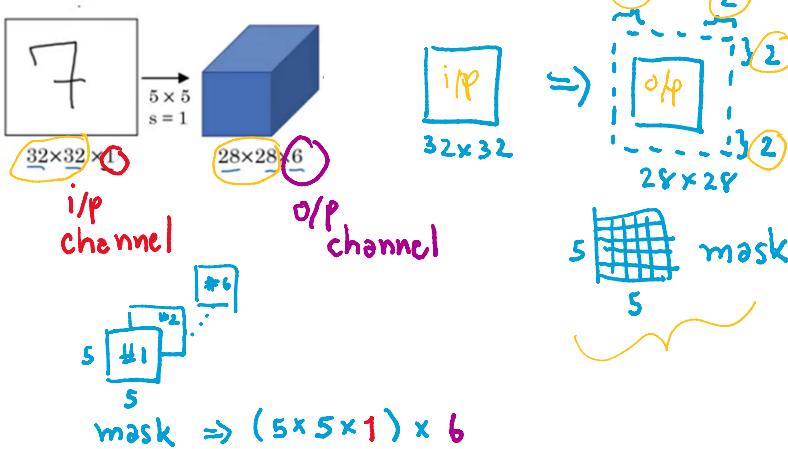
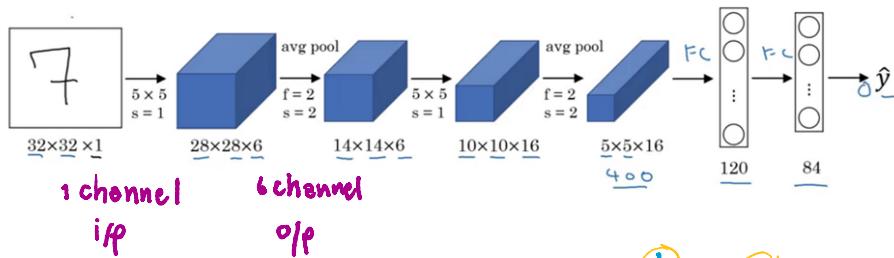


CNN Architecture (Parameters)

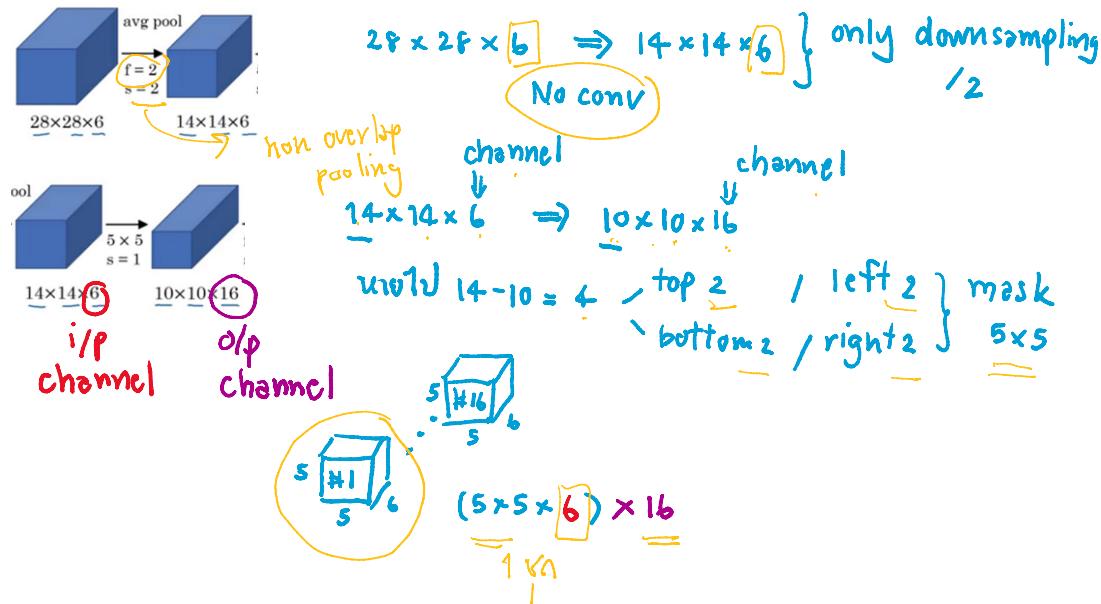
07 March 2020 07:30

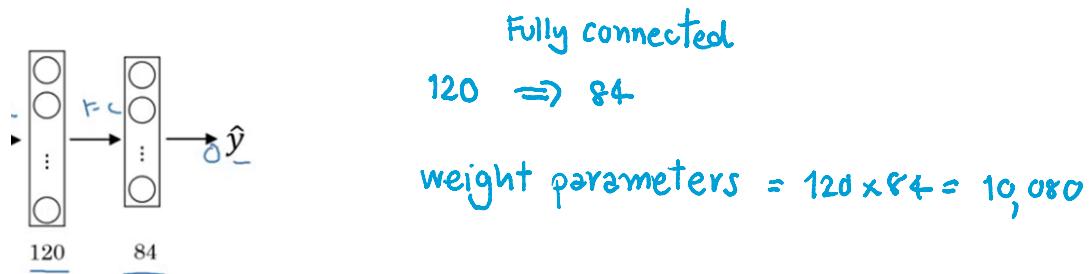
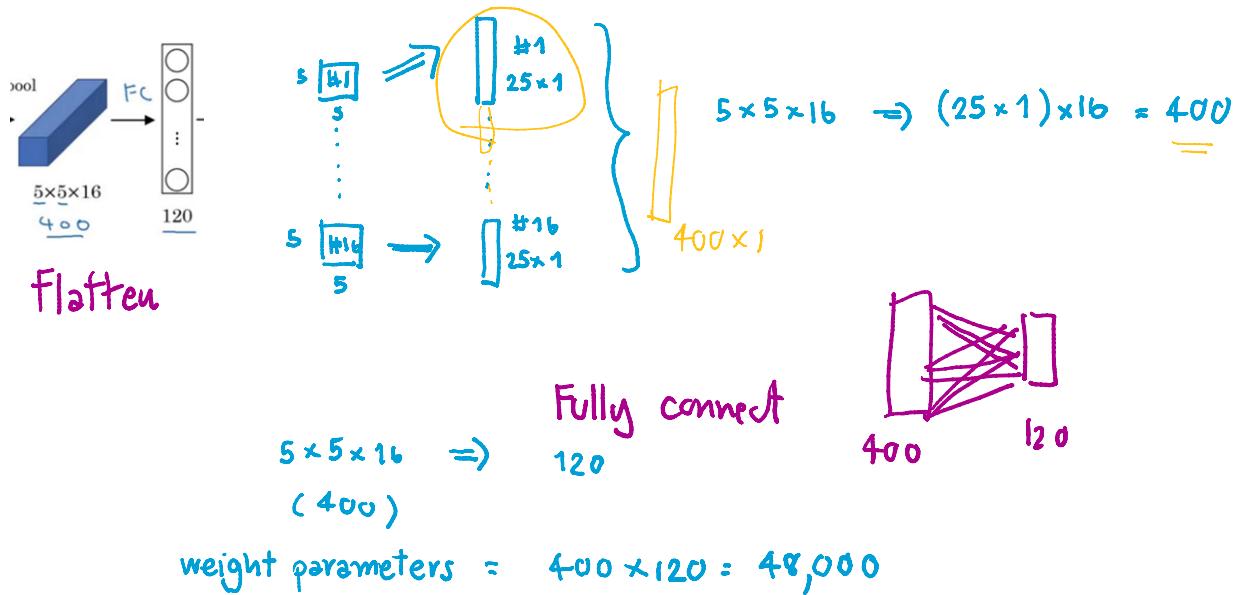


Annotations for the pooling layer:

- $32 - 2 \times 4 = 4$
- top 2 rows / left 2 columns
- bottom 2 rows / right 2 columns
- missing
- missing
- No padding

conv over volume

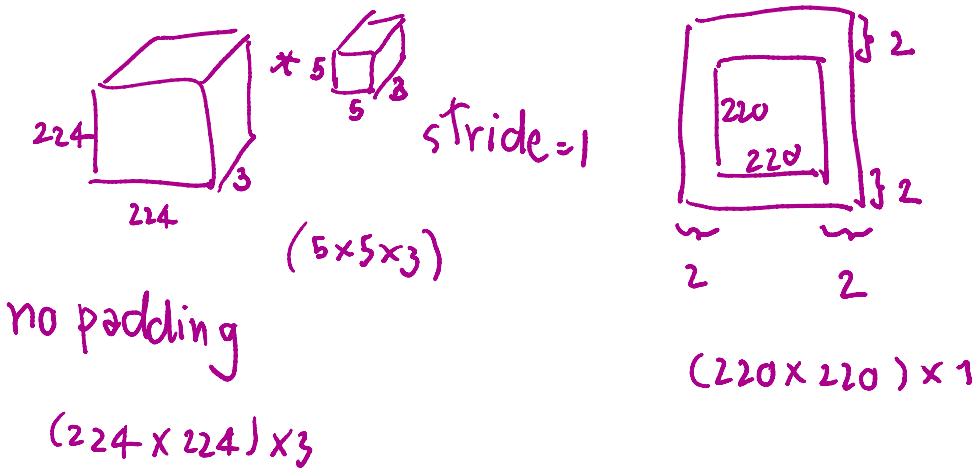
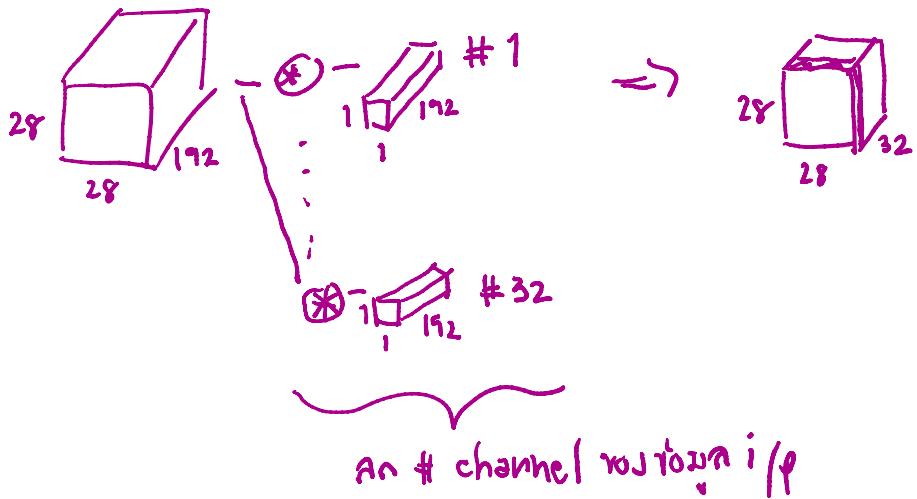




Total weight parameters

$$\begin{array}{ll}
 \text{mask} \Rightarrow (5 \times 5 \times 1) \times 6 & 400 \times 120 = 48,000 \\
 = 150 & 120 \times 84 = 10,080 \\
 & \\
 \text{mask} \Rightarrow (5 \times 5 \times 6) \times 16 & \\
 = 2400 &
 \end{array}$$

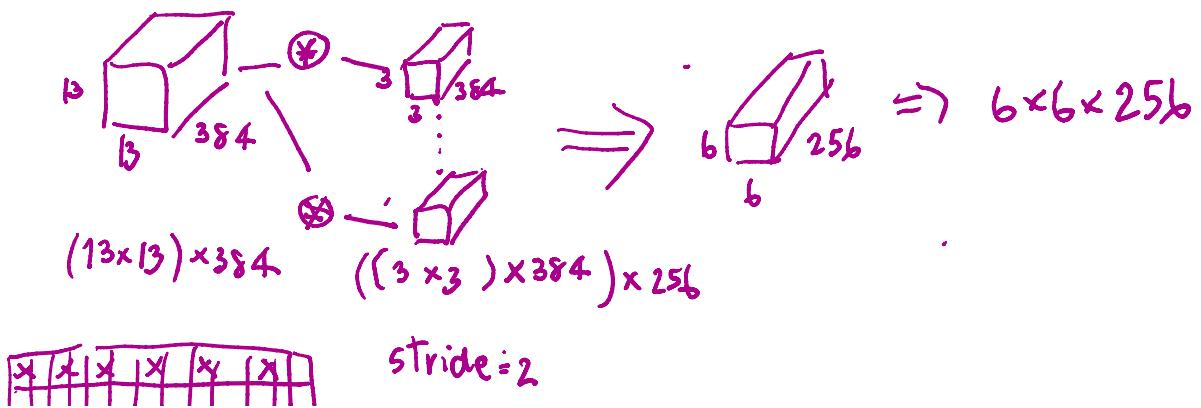
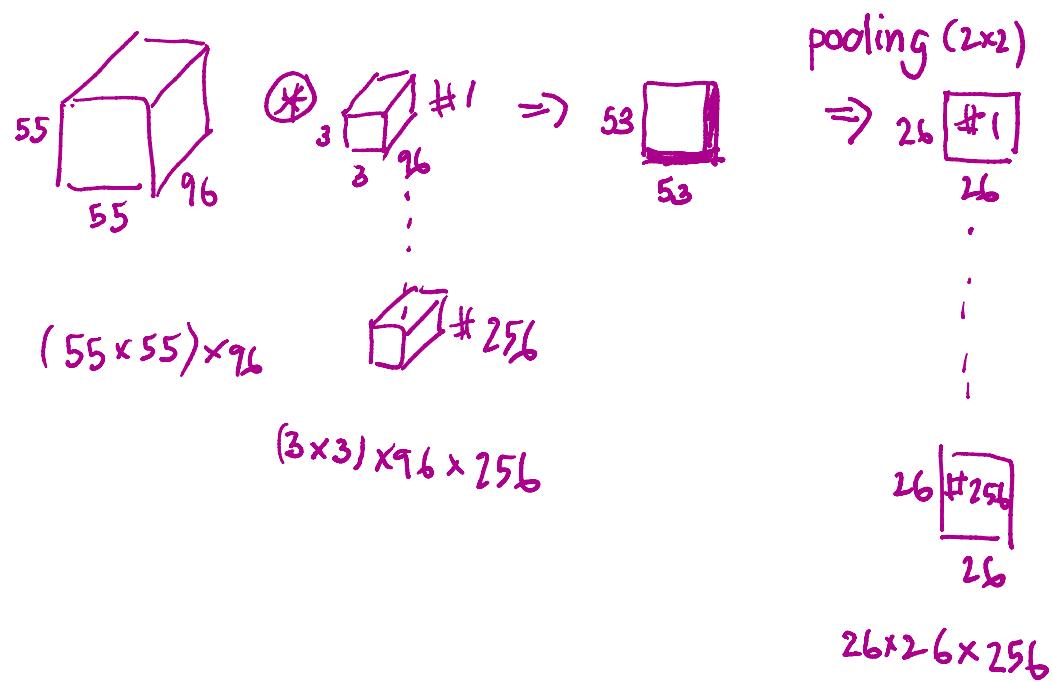
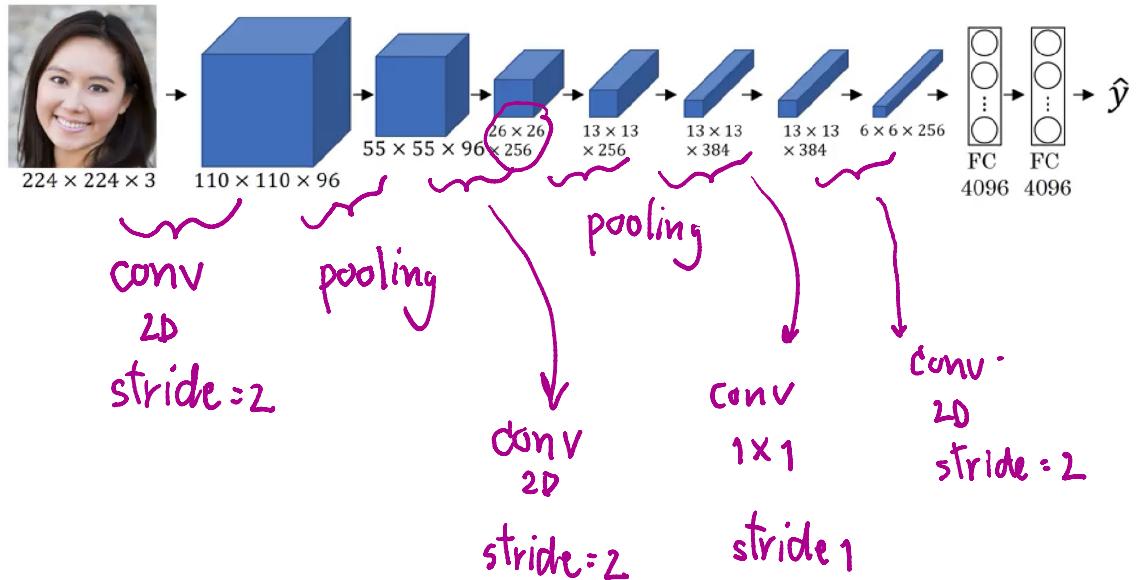
$$\begin{aligned}
 \text{Total weight parameters} &= 150 + 2400 + 48,000 + 10,080 \\
 &= 60,630
 \end{aligned}$$

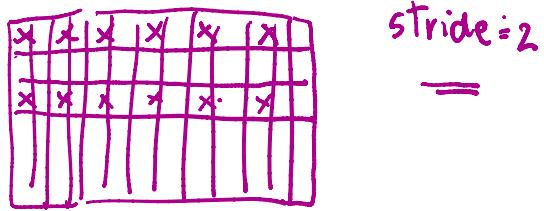


$$\otimes \quad 5 \quad 3 \quad \frac{220}{2} \quad \frac{220}{2} = (110 \times 110)$$

stride = 2

Visualizing what a deep network is learning





$$\left(\begin{array}{c} \text{feature} \\ \boxed{\quad} \\ \text{feature} \times \text{timestep} \end{array} \right)^T \Rightarrow \begin{array}{c} \text{feature} \\ \boxed{\quad} \\ \text{time step} \\ \text{timestep} \times \text{Feature} \end{array}$$