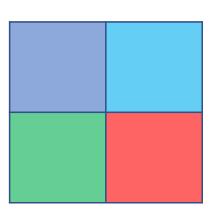


Convolutional Neural Networks

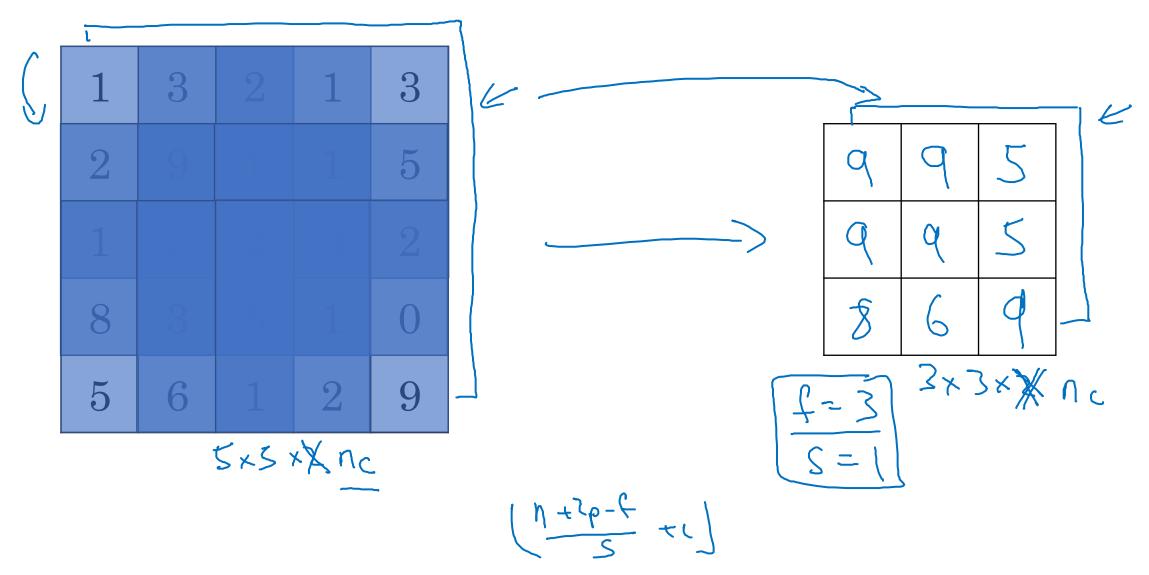
Pooling layers

Pooling layer: Max pooling

1	3	2	1
2	9	1	1
1	3	2	3
5	6	1	2

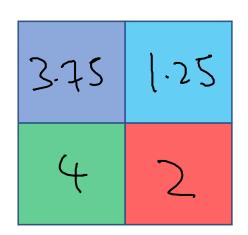


Pooling layer: Max pooling



Pooling layer: Average pooling

1	3	2	1
2	9	1	1
1	4	2	3
5	6	1	2



$$f = 2$$

 $S = 2$
 $1 \times 1 \times 1000$

Summary of pooling

Hyperparameters:

f: filter size s: stride

Max or average pooling

$$N_{H} \times N_{W} \times N_{C}$$

$$N_{H} - f + 1$$

$$\times N_{C}$$