



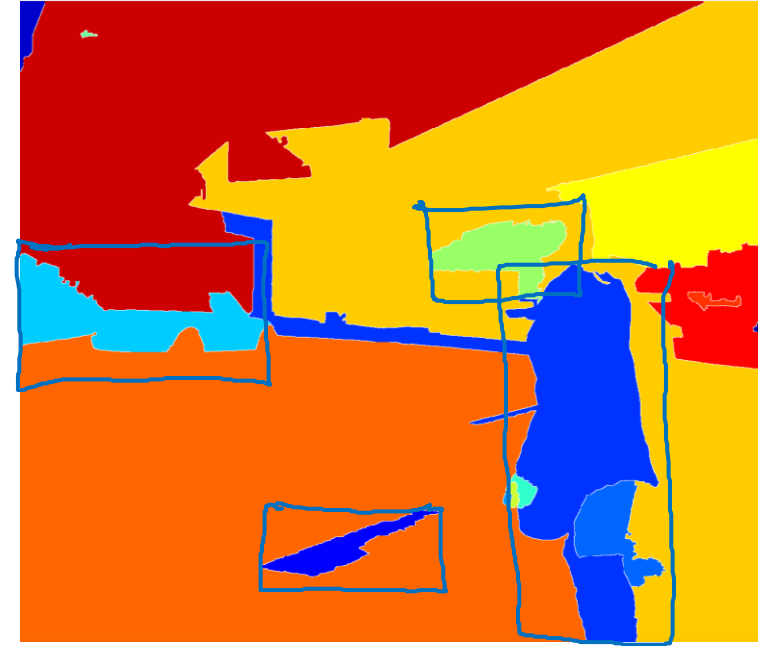
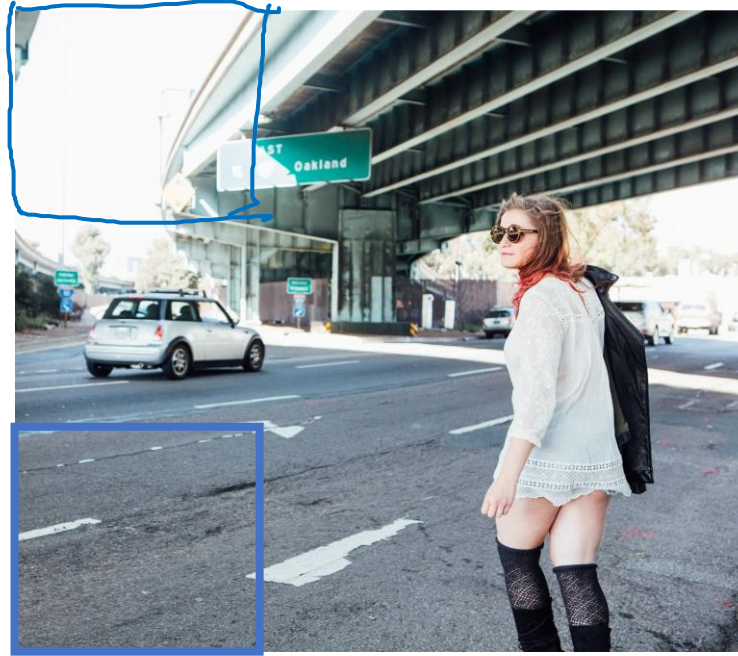
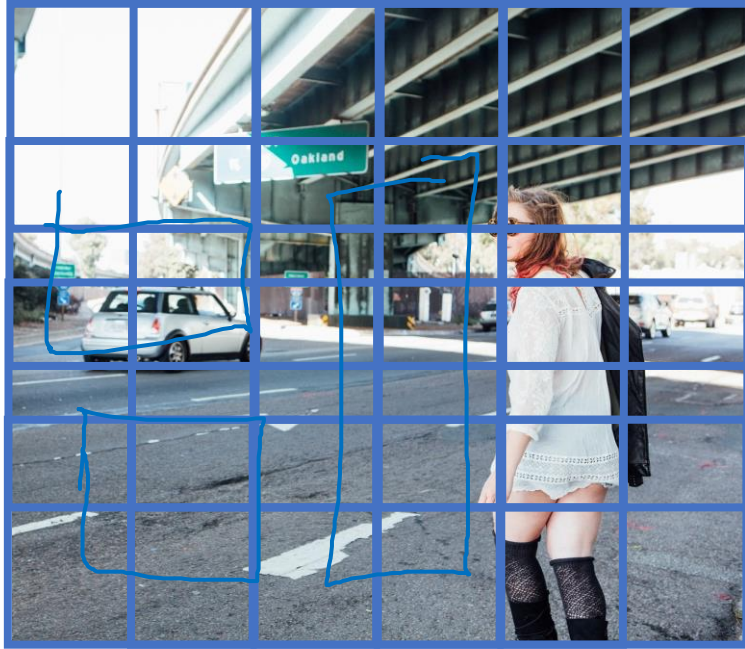
deeplearning.ai

# Object Detection

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Region proposals  
(Optional)

# Region proposal: R-CNN



Segmentation algorithm  
 $\sim 2,000$

# Faster algorithms

→ R-CNN: Propose regions. Classify proposed regions one at a time. Output label + bounding box. ←

Fast R-CNN: Propose regions. Use convolution implementation of sliding windows to classify all the proposed regions. ←

Faster R-CNN: Use convolutional network to propose regions.

[Girshik et. al, 2013. Rich feature hierarchies for accurate object detection and semantic segmentation]

[Girshik, 2015. Fast R-CNN]

[Ren et. al, 2016. Faster R-CNN: Towards real-time object detection with region proposal networks]

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