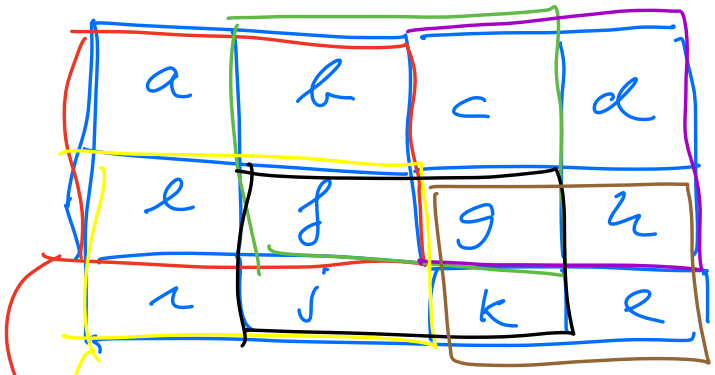
Lecture October 22

In CNNs the dim of the kernel K (filter) < than the input I

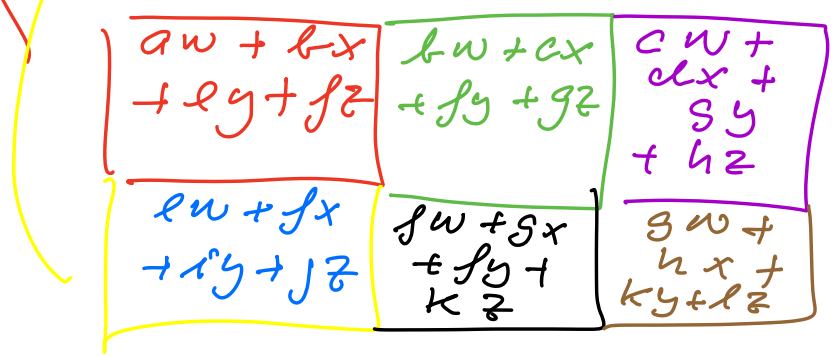
Convolution step

I



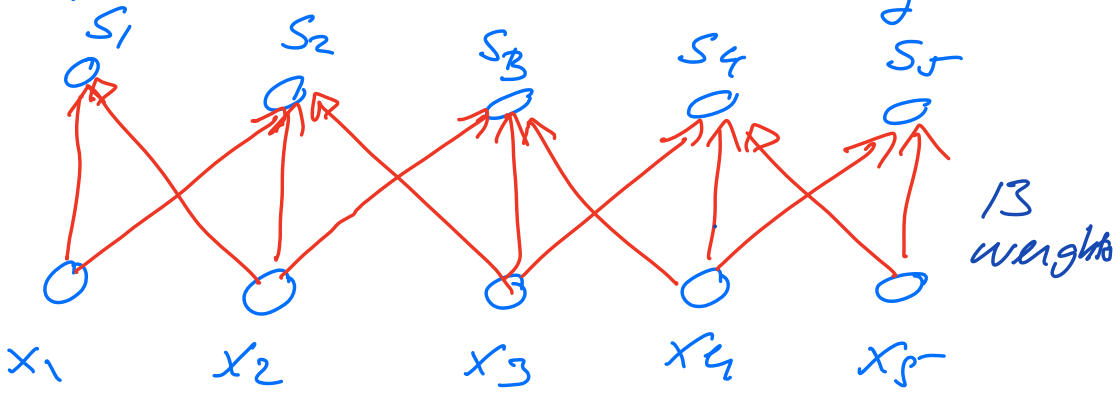
K

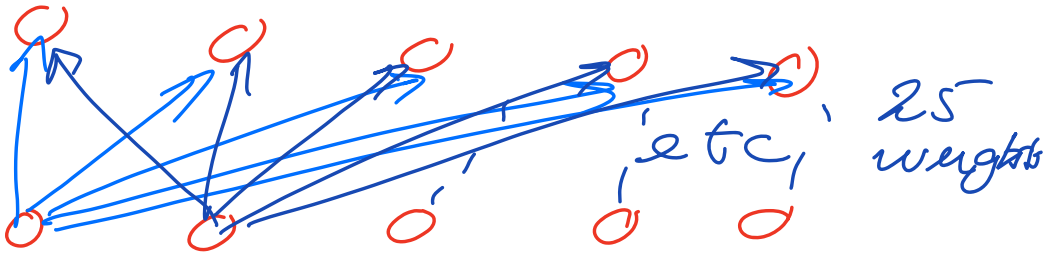
w	x
y	z



- Sparse connectivity

- parameter sharing

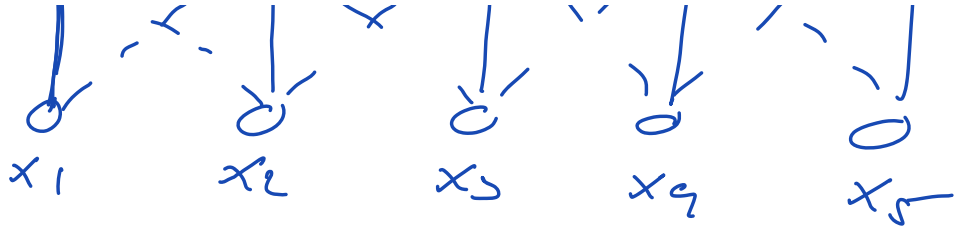




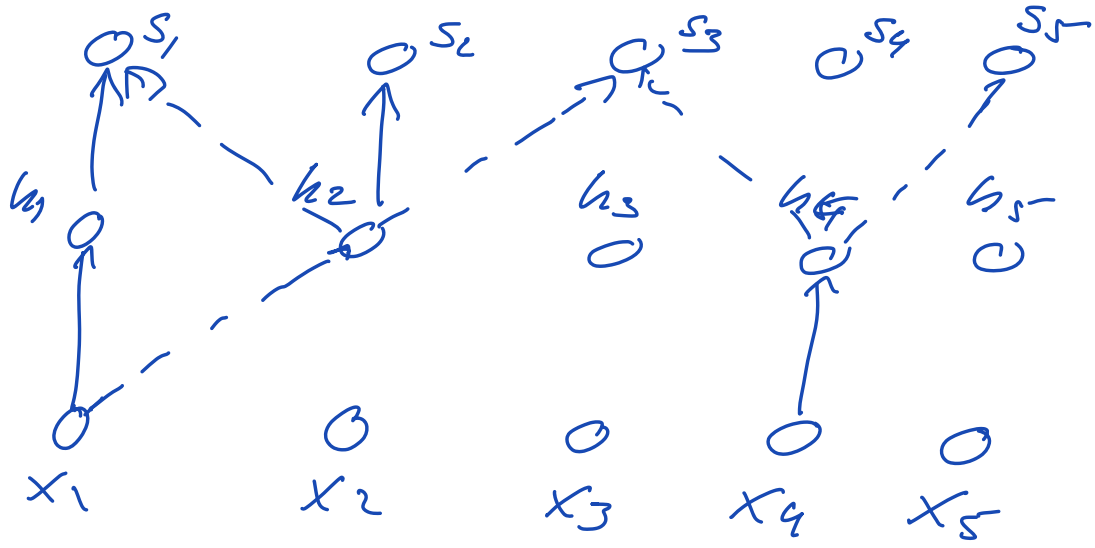
k - connection and n inputs k x n weights

k << number of inputs n.

- parameter sharing.



- Receptive field



pooling

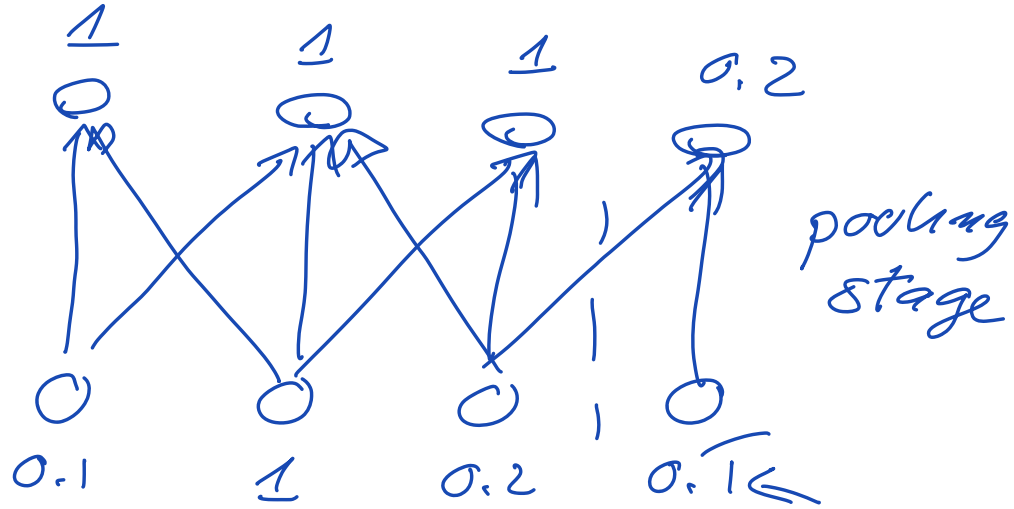
1st stage : convolution itself. (1st dimensionality reduction)

2nd stage : convolution is ran through an activation function.

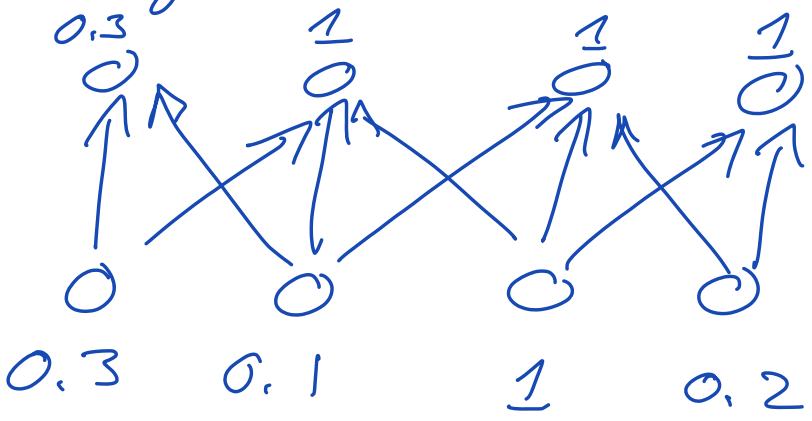
(ReLU etc) Detection stage

3rd stage: pooling,

standard Max pooling

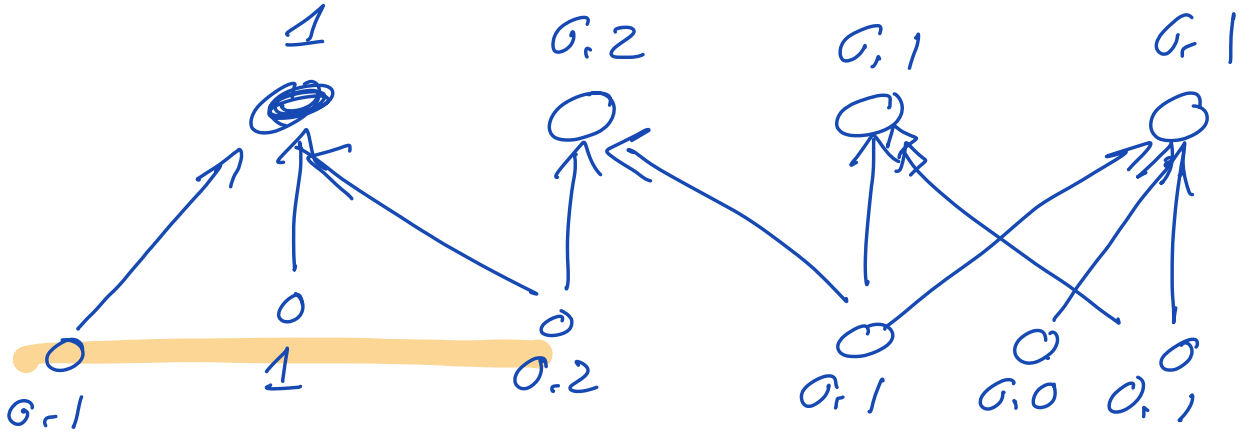


shift one pixel to the right

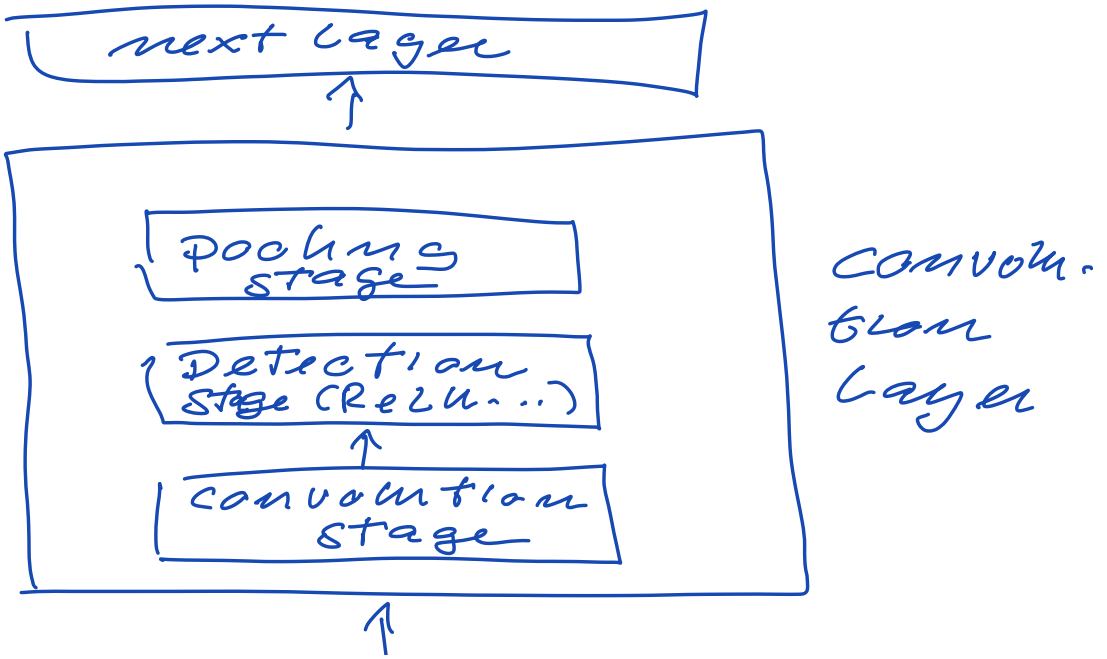


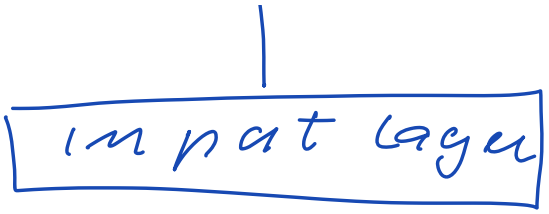
pooling with Down

Pooling



max pooling width a width of 3 and a stride of 2.




input layer