deeplearning.ai

Case Studies

Network in Network and 1×1 convolutions

Why does a 1 × 1 convolution do?

1	2	3	6	5	8
3	5	5	1	3	4
2	1	3	4	9	3
4	7	8	5	7	9
1	5	3	7	4	8
5	4	9	8	3	5

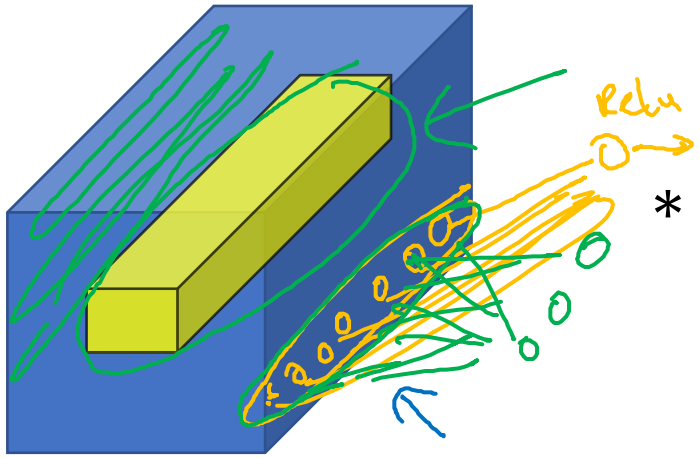
6 × 6 × 1

*

2

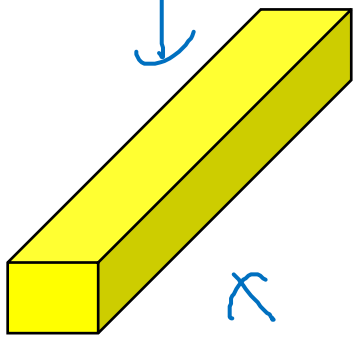
=

2	4	6	…		



6 × 6 × 32

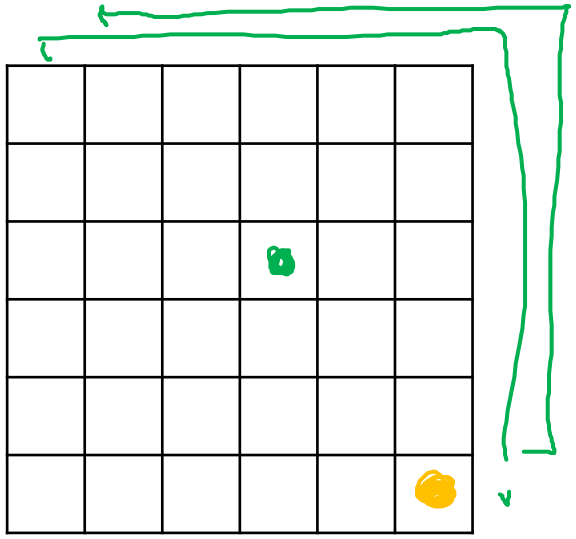
*



1 × 1 × 32

=

32 → # filters. $n_c^{[l+1]}$



6 × 6 × # filters

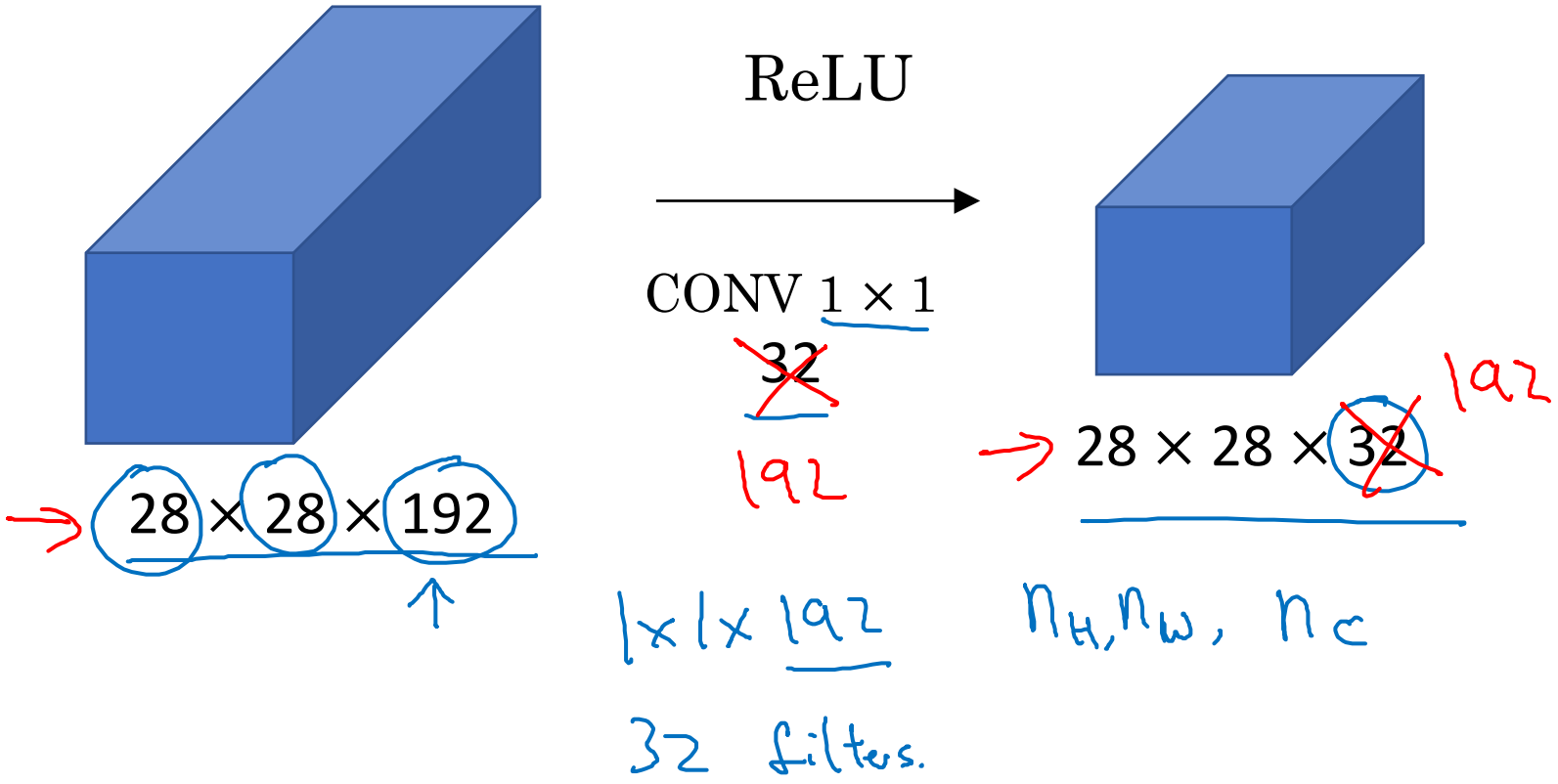
ReLU

Network in Network

[Lin et al., 2013. Network in network]

Andrew Ng

Using 1×1 convolutions



[Lin et al., 2013. Network in network]