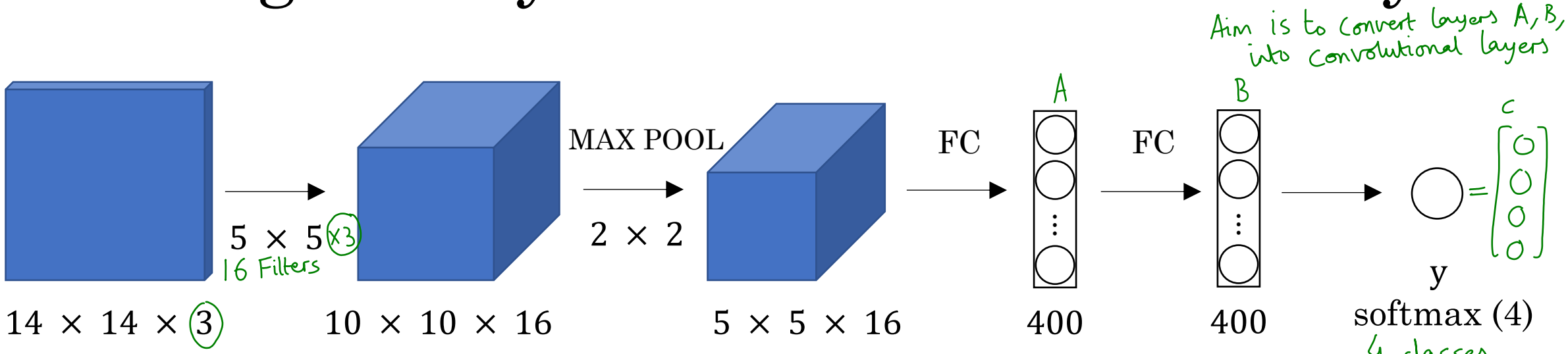
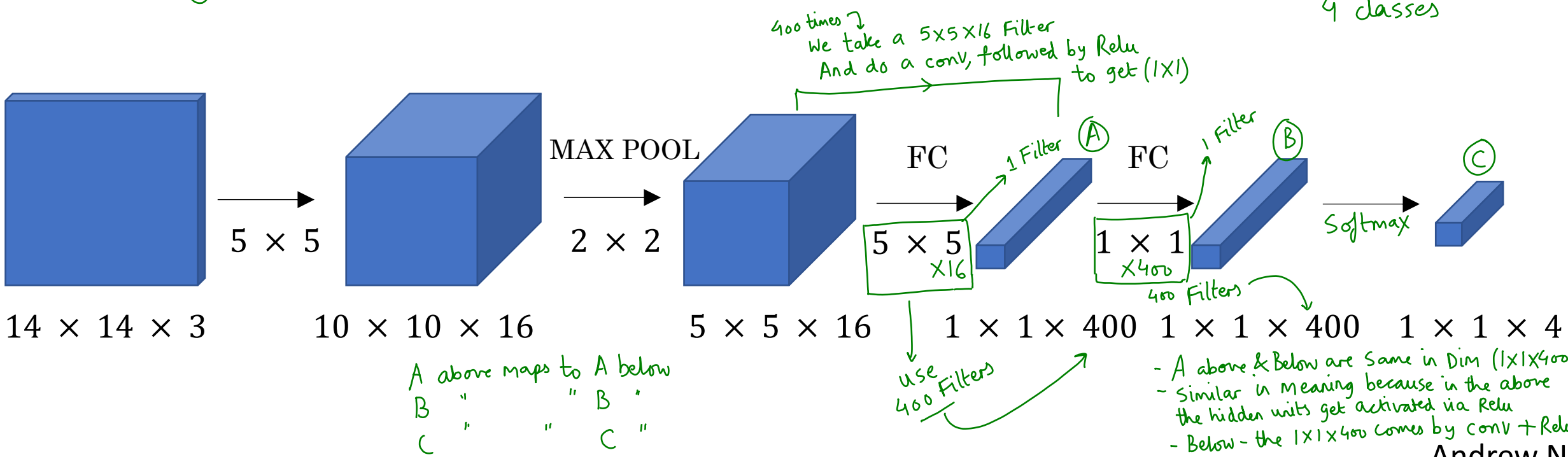
deeplearning.ai

Object Detection

Convolutional implementation of sliding windows

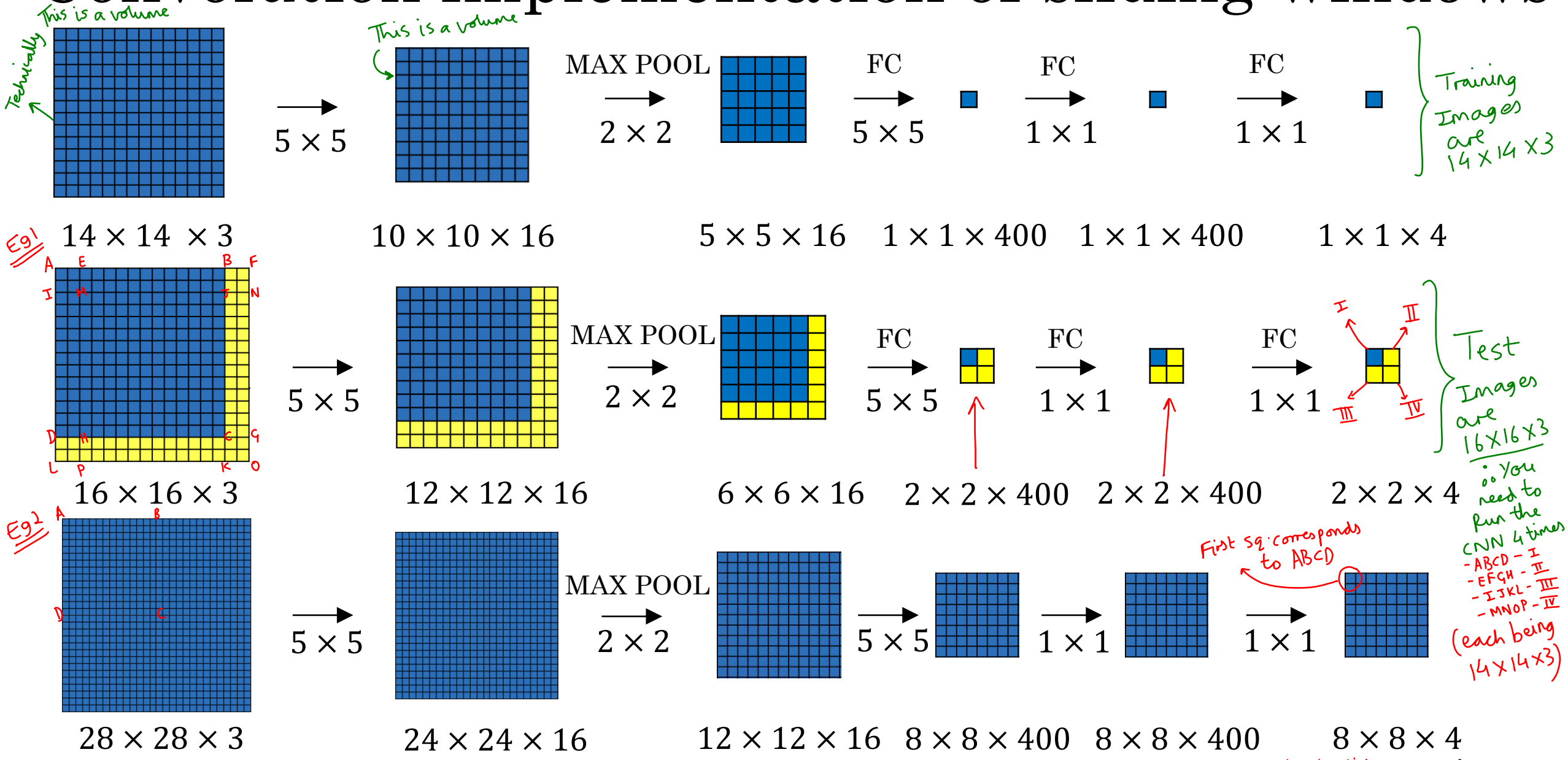
Turning FC layer into convolutional layers





Andrew Ng

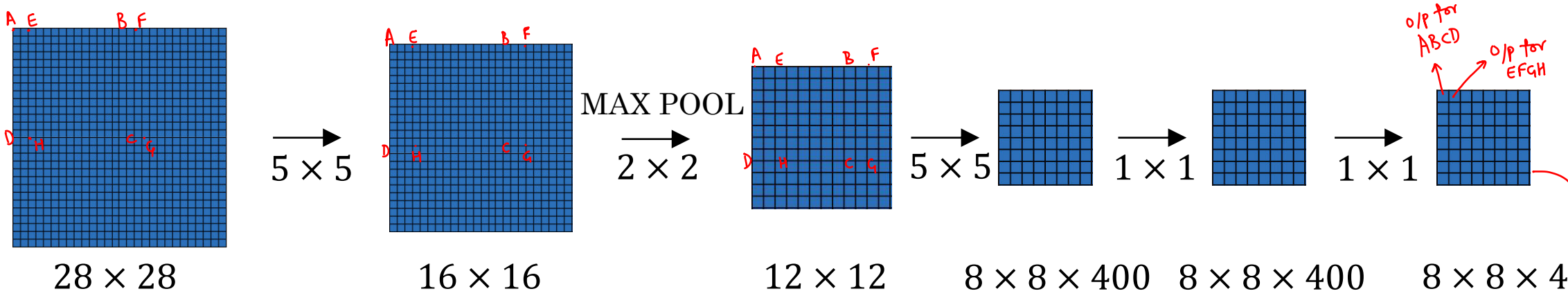
Convolution implementation of sliding windows



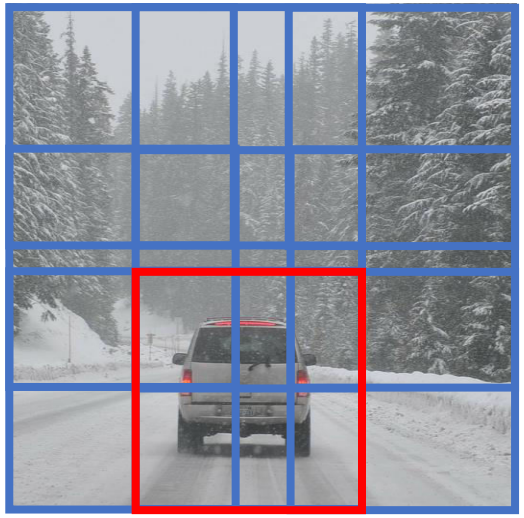
[Sermanet et al., 2014, OverFeat: Integrated recognition, localization and detection using convolutional networks]

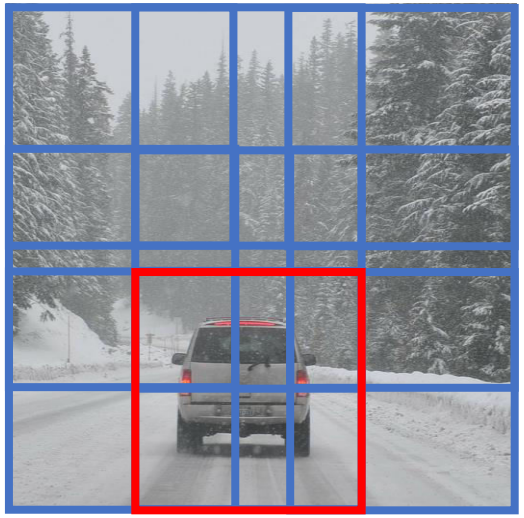
See Next slide

Convolution implementation of sliding windows



- Each square in the O/p is a Result of some 14x14x3 subset of the Image
- Advantage - You share some of the computation in the middle layers as the sliding windows overlap eg ABCD v/s EFGH





Note from Previous Slide
↳ Basically you're Running the convnet for each 14x14x3 block with some stride so you can cover the entire Image using sliding windows of 14x14x3. Why? Because that was the training Img. Size. However, you share a lot of the computation result/sliding window