

Computer Vision, Object Detection Lab 2

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1. Visualization

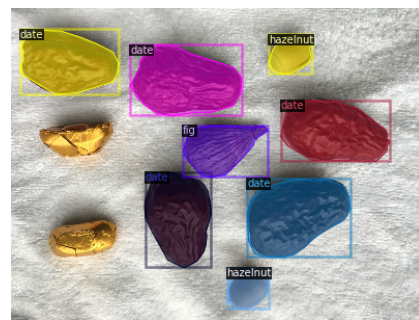
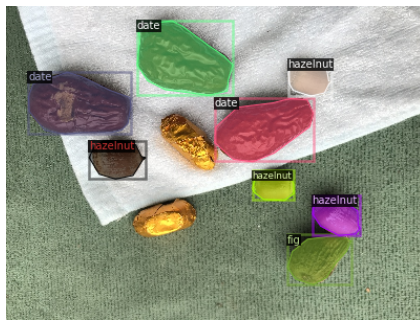


Figure 1.a,b. Random examples from nut training data.

2. Training Curves

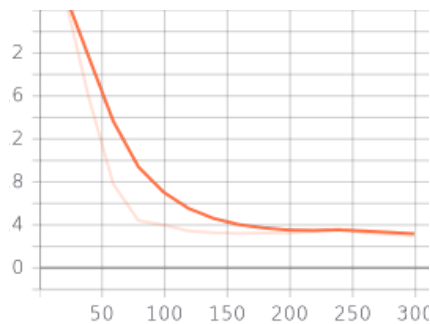


Figure 2.a. Total loss of COCO init model

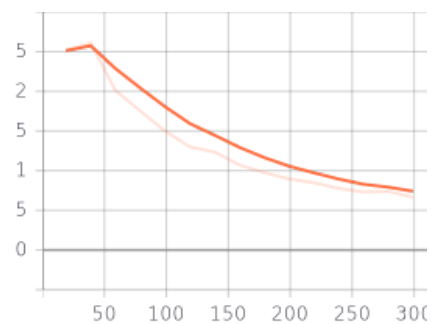


Figure 2ba. Total loss of IN init model

We noticed that COCO init converges faster and converges to a lower value.

3. Visualizations and Predictions

COCO init

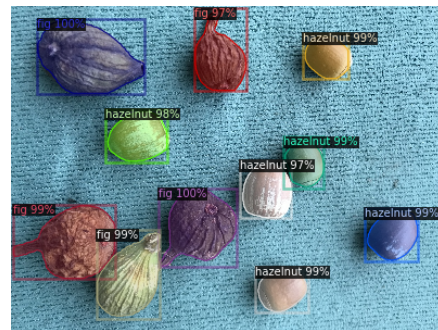
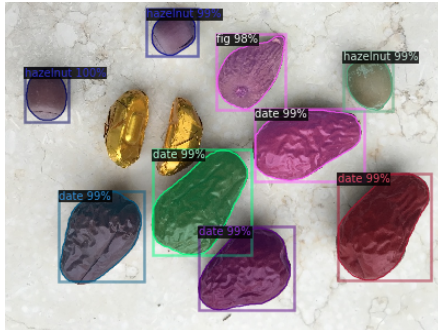


Figure 3.a,b. Random predictions from COCO initialized model.

IN init

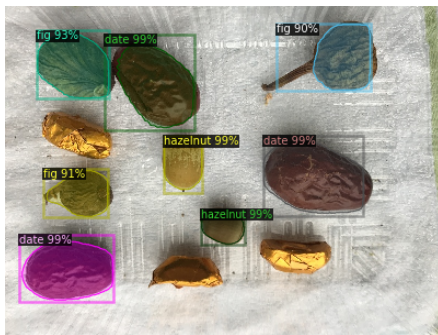


Figure 4.a,b. Random predictions from IN initialized model.

We noticed that COCO init gives more confident predictions $\geq 98\%$, while IN gives less confident ones $\geq 75\%$.

4. Evaluation

Segmentation

Init	AP	AP50	AP75	APs	APm	API
COCO	93	100	100	NaN	91	94
IN	76	100	97	NaN	75.5	74

BBox

Init	AP	AP50	AP75	APs	APm	API
COCO	85	100	94	NaN	80	90
IN	59	100	59	NaN	60.5	48

5. Conclusion

As it appears from above, that the COCO initialized model performs better than the ImageNet one in most of the metrics, and performs equal in some the rest. This is mainly because COCO is built on ImageNet with additional data.