Supplementary Reading: The Object Detection Problem

- Implementation Resources: https://github.com/tensorflow/models/tree/master/research/object_detection (Fully implemented models ready to be used, from Google team)

Supplementary Reading: 2D Object detection with Convolutional Neural Networks

- Everingham, M., Van Gool, L., Williams, C. K., Winn, J., & Zisserman, A. (2010). The pascal visual object classes (voc) challenge. International journal of computer vision, 88(2), 303-338. (For understanding the problem + the metrics)

Supplementary Reading: Training vs. Inference

- Ren, S., He, K., Girshick, R., & Sun, J. (2015). Faster r-cnn: Towards real-time object detection with region proposal networks. In Advances in neural information processing systems (pp. 91-99).
- Liu, W., Anguelov, D., Erhan, D., Szegedy, C., Reed, S., Fu, C. Y., & Berg, A. C. (2016, October). Ssd: Single shot multibox detector. In European conference on computer vision (pp. 21-37). Springer, Cham. https://arxiv.org/abs/1512.02325
- Lin, T. Y., Goyal, P., Girshick, R., He, K., & Dollár, P. (2018). Focal loss for dense object detection. IEEE transactions on pattern analysis and machine intelligence. (State of the art)

Supplementary Reading: Using 2D Object Detectors for Self-Driving Cars

- Qi, C. R., Liu, W., Wu, C., Su, H., & Guibas, L. J. (2017). Frustum pointnets for 3d object detection from rgb-d data. arXiv preprint arXiv:1711.08488. (3D object detection from 2D)
- Forsyth, D.A. and J. Ponce (2003). *Computer Vision: a modern approach* (2nd edition). New Jersey: Pearson. Read section 18.2 (Tracking)