References

This course drew from the following resources:

Week 1:

- Fully Convolutional Networks for Semantic Segmentation (Long, Shelhamer & Darrell, 2014)

- U-Net: Convolutional Networks for Biomedical Image Segmentation (Ronneberger, Fischer & Brox, 2015)

- DeepLab: Semantic Image Segmentation with Deep Convolutional Nets, Atrous Convolution, and Fully Connected CRFs
(Chen, Papandreou, Kokkinos, Murphy, and Yuille, 2016)

- Mask R-CNN (He, Gkioxari, Dollár & Girshick, 2017)

Week 2:

- Amazon Rekognition

- PowerAI

- DIGITS

- (R-CNN) Rich feature hierarchies for accurate object detection and semantic segmentation (Girshick, Donahue, Darrell &
Malik, 2013)

- Fast R-CNN (Girshick, 2015)

- TensorFlow Hub

- Object Detection API

- (RetinaNet) Focal Loss for Dense Object Detection (Lin, Goyal, Girshick, He & Dollár, 2017)

- TensorFlow's Model Garden

Week 3:

- Fully Convolutional Networks for Semantic Segmentation (Long, Shelhamer & Darrell, 2014)

- Divam Gupta's GitHub account containing a subsample of the CamVid dataset to create a smaller dataset.

- U-Net: Convolutional Networks for Biomedical Image Segmentation (Ronneberger, Fischer & Brox, 2015)

Week 4:

- Grad-CAM: Visual Explanations from Deep Networks via Gradient-based Localization (Selvaraju, Cogswell, Das, Vedantam,
Parikh & Batra, 2019)

A conceptual overview of GradCam

For an optional, conceptual look at GradCAM, please see these videos from Deeplearning.AI's "AI for Medical Treatment" course.

Interpreting CNN models

Localization maps

Heat maps

- (ZFNet) Visualizing and Understanding Convolutional Networks (Zeiler & Fergus, 2013)