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YOLO Model 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Image | Total Objects Detected | Detection Time (s) | Average Confidence (%) | Detected Objects |
| Pigs.jpg | 5 | 7.06 | 61.2 | cow (90.0%), cow (75.0%), cow (64.0%), cow (39.0%), cow (38.0%) |
| Race\_Horse.jpeg | 7 | 0.75 | 70.57 | horse (93.0%), horse (91.0%), person (86.0%), person (84.0%), person (70.0%), horse (44.0%), horse (26.0%) |
| Randy\_Moss.jpeg | 7 | 1.19 | 70 | person (93.0%), person (92.0%), person (82.0%), person (78.0%), person (74.0%), person (36.0%), sports ball (35.0%) |
| Team\_USA.jpeg | 10 | 1.14 | 77.1 | person (91.0%), person (91.0%), person (87.0%), person (83.0%), person (81.0%), sports ball (79.0%), person (76.0%), person (71.0%), person (64.0%), person (48.0%) |
| Bayern.jpeg | 12 | 1.49 | 73.83 | person (89.0%), person (89.0%), person (84.0%), person (83.0%), person (78.0%), person (76.0%), person (75.0%), person (74.0%), person (70.0%), person (60.0%), person (54.0%), person (54.0%) |
| Byron\_Buxton.jpeg | 2 | 1.51 | 93.5 | person (94.0%), baseball bat (93.0%) |

In my first model, detection time was sub 2 seconds for most of my objects. However I did find it interesting that the pigs image which in my opinion is the simplest image out of the 6 too the longest to detect. Lastely it seems that the yolo model is able to detect people very well as it detected a person in all the images that had a person in it.

RCNN Model 2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Image | Total Objects Detected | Detection Time (s) | Average Confidence (%) | Detected Objects |
| Pigs.jpg | 5 | 8.97 | 69.09 | cow (87.48%), cow (79.17%), sheep (65.12%), bird (60.09%), sheep (53.57%) |
| Race\_Horse.jpeg | 8 | 6.07 | 93.85 | horse (99.9%), person (99.45%), horse (99.08%), person (98.66%), person (98.3%), horse (96.15%), horse (88.5%), person (70.74%) |
| Randy\_Moss.jpeg | 9 | 7.78 | 86.17 | person (99.94%), person (99.8%), person (99.73%), person (99.54%), person (96.32%), person (82.8%), potted plant (73.51%), person (70.92%), baseball glove (52.94%) |
| Team\_USA.jpeg | 19 | 8.43 | 82.73 | person (99.9%), person (99.86%), person (99.8%), person (99.52%), sports ball (99.48%), person (99.35%), person (99.01%), person (96.43%), person (94.58%), person (93.29%), person (84.03%), person (81.85%), person (79.55%), person (65.12%), person (63.7%), person (58.12%), person (53.89%), person (52.95%), person (51.5%) |
| Bayern.jpeg | 15 | 8.01 | 85.49 | person (99.92%), person (99.82%), person (99.75%), person (99.63%), person (99.36%), person (98.69%), person (95.66%), person (95.56%), person (94.21%), person (93.42%), person (87.57%), person (64.01%), person (52.38%), person (51.45%), person (50.89%) |
| Byron\_Buxton.jpeg | 3 | 6.47 | 86.09 | person (99.98%), baseball bat (99.49%), baseball glove (58.8%) |

In my second model which is the RCNN there was a notably longer detection time versus my first yolo model. Another observation with the RCCN in comparison with the Yolo is that the RCNN model detected more objects in total in each image. Furthermore, average confidence on all images were higher than the yolo model.

(ii) As for my third model that detected dominant color. It correct identified the top colors for each image in my data set.