L06 Reflective Journal

1. Image classification assigns a label to a given input image and object detection uses image features to help assign labels to images.

2. Bounding boxes use fractions instead of pixel values so that the bound are normalized with respect to the actual input images.

3. IoU stands for Intersection over Union and measures how closely a result is to true positive. A value of 0.5 is used as a threshold to decide whether a result meets a true positive condition.

4. The most challenging aspect of implementing the plot detection function is the low amount of training data. That makes feature detection more challenging. This can be mitigated with a higher IoU threshold.

5. Without the max(0…) limit, the bounding boxes might overlap and that would be an issue with isolating features.

6. I did not encounter any errors in the code. In fact, I was extremely confused that the whole program was complete already.

7. I had about 15 boxes with the lenient 0.3 threshold as opposed to 2 boxes with the 0.7 threshold. I think the strict 0.7 threshold is better because it only outlines the rider and the horse.

8. My classifications were very wrong in both cases.

9. My model mislabeled everything for a 100% false positive rate.

10. For self driving cars we want high recall because it's safer if a car stops for a perceived obstacle than if it ran people over sometimes. The same goes for image classification because we want all relevant results that were correctly identified.

11. The advantage of a pre-trained model is its high accuracy potential, however if the model memorized the data, that could lead to overfitting which is not desired.

12. Self-driving vehicles need to identify features and obstacles to avoid collisions. Gait analysis is important to identify individuals in emergencies. There's an experimental technique that would search for bulges under clothing to detect inappropriate weapons.