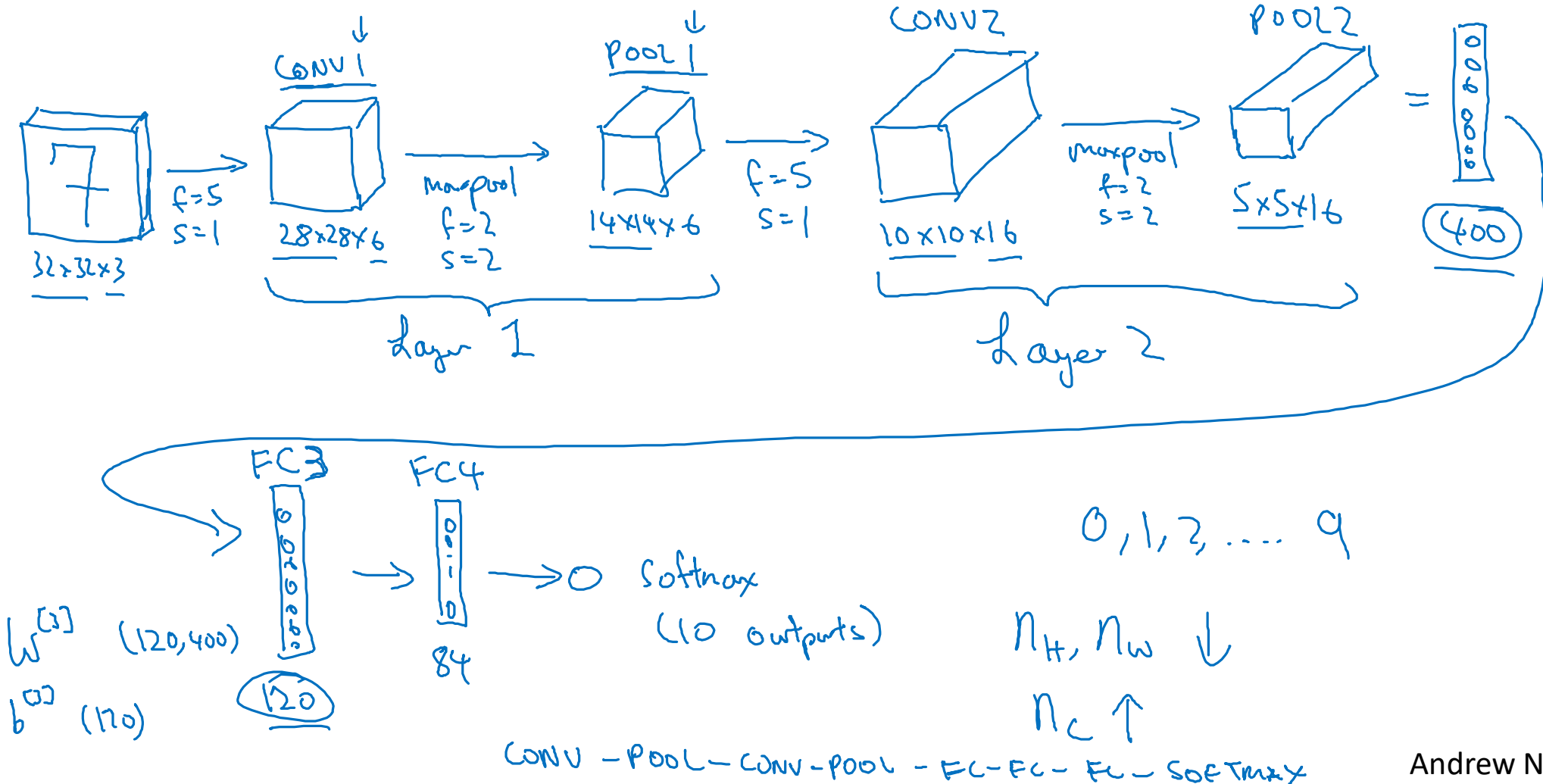deeplearning.ai

Convolutional
Neural Networks

Convolutional neural network example

Neural network example   (LeNet-5)

CONV1 ↓   POOL1 ↓   CONV2   POOL2

$32 \times 32 \times 3$

$f=5$
$s=1$

$28 \times 28 \times 6$

maxpool
$f=2$
$s=2$

$14 \times 14 \times 6$

$f=5$
$s=1$

$10 \times 10 \times 16$

maxpool
$f=2$
$s=2$

$5 \times 5 \times 16$

400

Layer 1   Layer 2

FC3   FC4

→ O Softmax
(10 outputs)

$W^{[3]}$ (120,400)
$b^{[3]}$ (120)

120   84

$0, 1, 2, \ldots 9$

$n_H, n_W \downarrow$
$n_C \uparrow$

CONV — POOL — CONV — POOL — FC — FC — FC — SOFTMAX

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Neural network example

	Activation shape	Activation Size	# parameters
Input:	(32,32,3)	3,072 $a^{[0]}$	0