Literature report

After finished the design phase, we proceed to explore and research before implementing.

We focused on Object-Detection and Lane-Driving.

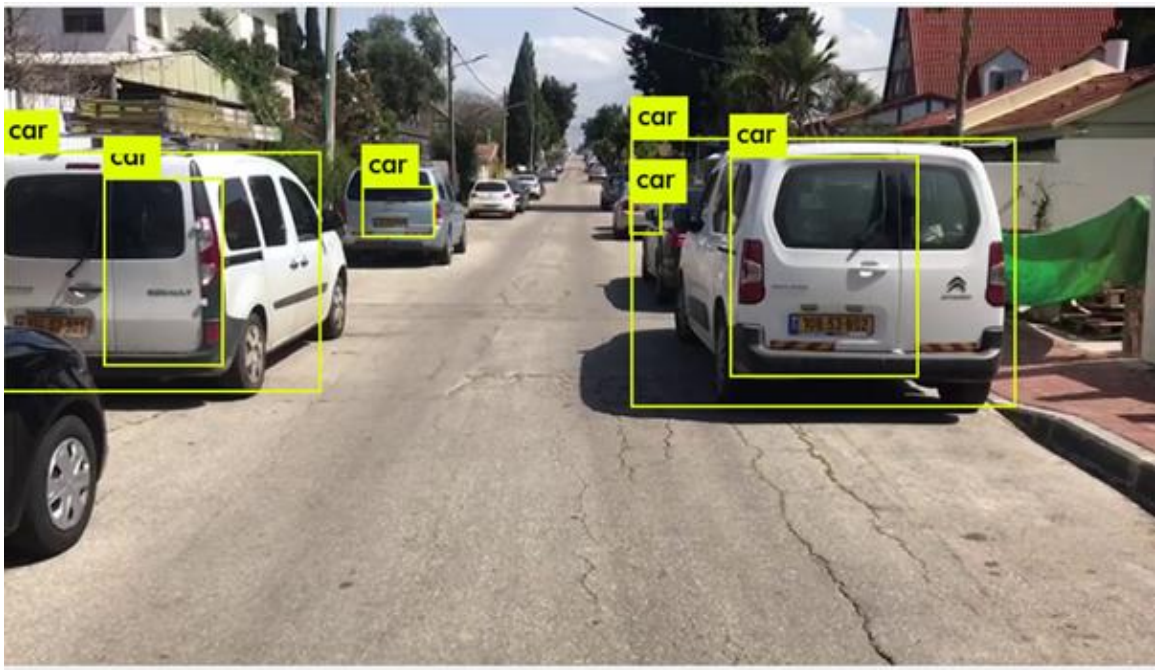
Having read several articles and explored githubs this is what we found:

Darknet: written by Joshep Redmon is a YOLO implementation.

By running the full model we received poor performance, thus we tried the tiny-yolo implementation.

the tiny-yolo's performance was slightly better, about 1.5 fps on VM machine.

thinking this could be improved by running training the model by ourselves with dedicated dataset and indeed, we received 4fps.



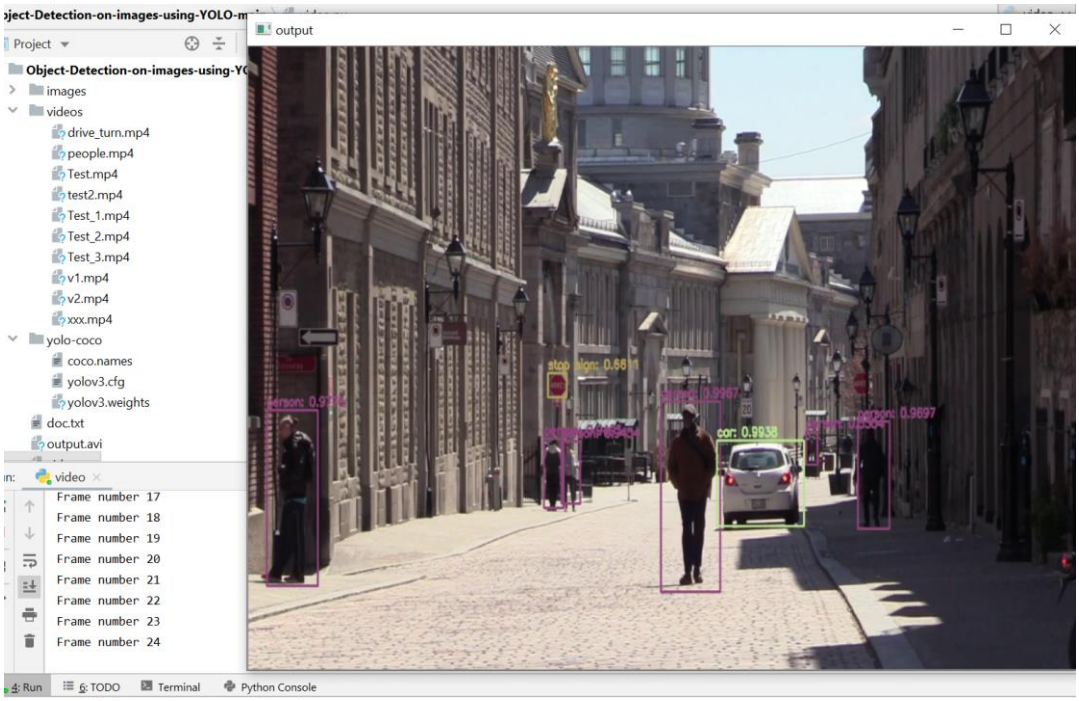
We tested 2 self-trained models, one is trained by COCO dataset, the other by VOC.

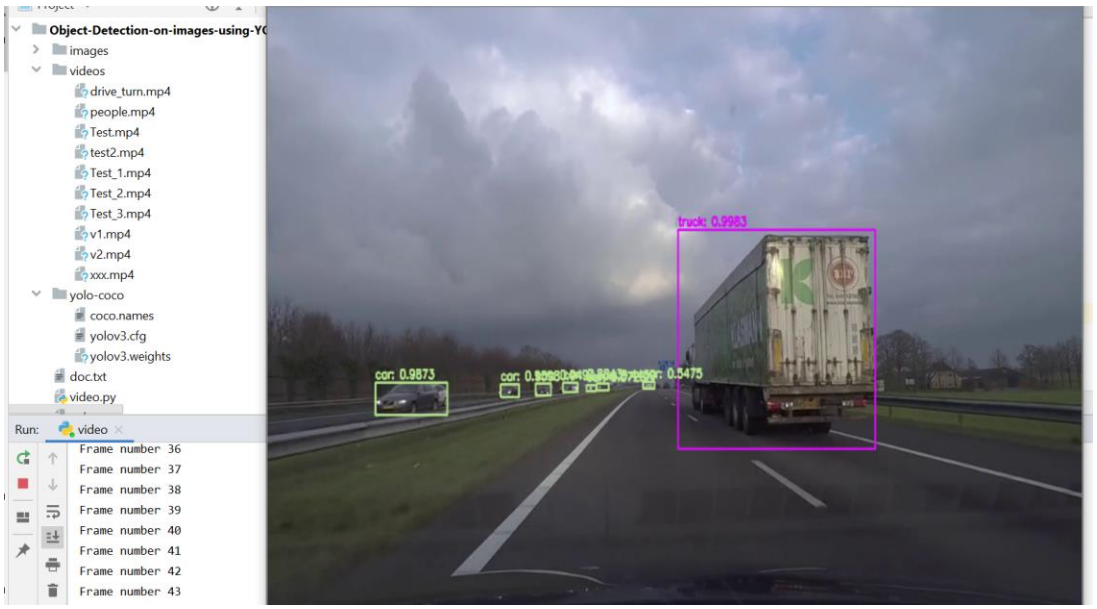
The results are as follows.

YOLO object detection:

https://cloudxlab.com/blog/object-detection-yolo-and-python-pydarknet/

https://github.com/yash42828/YOLO-object-detection-with-OpenCV





lane detection:

Radius of the curvature

https://github.com/maunesh/advanced-lane-detection-for-self-driving-cars

https://github.com/canozcivelek/lane-detection-with-steer-and-departure

https://github.com/hrithiks2019/Self_Driving_Car