VRDL – HW2 Report

Model and inference.py link:
https://drive.google.com/drive/folders/17J8Vs2ouDpmPzh4FoLkkLRfjVDSNgvYF?usp=sharing

1 GitHub link: https://github.com/andychan8877/VRDL_HW2

2 Reference:

2.1 https://colab.research.google.com/github/ZwwWayne/mmdetection/blob/update-colab/demo/MMDet_Tutorial.ipynb#scrollTo=7WBWHu010PN3

2.2 https://github.com/open-mmlab/mmdetection

2.3 https://mmdetection.readthedocs.io/en/latest/get_started.html

2.4 https://blog.csdn.net/iteapoy/article/details/117899064

3 Introduction:

3.1 Package: I use Pytorch-MMdetectiom to do this homework.

3.2 Model: I use Faster-RCNN, and backbone model pretrained Resnet-50 of Pytorch.

4 Methodology:

4.1 Data pre-process: I redesigned the method in mmdetection tutorial and converted it into the middle format required by the model, and create needed dataset object.

4.2 Checkpoints: I use this checkpoint https://download.openmmlab.com/mmdetection/v2.0/mask_rcnn/mask_rcnn_r50_caffe_fpn_mstrain-poly_3x_coco/mask_rcnn_r50_caffe_fpn_mstrain-poly_3x_coco_bbox_mAP-0.408__segm_mAP-0.37_20200504_163245-42aa3d00.pth , this is from github tutorial of mmdetection.

4.3 Config of model: I set learning rate as 0.0025, and num_classes of bbox_head as 11.

5 Summary:

In the process of doing this homework, at first I noticed that the teaching assistant was using Faster-RCNN as the baseline training model, so I searched for some examples, but because the model was hand-carved by others, many problems occurred during operation. .

Later, I changed to use the Faster-RCNN framework in mmdetection, and after converting the data format myself, I could finally train the model.

In summary, although I forgot to use the package at the beginning of this

assignment, after reading the code engraved by others, I reviewed the architecture of Faster-RCNN again.