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① Parameters & receptive field

a) number of parameters

general case: [O × O × C_O ≤ output ; I × I × C_I ≙ input]

operation	#(shared parameters)	output dim. [O]
convolution (K × K, P, S) (P: padding, S: stride)	K × K × C_I × C_O	$\frac{I - K + 2P}{S} + 1$ (+1 bias)
max pooling (P_S × P_S, S)	0 (all hyperparameters)	$\frac{I - P_S}{S} + 1$
fully connected (1 × 1 × C_O)	I × I × C_I × C_O	1 × 1 × C_O

HERE:

layer	1	2	3	4	5
#parameters	5 × 5 × 3 × 32	3 × 3 × 32 × 32	0	3 × 3 × 32 × 64	3 × 3 × 64 × 64
output dim	56 × 56 × 32	56 × 56 × 32	28 × 28 × 32	28 × 28 × 64	28 × 28 × 64

6	7 (*)	8	9
0	3 × 3 × 64 × 128	14 × 14 × 128 × 512	512 × 10
14 × 14 × 64	14 × 14 × 128	1 × 1 × 512	1 × 1 × 10

Total = sum of parameters for each layer

b) receiptive field

Dimension: 14 x 14 x 128

general case [notation from article]:

	convolution	maxpool
n_{out}	$\frac{n_{in}+2-k}{s}$ (+1)	$\frac{n_{in}-r_s}{s}$ (+1)
j_{out}	$j_{in} * s$	$j_{in} * s$
r_{out}	$r_{in} + (k-1) j_{in}$	$r_{in} + (k-1) j_{in}$

HERE:

layer	0	1	2	3	4	5	6	7
n_{out}	56	56	56	28	28	28	14	14
j_{out}	1	1	1	2	2	2	4	4
r_{out}	1	5	7	8	12	16	20	26
		$1+4\cdot1$	$5+2\cdot1$	$7+1\cdot1$	$8+2\cdot2$	$12+2\cdot2$	$16+1\cdot2$	$20+2\cdot4$