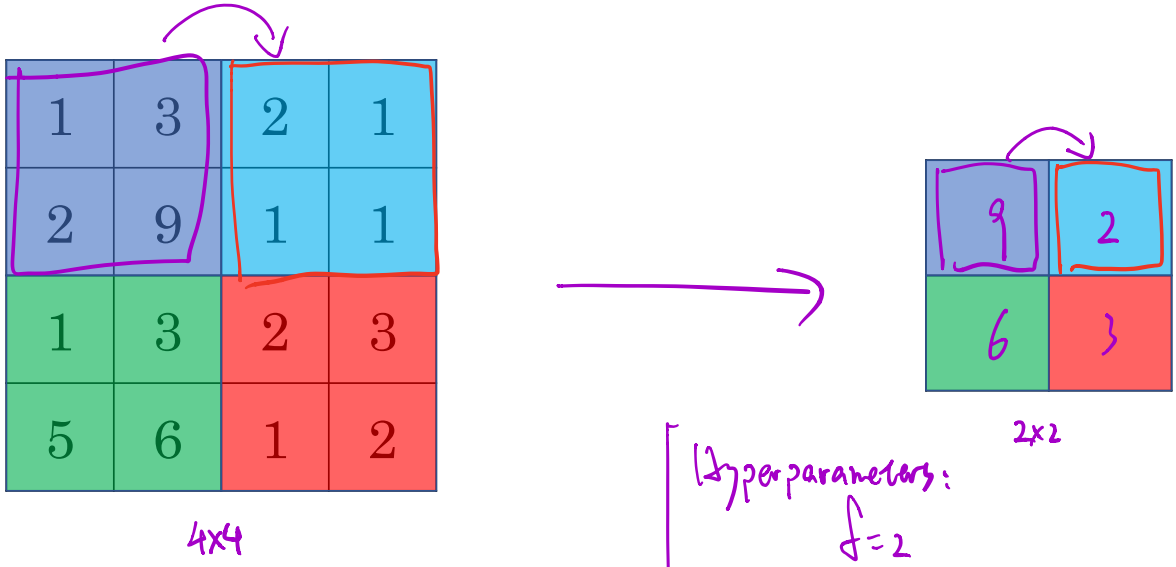
deeplearning.ai

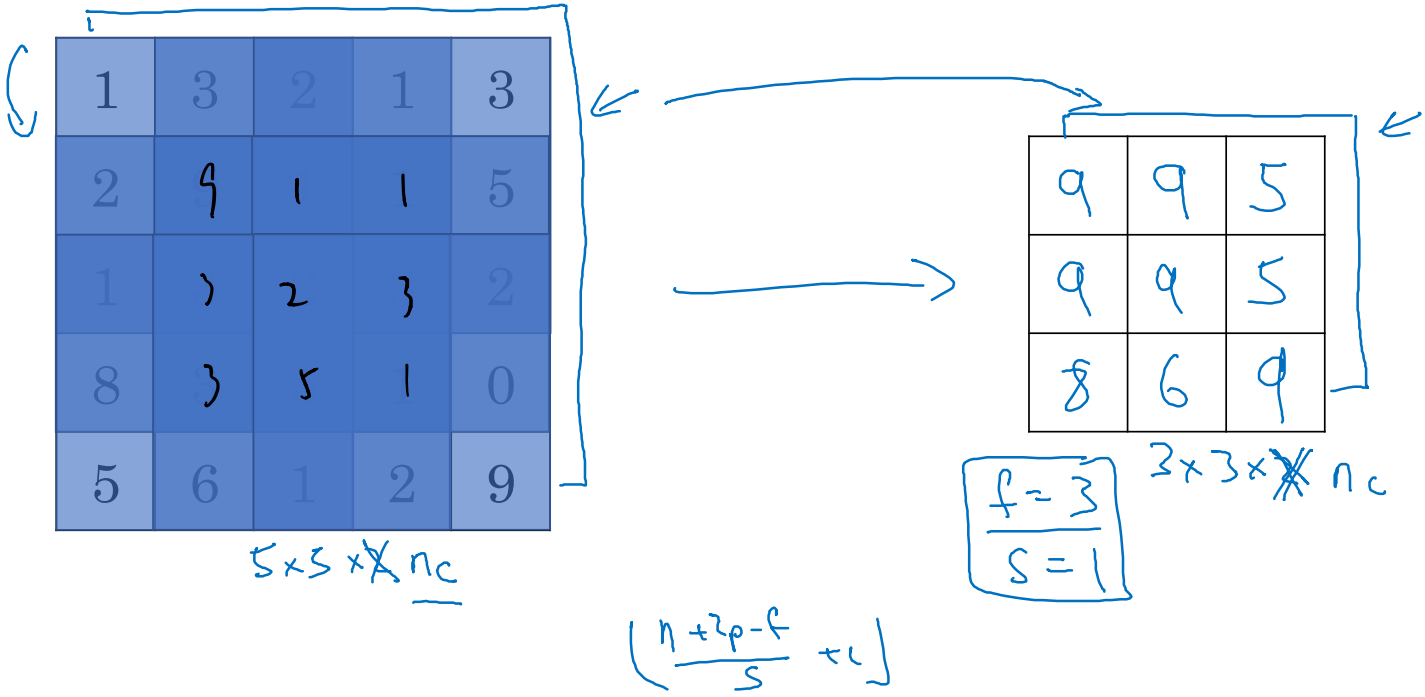
Convolutional Neural Networks

Pooling layers

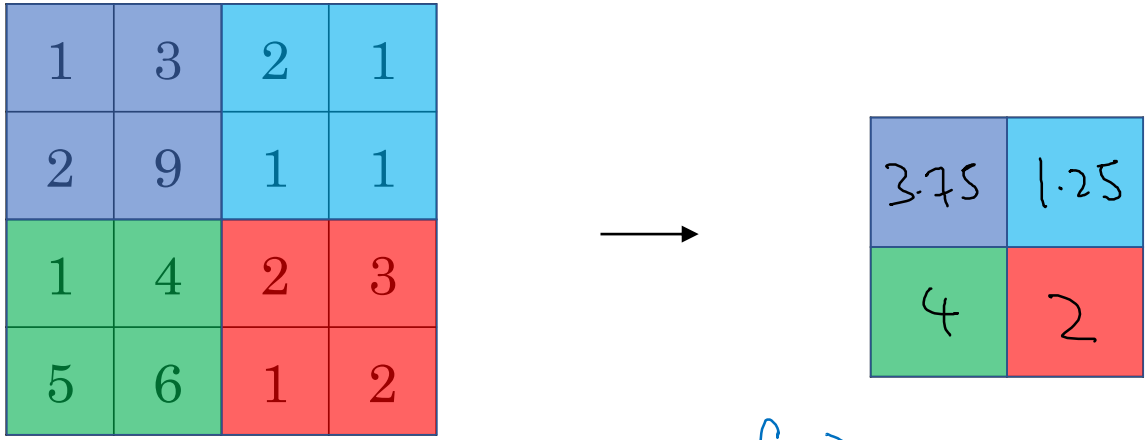
Pooling layer: Max pooling



Pooling layer: Max pooling



Pooling layer: Average pooling



$f = 2$

$s = 2$

$7 \times 7 \times 1000 \rightarrow 1 \times 1 \times 1000$

Summary of pooling

Hyperparameters:

- f : filter size
- s : stride
- Max or average pooling

$f=2, s=2$ (most common)

$f=3, s=2$

$n_H \times n_w \times n_c$

$\downarrow$

$\left\lfloor \frac{n_H - f}{s} + 1 \right\rfloor \times \left\lfloor \frac{n_w - f}{s} + 1 \right\rfloor \times n_c$

~~p : padding~~ (0 most common)

No parameters to learn!