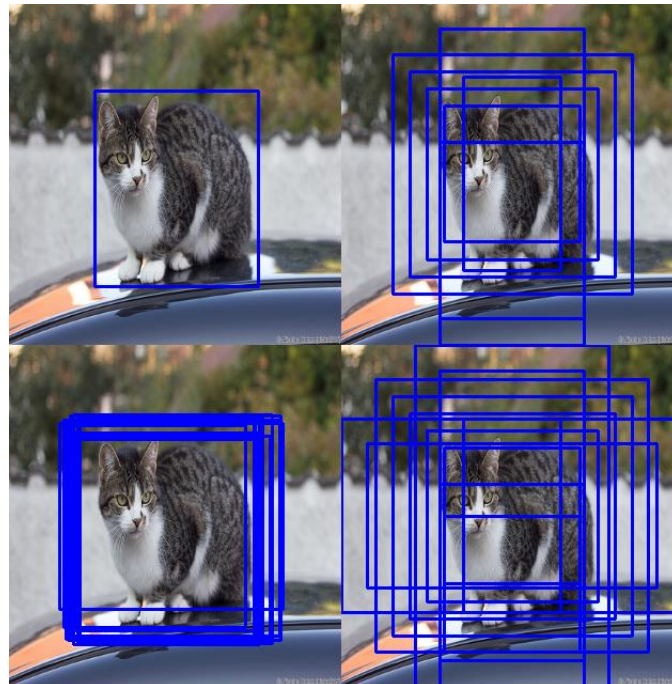
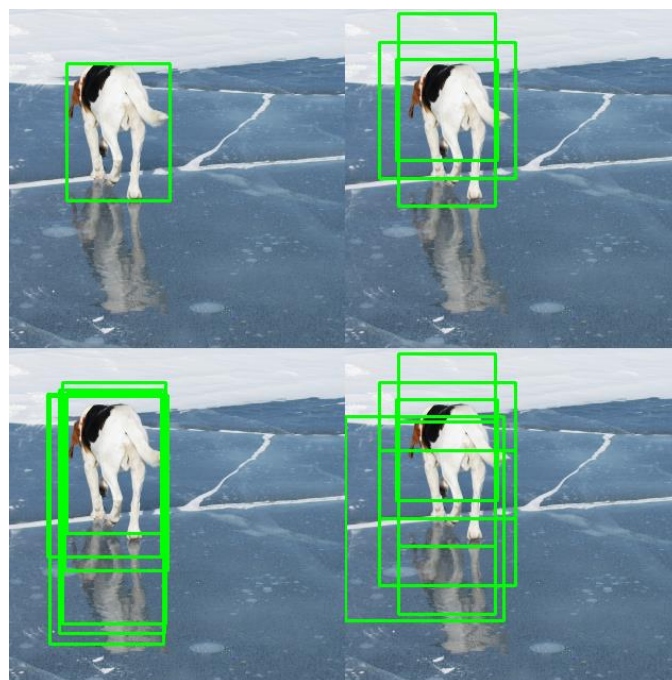


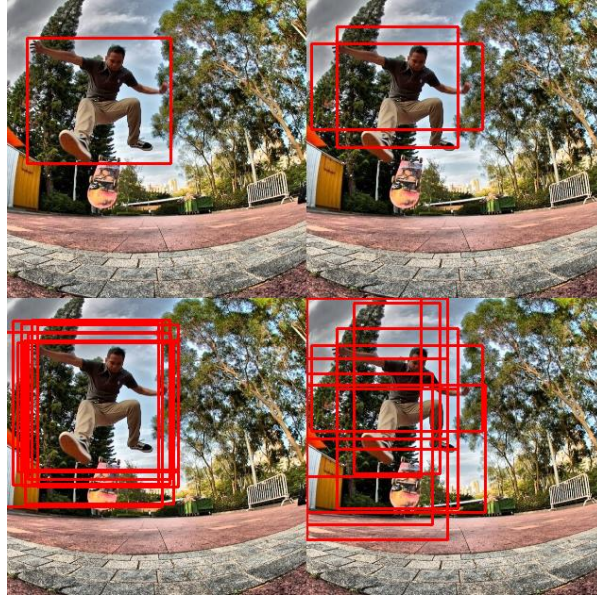
- One visualization of the network output on an image with **at least one cat object**, **before** non maximum suppression.



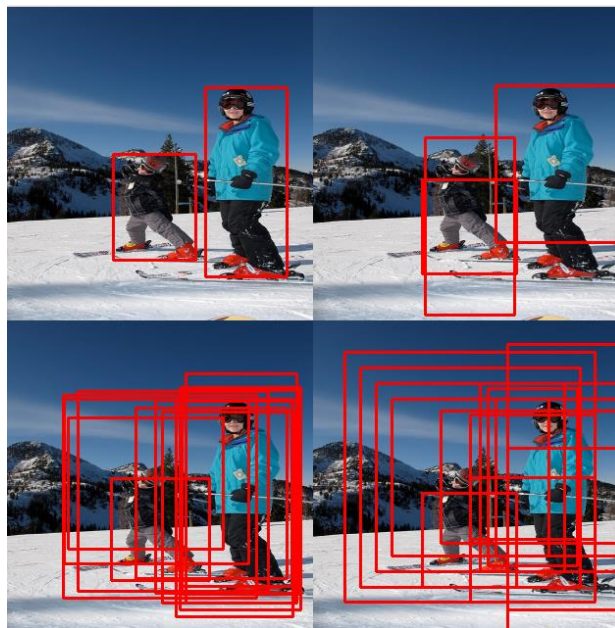
- One visualization of the network output on an image with **at least one dog object**, **before** non maximum suppression.



- One visualization of the network output on an image with **at least one person object**, **before** non maximum suppression.

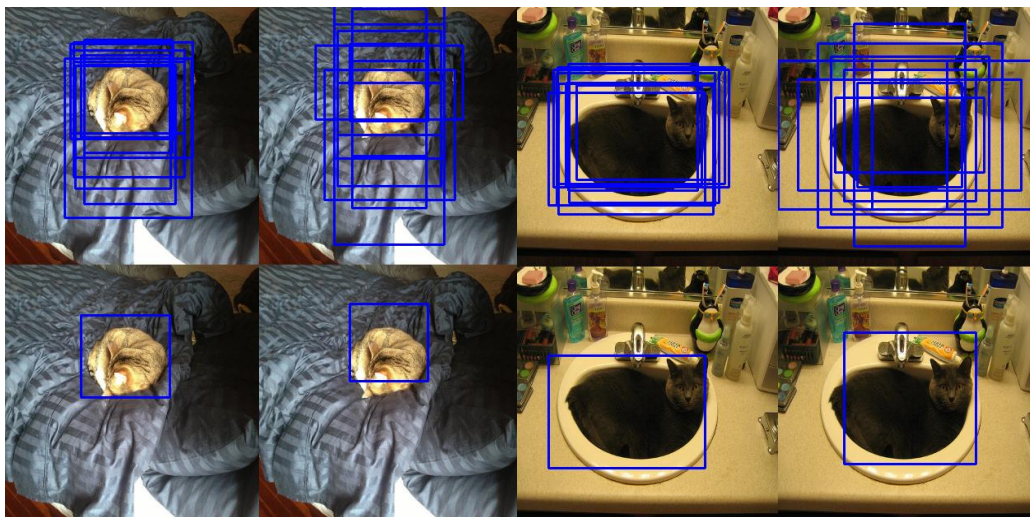


- One visualization of the network output on an image with **at least two person objects**, **before** non maximum suppression.

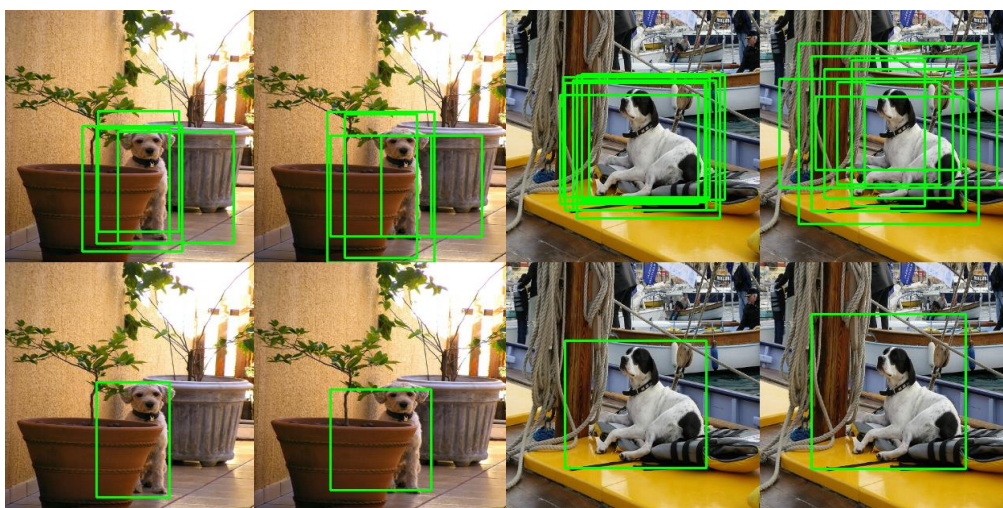


- One visualization of the network output on an image with **at least one cat object**, **after** non maximum suppression.

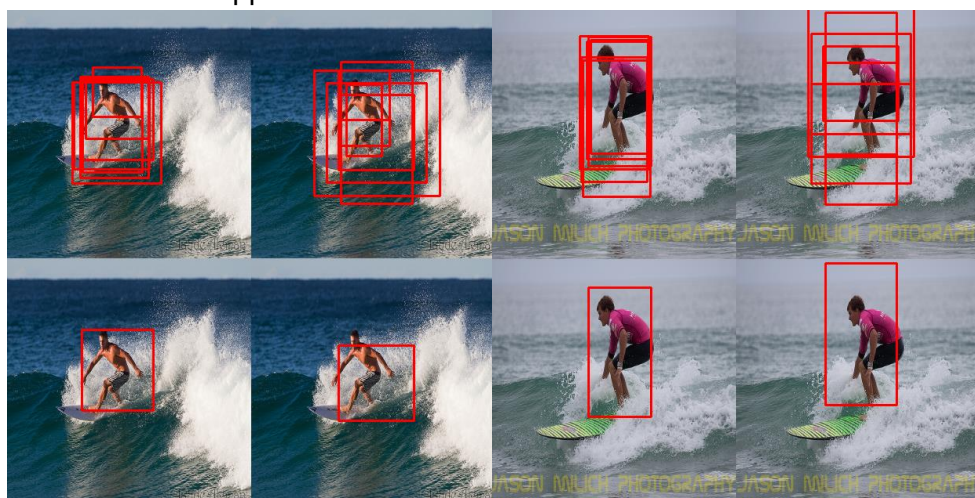




- One visualization of the network output on an image with **at least one dog object**, **after** non maximum suppression.

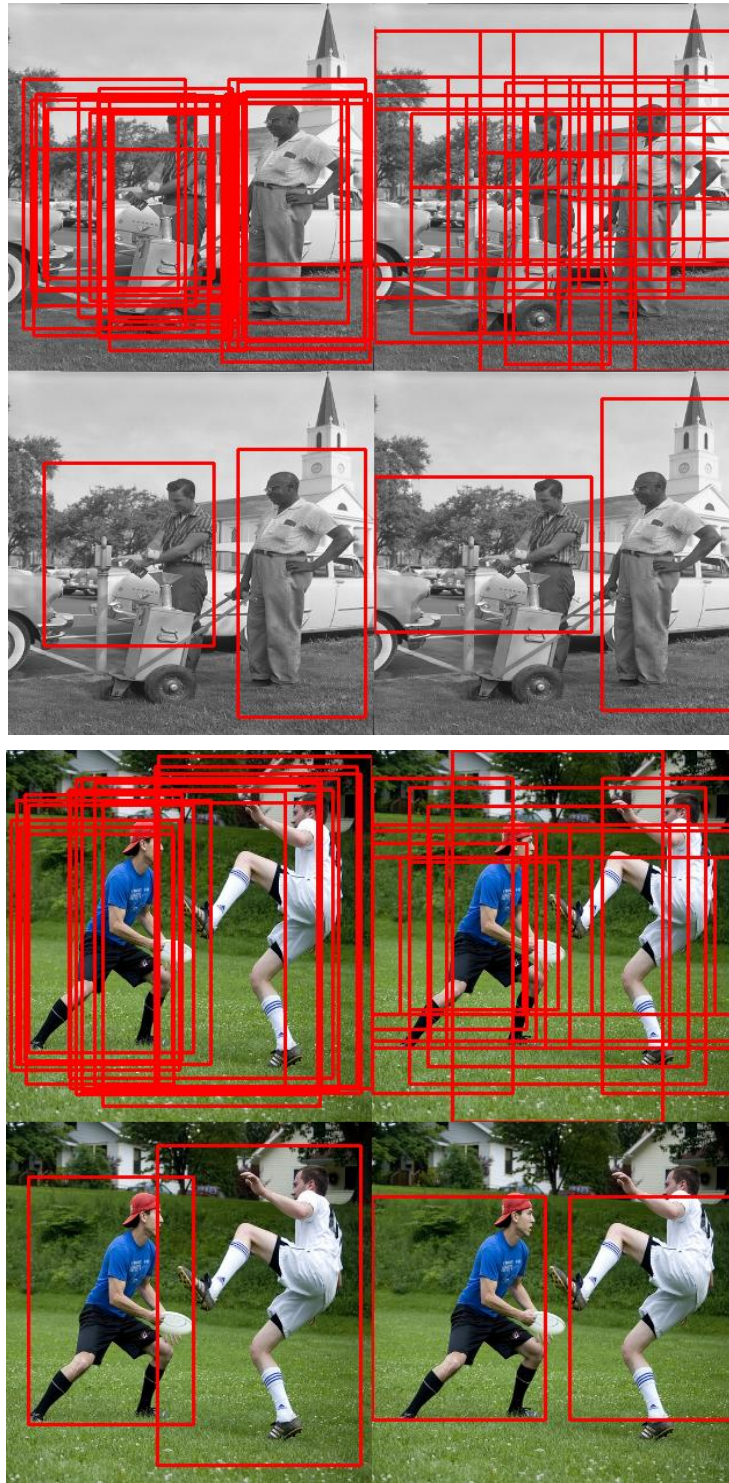


- One visualization of the network output on an image with **at least one person object**, **after** non maximum suppression.





- One visualization of the network output on an image with **at least two person objects**, **after** non maximum suppression.



- The training time of your network, the hardware settings (GPU, server or laptop, etc). GPU, server. It took about twelve thousand seconds to finish the whole process(including data augmentation part)
- Approximately how long it takes for you to finish the assignment. 40-50 hours.
- How difficult (or easy) you think the assignment is and why.

The data processing part is the most difficult. Like to understand the correct way of match ground-truth box, default box and confidence, how to random crop images while making sure the images and the boxes are matched. One could make many mistakes if he has not understood the principles of SSD.

Personally, the biggest mistake I made is to use batchsize=16 when training, but use batchsize=1 when testing. The result comes quite weird, which makes me suspect the model is failed and retrain the model again, wasting a lot of time.

Thanks to this assignment, I have gained a stronger ability to process the data.

- Any other suggestions for this assignment. (optional)