

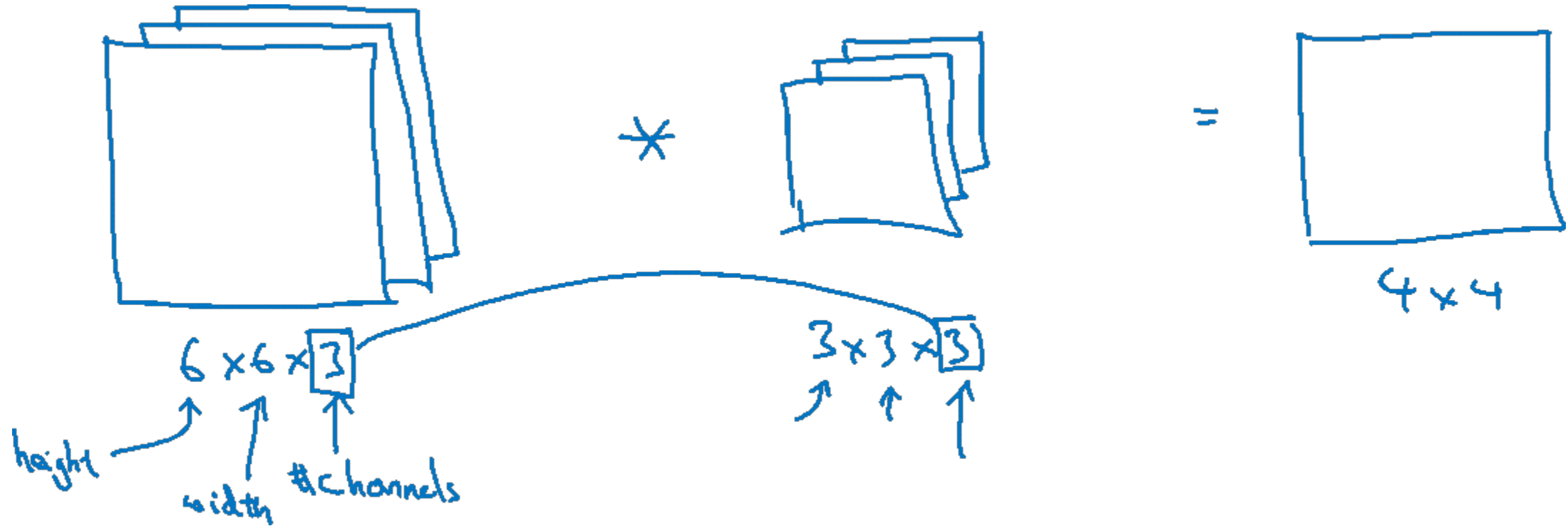


deeplearning.ai

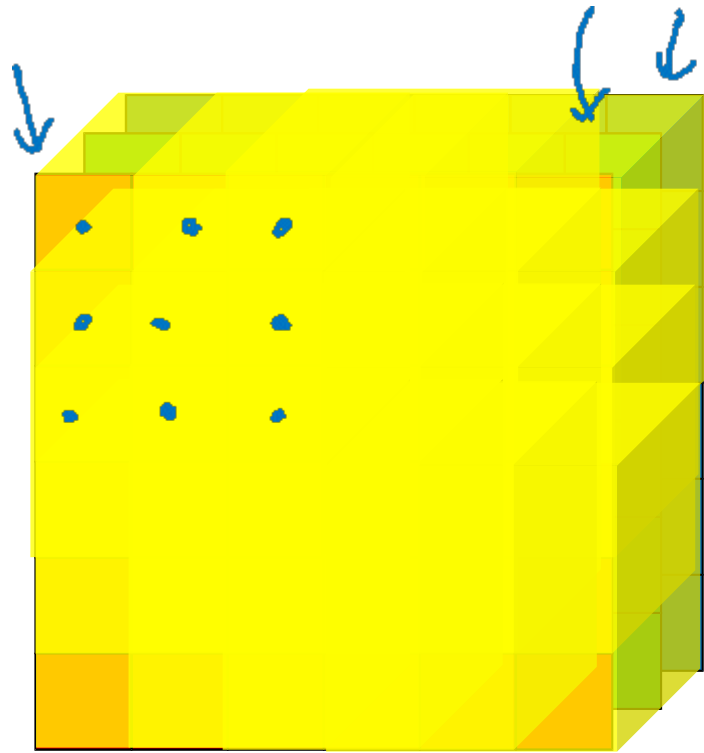
Convolutional Neural Networks

Convolutions
over volumes

Convolutions on RGB images



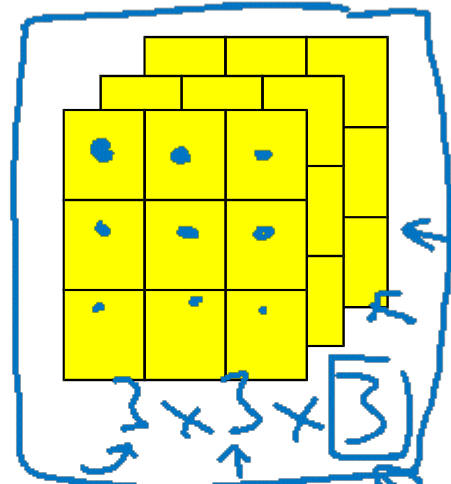
Convolutions on RGB image



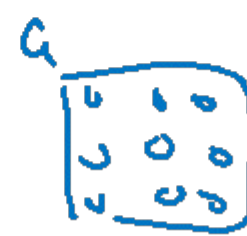
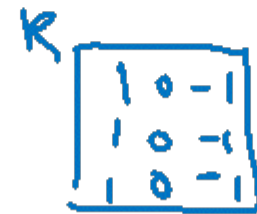
$6 \times 6 \times 3$
 $\uparrow \quad \uparrow \quad \uparrow$



*



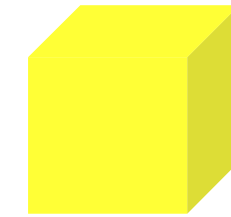
27 numbers



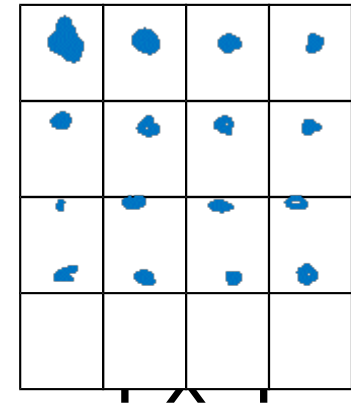
$\rightarrow 3 \times 3 \times 3$



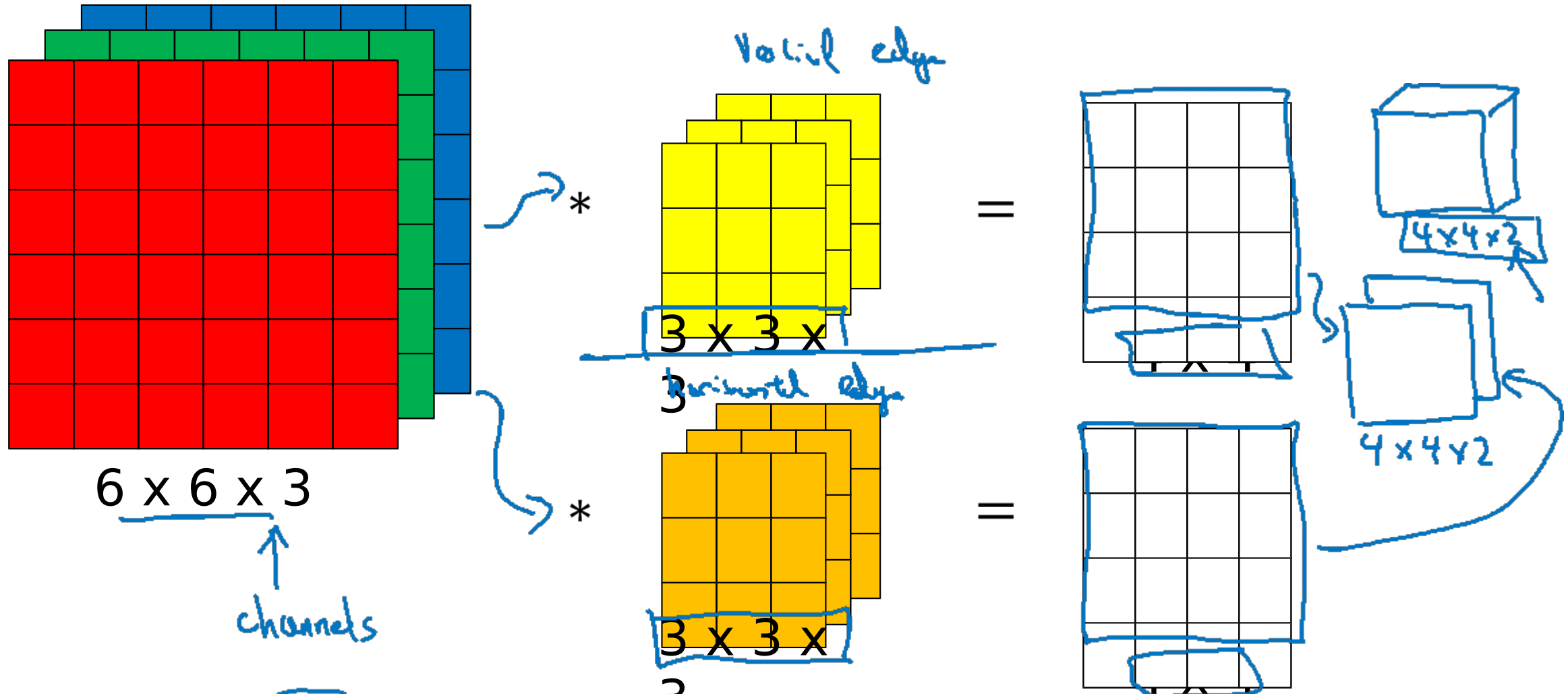
$\rightarrow 3 \times 3 \times 3$



=



Multiple filters



Summary: $n \times n \times n_c$
 $6 \times 6 \times 3$

$* f \times f \times n_c$
 $3 \times 3 \times 3$

$\rightarrow \frac{n-f+1}{4} \times \frac{n-f+1}{4} \times n_c'$
 $4 \times 4 \times 2$ #filters