

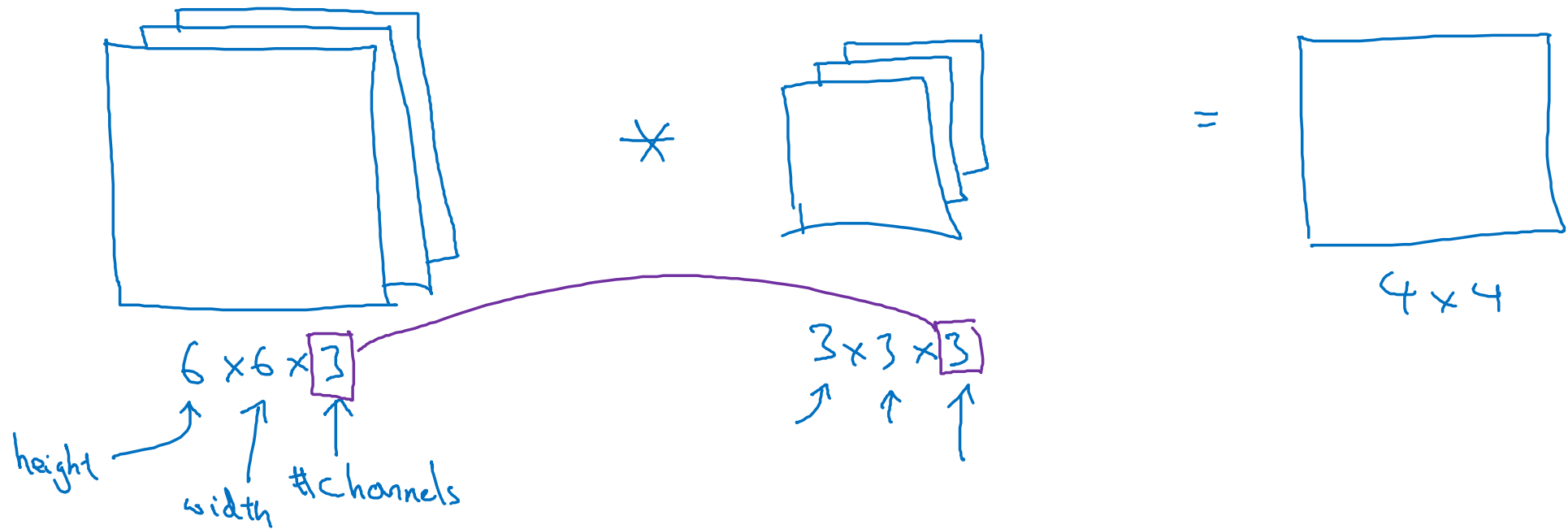


deeplearning.ai

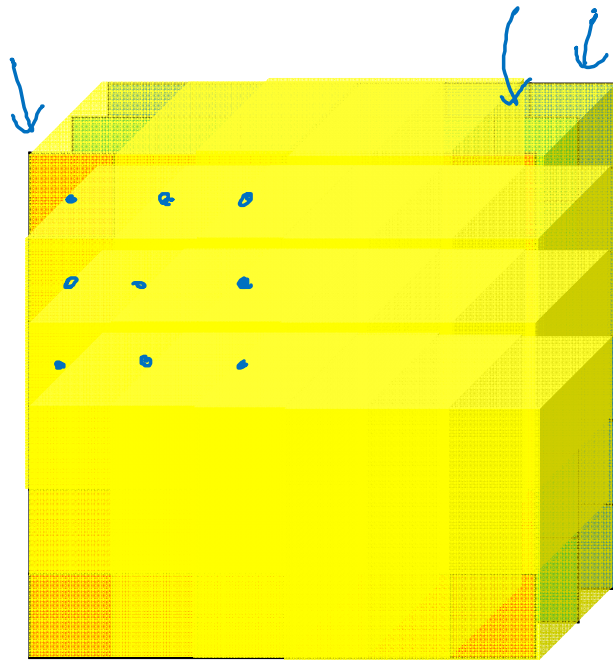
Convolutional Neural Networks

Convolutions over volumes

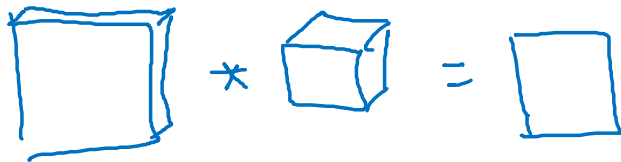
Convolutions on RGB images



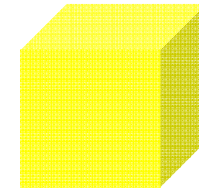
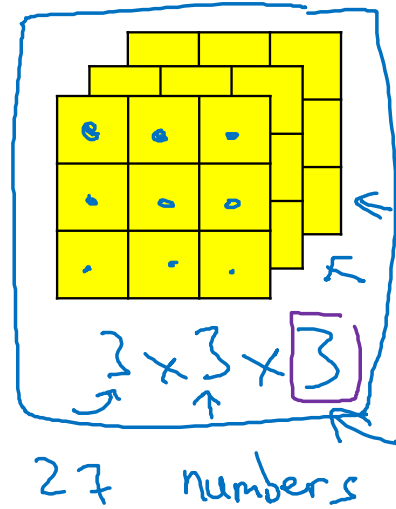
Convolutions on RGB image



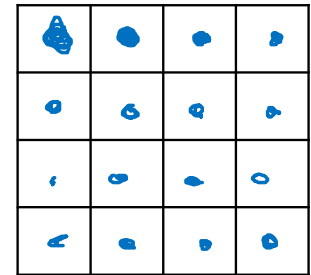
$6 \times 6 \times 3$
 $\uparrow \quad \uparrow \quad \uparrow$



*

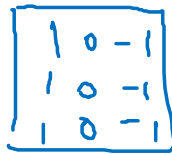


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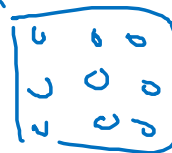


4 x 4

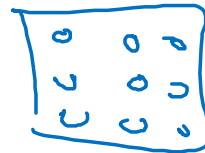
R



G

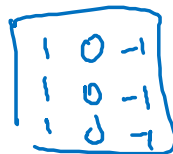


B



$\rightarrow 3 \times 3 \times 3$

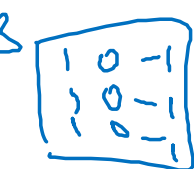
R



G



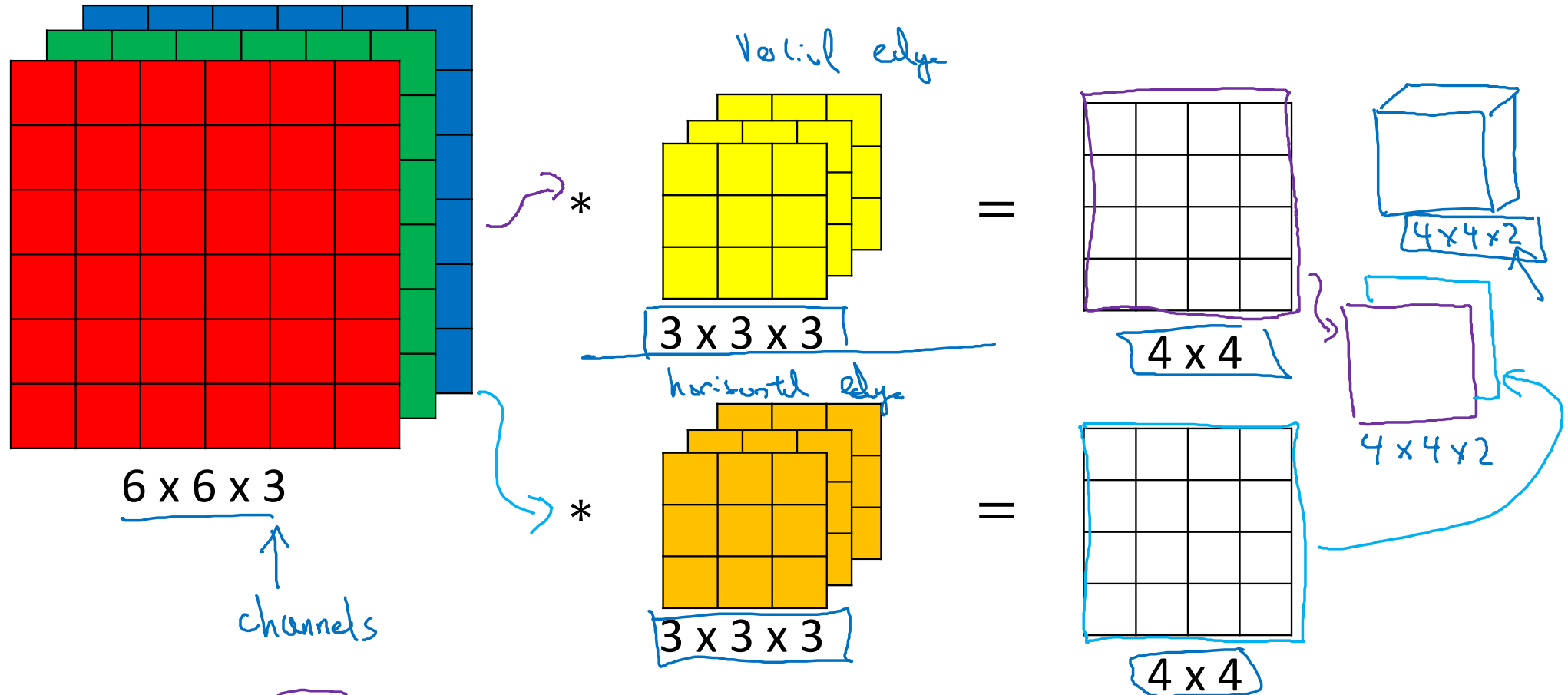
B



$\rightarrow 3 \times 3 \times 3$

Andrew Ng

Multiple filters



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

$6 \times 6 \times 3$ $3 \times 3 \times 3$ $4 \times 4 \times 2$ \uparrow #filters