

## Preprocessing with YOLO ver 5.

Crop the car only by using yolo

In 'yolov5' folder, everything came from <https://github.com/ultralytics/yolov5.git>

except yolo\_helper.py , sorter.py, cropper.py and minifile\_killer.py.

All explanation about code is revealed by annotation in front of the code

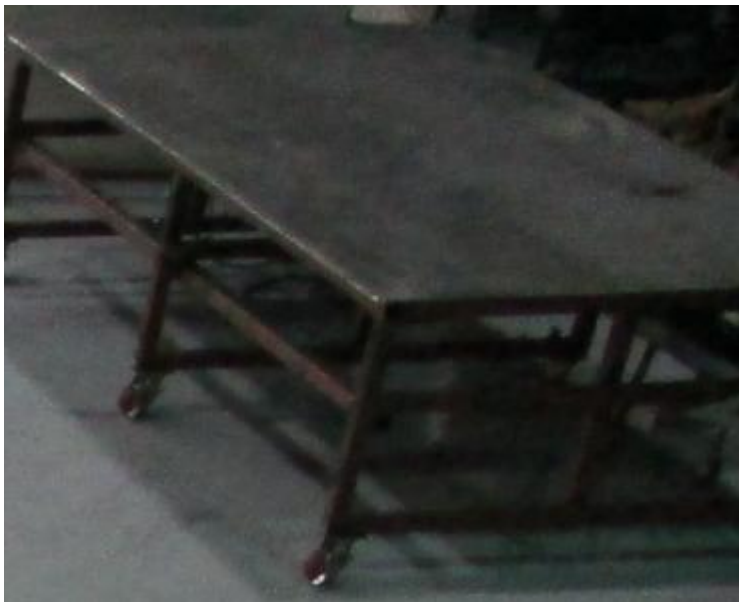
## Observation before image cropping

The target car mostly recognized as car, but some data has wrong tag such as airplane, parking parameter, cellphone, train.

But because there is no bigger object than target, the biggest one is almost target car

So, I search the biggest object and crop it.

## After image cropping.



1200 files are eliminated because yolo5 cannot find any objects.  
some of cropped picture includes these little objects.

This thing happens because the yolo5 couldn't recognized our car.

It can be processed by eliminating the smaller sized cropped data.

The number of small files that is under 10000 byte is 570. That is quite reasonable so I deleted them.

Still there is not appropriate pictures, thus 62900 pictures left.

The 97% of pictures are used for our training.