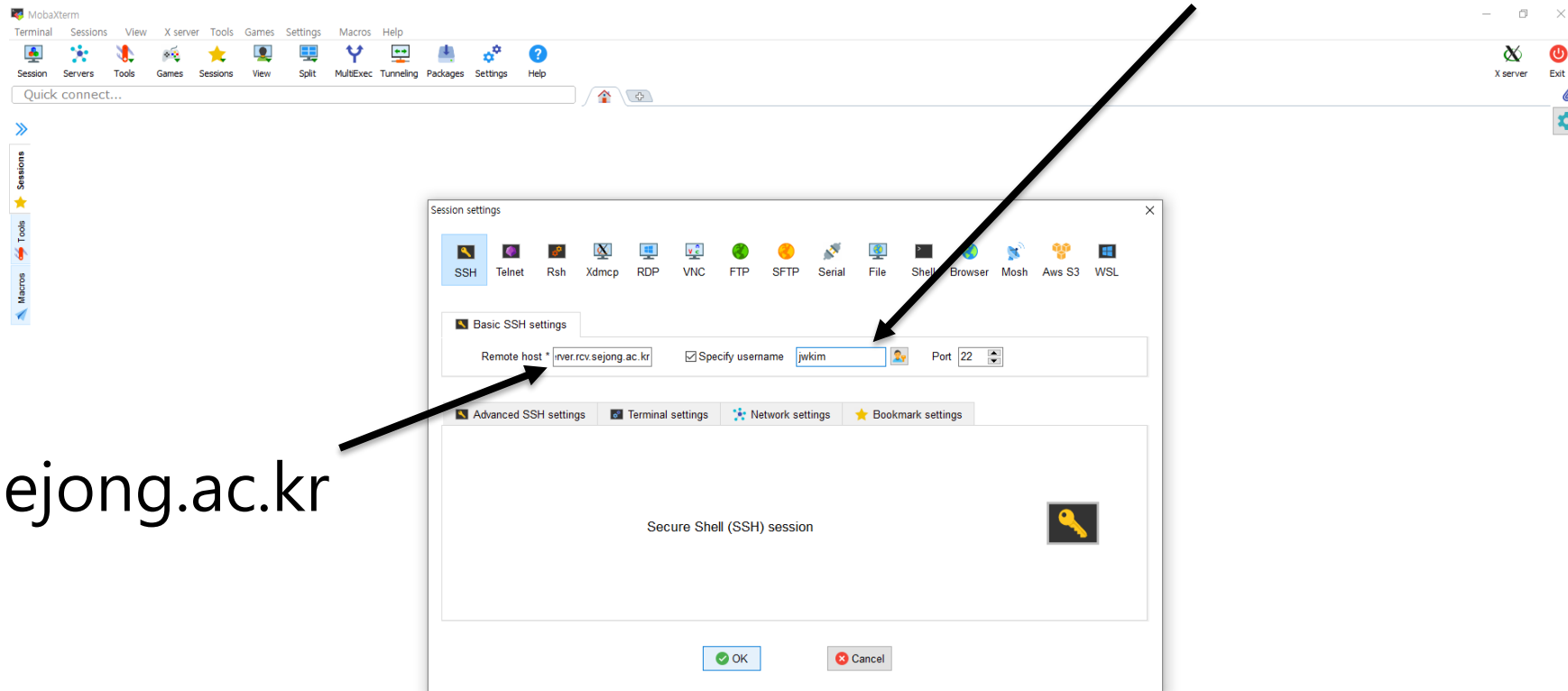


SEJONG RCV Winter School

- Object Detection(SSD) -

Setting

jwkim



server.rcv.sejong.ac.kr

내부인원 : 이름 , 비밀번호 : 공통비밀번호
외부인원 : guest , 비밀번호 : 0000

```

guest@dgx-server:~$ ls -al
total 48
drwxr-xr-x  5 guest guest 4096 3월  4 17:18 .
drwxr-xr-x 19 root  root 4096 3월  1 19:21 ..
-rw-r--r--  1 guest guest  56 3월  4 17:18 .Xauthority
-rw-r--r--  1 guest guest 1600 3월  1 19:21 .Xdefaults
-rw-r--r--  1 guest guest  220 3월  1 19:21 .bash_logout
-rw-r--r--  1 guest guest 3771 3월  1 19:21 .bashrc
drwx-----  2 guest guest 4096 3월  4 17:18 .cache
drwxr-xr-x  3 guest guest 4096 3월  1 19:21 .config
drwx-----  3 guest guest 4096 3월  4 17:18 .gnupg
-rw-r--r--  1 guest guest  807 3월  1 19:21 .profile
-rw-r--r--  1 guest guest   14 3월  1 19:21 .xscreensaver
-rw-r--r--  1 guest guest   13 3월  1 19:21 .xsession
guest@dgx-server:~$ ln -s /raid/guest/workspace/ ./

```

ln -s /raid/guest/workspace/ ./

ls -al

```

guest@dgx-server:~$ ls -al
total 48
drwxr-xr-x  5 guest guest 4096 3월  4 17:27 .
drwxr-xr-x 19 root  root 4096 3월  1 19:21 ..
-rw-r--r--  1 guest guest  56 3월  4 17:18 .Xauthority
-rw-r--r--  1 guest guest 1600 3월  1 19:21 .Xdefaults
-rw-r--r--  1 guest guest  220 3월  1 19:21 .bash_logout
-rw-r--r--  1 guest guest 3771 3월  1 19:21 .bashrc
drwx-----  2 guest guest 4096 3월  4 17:18 .cache
drwxr-xr-x  3 guest guest 4096 3월  1 19:21 .config
drwx-----  3 guest guest 4096 3월  4 17:18 .gnupg
-rw-r--r--  1 guest guest  807 3월  1 19:21 .profile
-rw-r--r--  1 guest guest   14 3월  1 19:21 .xscreensaver
-rw-r--r--  1 guest guest   13 3월  1 19:21 .xsession
lrwxrwxrwx  1 guest guest   22 3월  4 17:27 workspace -> /raid/guest/workspace
guest@dgx-server:~$

```

```
guest@dgx-server:~/workspace$ ls -al
total 8
drwxrwxrwx 2 guest guest 4096 3월  1 19:26
drwxrwxrwx 4 guest guest 4096 3월  1 19:26
guest@dgx-server:~/workspace$ git clone https://github.com/sejong-rcv/2020.RCVWS.git
Cloning into '2020.RCVWS'...
remote: Enumerating objects: 83, done.
remote: Counting objects: 100% (83/83), done.
remote: Compressing objects: 100% (77/77), done.
remote: Total 273 (delta 31), reused 22 (delta 3), pack-reused 190
Receiving objects: 100% (273/273), 56.90 MiB | 3.36 MiB/s, done.
Resolving deltas: 100% (66/66), done.
guest@dgx-server:~/workspace$ ls -al
total 12
drwxrwxrwx 3 guest guest 4096 3월  4 17:30
drwxrwxrwx 4 guest guest 4096 3월  1 19:26
drwxrwxr-x 8 guest guest 4096 3월  4 17:30 2020.RCVWS
guest@dgx-server:~/workspace$
```

git clone https://github.com/sejong-rcv/2020.RCVWS.git

```

guest@dgx-server:~/workspace$ ls -al
total 12
drwxrwxrwx 3 guest guest 4096 3월 4 17:30 .
drwxrwxrwx 4 guest guest 4096 3월 1 19:26 ..
drwxrwxr-x 8 guest guest 4096 3월 4 17:30 2020.RCVWS
guest@dgx-server:~/workspace$ cd 2020.RCVWS/
guest@dgx-server:~/workspace/2020.RCVWS$ ls -al
total 36
drwxrwxr-x 8 guest guest 4096 3월 4 17:30 .
drwxrwxrwx 3 guest guest 4096 3월 4 17:30 ..
drwxrwxr-x 8 guest guest 4096 3월 4 17:30 .git
drwxrwxr-x 2 guest guest 4096 3월 4 17:30 1일 차 -1
drwxrwxr-x 2 guest guest 4096 3월 4 17:30 1일 차 -2
drwxrwxr-x 2 guest guest 4096 3월 4 17:30 2일 차
drwxrwxr-x 2 guest guest 4096 3월 4 17:30 3일 차
drwxrwxr-x 4 guest guest 4096 3월 4 17:30 5일 차 _Object_Detection
-rw-rw-r-- 1 guest guest 2701 3월 4 17:30 README.md
guest@dgx-server:~/workspace/2020.RCVWS$ cd 5일 차 _Object_Detection/
guest@dgx-server:~/workspace/2020.RCVWS/5일 차 _Object_Detection$ ls -al
total 1960
drwxrwxr-x 4 guest guest 4096 3월 4 17:30 .
drwxrwxr-x 8 guest guest 4096 3월 4 17:30 ..
-rw-rw-r-- 1 guest guest 1985598 3월 4 17:30 RCVWS_2020_이 론 _Object_Detection_pdf.pdf
drwxrwxr-x 3 guest guest 4096 3월 4 17:30 SSD
drwxrwxr-x 4 guest guest 4096 3월 4 17:30 StaticFusion
-rw-rw-r-- 1 guest guest 17 3월 4 17:30 readme.md
guest@dgx-server:~/workspace/2020.RCVWS/5일 차 _Object_Detection$ chmod -R 777 SSD/
guest@dgx-server:~/workspace/2020.RCVWS/5일 차 _Object_Detection$ cd SSD/
guest@dgx-server:~/workspace/2020.RCVWS/5일 차 _Object_Detection/SSD$ ls -al
total 888
drwxrwxrwx 3 guest guest 4096 3월 4 17:30 .
drwxrwxr-x 4 guest guest 4096 3월 4 17:30 ..
-rwxrwxrwx 1 guest guest 7639 3월 4 17:30 Draw_GT.py
-rwxrwxrwx 1 guest guest 2 3월 4 17:30 README.md
-rwxrwxrwx 1 guest guest 760524 3월 4 17:30 calibril.ttf
-rwxrwxrwx 1 guest guest 234 3월 4 17:30 create_data_lists.py
-rwxrwxrwx 1 guest guest 5307 3월 4 17:30 datasets.py
-rwxrwxrwx 1 guest guest 5660 3월 4 17:30 detect.py
-rwxrwxrwx 1 guest guest 3719 3월 4 17:30 eval.py
-rwxrwxrwx 1 guest guest 6360 3월 4 17:30 eval_coco.py
-rwxrwxrwx 1 guest guest 1599 3월 4 17:30 fail_test.sh
-rwxrwxrwx 1 guest guest 1664 3월 4 17:30 find_mean_std.py
-rwxrwxrwx 1 guest guest 461 3월 4 17:30 image_to_video.py
-rwxrwxrwx 1 guest guest 1571 3월 4 17:30 make_annotation.py
-rwxrwxrwx 1 guest guest 19987 3월 4 17:30 model.py
-rwxrwxrwx 1 guest guest 2 3월 4 17:30 readme.md
drwxrwxrwx 9 guest guest 4096 3월 4 17:30 torchcv
-rwxrwxrwx 1 guest guest 13158 3월 4 17:30 train_eval.py
-rwxrwxrwx 1 guest guest 31226 3월 4 17:30 utils.py
guest@dgx-server:~/workspace/2020.RCVWS/5일 차 _Object_Detection/SSD$

```

ls -al

cd 2020.RCVWS

cd 5일차_Object_Detection/

chmod -R 777 SSD/

cd SSD

```

guest@dgx-server:~/workspace/2020.RCVWS/5월 차 _Object_Detection/SSD$ ln -s /raid/
.Trash-0/      bjkim/      dchan/      images/      jowon/      lost+found/  potenit/     root/        smhwang/     yjhwang/
.torch/       chung/      guest/      jmpark/      jslee/      nhkim/       public/      rsync_result.txt  tjkim/      ykchoi/
atoz_hhnam/   datasets/   hhnam/      jmshin/      jwkim/      nlkim/       raid2/       shshin/      user01/
guest@dgx-server:~/workspace/2020.RCVWS/5월 차 _Object_Detection/SSD$ ln -s /raid/guest/jobs/ ./

```

ln -s /raid/guest/jobs/ ./

```

guest@dgx-server:~/workspace/2020.RCVWS/5월 차 _Object_Detection/SSD$ ls -al
total 888
drwxrwxrwx 3 guest guest 4096 3월 4 17:43
drwxrwxr-x 4 guest guest 4096 3월 4 17:30 ..
-rwxrwxrwx 1 guest guest 7639 3월 4 17:30 Draw_GT.py
-rwxrwxrwx 1 guest guest 2 3월 4 17:30 README.md
-rwxrwxrwx 1 guest guest 760524 3월 4 17:30 calibril.ttf
-rwxrwxrwx 1 guest guest 234 3월 4 17:30 create_data_lists.py
-rwxrwxrwx 1 guest guest 5307 3월 4 17:30 datasets.py
-rwxrwxrwx 1 guest guest 5660 3월 4 17:30 detect.py
-rwxrwxrwx 1 guest guest 3719 3월 4 17:30 eval.py
-rwxrwxrwx 1 guest guest 6360 3월 4 17:30 eval_coco.py
-rwxrwxrwx 1 guest guest 1599 3월 4 17:30 fail_test.sh
-rwxrwxrwx 1 guest guest 1664 3월 4 17:30 find_mean_std.py
-rwxrwxrwx 1 guest guest 461 3월 4 17:30 image to video.py
lrwxrwxrwx 1 guest guest 17 3월 4 17:43 jobs -> /raid/guest/jobs/
-rwxrwxrwx 1 guest guest 1571 3월 4 17:30 make_annotation.py
-rwxrwxrwx 1 guest guest 19987 3월 4 17:30 model.py
-rwxrwxrwx 1 guest guest 2 3월 4 17:30 readme.md
drwxrwxrwx 9 guest guest 4096 3월 4 17:30 torchcv
-rwxrwxrwx 1 guest guest 13158 3월 4 17:30 train_eval.py
-rwxrwxrwx 1 guest guest 31226 3월 4 17:30 utils.py
guest@dgx-server:~/workspace/2020.RCVWS/5월 차 _Object_Detection/SSD$

```

```
guest@dgx-server:~$ cd /raid/public/workspace/docker/pytorch1.0-cuda10.0-cudnn7/
guest@dgx-server:/raid/public/workspace/docker/pytorch1.0-cuda10.0-cudnn7$ ls -al
total 48
drwxrwxr-x 2 public public 4096 3월  1 19:09 .
drwxrwxr-x 3 public public 4096 2월 28 11:13 ..
-rw-rw-r-- 1 public public  346 2월 20 16:31 apex.Dockerfile
-rw-rw-r-- 1 public public 2307 2월 20 16:31 base.Dockerfile
-rwxrwxr-x 1 public public  195 2월 20 16:31 build_apex.sh
-rwxrwxr-x 1 public public  260 2월 20 16:31 build_base.sh
-rwxrwxr-x 1 public public  374 2월 20 16:31 build_user.sh
-rwxr-xr-x 1 jmpark jmpark  361 2월 29 15:36 build_user_ws.sh
-rwxrwxr-x 1 public public  450 2월 20 17:18 run_container.sh
-rwxr-xr-x 1 jwkim jwkim  494 3월  1 19:12 run_container_ws.sh
-rw-rw-r-- 1 public public 1074 2월 20 16:31 user.apex.Dockerfile
-rw-rw-r-- 1 public public 1074 2월 20 16:31 user.base.Dockerfile
guest@dgx-server:/raid/public/workspace/docker/pytorch1.0-cuda10.0-cudnn7$
```

cd /raid/public/workspace/docker/pytorch1.0-cuda10.0-cudnn7/

cat build_user_ws.sh

```

guest@dgx-server:/raid/public/workspace/docker/pytorch1.0-cuda10.0-cudnn7$ ls -al
total 48
drwxrwxr-x 2 public public 4096 3월  1 19:09 .
drwxrwxr-x 3 public public 4096 2월 28 11:13 ..
-rw-rw-r-- 1 public public 346 2월 20 16:31 apex.Dockerfile
-rw-rw-r-- 1 public public 2307 2월 20 16:31 base.Dockerfile
-rwxrwxr-x 1 public public 195 2월 20 16:31 build_apex.sh
-rwxrwxr-x 1 public public 260 2월 20 16:31 build_base.sh
-rwxrwxr-x 1 public public 374 2월 20 16:31 build_user.sh
-rwxr-xr-x 1 jmpark jmpark 361 2월 29 15:36 build_user_ws.sh
-rwxrwxr-x 1 public public 450 2월 20 17:18 run_container.sh
-rwxr-xr-x 1 jwkim jwkim 494 3월  1 19:12 run_container_ws.sh
-rw-rw-r-- 1 public public 1074 2월 20 16:31 user.apex.Dockerfile
-rw-rw-r-- 1 public public 1074 2월 20 16:31 user.base.Dockerfile
guest@dgx-server:/raid/public/workspace/docker/pytorch1.0-cuda10.0-cudnn7$ cat build_user_ws.sh
#!/bin/bash
IMAGE_NAME=pytorch1.0-cuda10.0-cudnn7
TARGET_TAG=$1
CONDA_ENV_NAME=rcv
UID=$2
USER_NAME=$3
PASSWORD=$4

nvidia-docker build -t \
    $USER_NAME/$IMAGE_NAME:$TARGET_TAG-py3 \
    --build-arg CONDA_ENV_NAME=$CONDA_ENV_NAME \
    --build-arg UID=$UID \
    --build-arg USER_NAME=$USER_NAME \
    --build-arg PASSWORD=$PASSWORD \
    -f user.$TARGET_TAG.Dockerfile \
    .
guest@dgx-server:/raid/public/workspace/docker/pytorch1.0-cuda10.0-cudnn7$ id
uid=1017(guest) gid=1017(guest) groups=1017(guest)
guest@dgx-server:/raid/public/workspace/docker/pytorch1.0-cuda10.0-cudnn7$ cat build_user_ws.sh base 1017 guest 0000

```

./build_user_ws.sh base 1017 guest 0000

```

Successfully built c5e5f3b58e41
Successfully tagged guest/pytorch1.0-cuda10.0-cudnn7:base-py3
guest@dgx-server:/raid/public/workspace/docker/pytorch1.0-cuda10.0-cudnn7$

```

```
jwkim@dgx-server:~$ python /home/public/workspace/find_ports.py
```

```
Using ports: 36
 8801 8802 8803 8804 8805
 8806 8807 8808 8809 8810
 8811 8812 8813 8815 8816
 8821 8822 8827 8841 8843
 8849 8850 8851 8852 8853
 8867 8868 8875 8877 8878
 8882 8883 8884 8895 8896
 8897

Unused ports: 63
 8814 8817 8818 8819 8820
 8823 8824 8825 8826 8828
 8829 8830 8831 8832 8833
 8834 8835 8836 8837 8838
 8839 8840 8842 8844 8845
 8846 8847 8848 8854 8855
 8856 8857 8858 8859 8860
 8861 8862 8863 8864 8865
 8866 8869 8870 8871 8872
 8873 8874 8876 8879 8880
 8881 8885 8886 8887 8888
 8889 8890 8891 8892 8893
 8894 8898 8899
```

```
8871 8872 : guest
8873 8874 : jslee
8876 8879 : chung
8889 8890 : jmshin
8891 8892 : tjkim
```

GPU // 5 : jslee, chung ,6 : jmshin, tjkim, 7: guest

```

guest@dgx-server:/raid/public/workspace/docker/pytorch1.0-cuda10.0-cudnn7$ ls -al
total 48
drwxrwxr-x 2 public public 4096 3월  1 19:09 .
drwxrwxr-x 3 public public 4096 2월 28 11:13 ..
-rw-rw-r-- 1 public public  346 2월 20 16:31 apex.Dockerfile
-rw-rw-r-- 1 public public 2307 2월 20 16:31 base.Dockerfile
-rwxrwxr-x 1 public public  195 2월 20 16:31 build_apex.sh
-rwxrwxr-x 1 public public  260 2월 20 16:31 build_base.sh
-rwxrwxr-x 1 public public  374 2월 20 16:31 build_user.sh
-rwxr-xr-x 1 jmpark jmpark  361 2월 29 15:36 build_user_ws.sh
-rwxrwxr-x 1 public public  450 2월 20 17:18 run_container.sh
-rwxr-xr-x 1 jwkim jwkim   494 3월  1 19:12 run_container_ws.sh
-rw-rw-r-- 1 public public 1074 2월 20 16:31 user.apex.Dockerfile
-rw-rw-r-- 1 public public 1074 2월 20 16:31 user.base.Dockerfile
guest@dgx-server:/raid/public/workspace/docker/pytorch1.0-cuda10.0-cudnn7$ cat run_container_ws.sh
#!/bin/bash

CONTAINER_NAME=$1
TARGET_TAG=$2
IMAGE_NAME=pytorch1.0-cuda10.0-cudnn7
PORT1=$3
PORT2=$4
POS_GPUS=$5
USER=$(whoami)

nvidia-docker run -it -u ${USER} \
  --name $(whoami)_$CONTAINER_NAME \
  -p $PORT1:$PORT1 \
  -p $PORT2:$PORT2 \
  -w /home/$USER/workspace \
  -v /home/$USER/workspace:/home/$USER/workspace \
  -v /raid:/raid \
  -v /raid2:/raid2 \
  -e NVIDIA_VISIBLE_DEVICES=$POS_GPUS \
  --shm-size=32G \
  $USER/$IMAGE_NAME:$TARGET_TAG-py3 \
  /bin/bash
guest@dgx-server:/raid/public/workspace/docker/pytorch1.0-cuda10.0-cudnn7$ ./run_container_ws.sh winter_school base 8871 8872 7

```

./run_container_ws.sh winter_school base 8871 8872 7

cd 2020.RCVWS/5일차_Object_Detection/SSD/

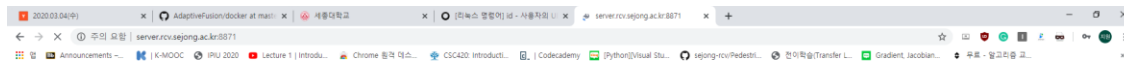
```
(rcv) guest@ccc644eb2356e:~/workspace$ cd 2020.RCVWS/5일 차 _Object_Detection/SSD/  
(rcv) guest@ccc644eb2356e:~/workspace/2020.RCVWS/5일 차 _Object_Detection/SSD$
```

ln -s /raid/datasets/ ./

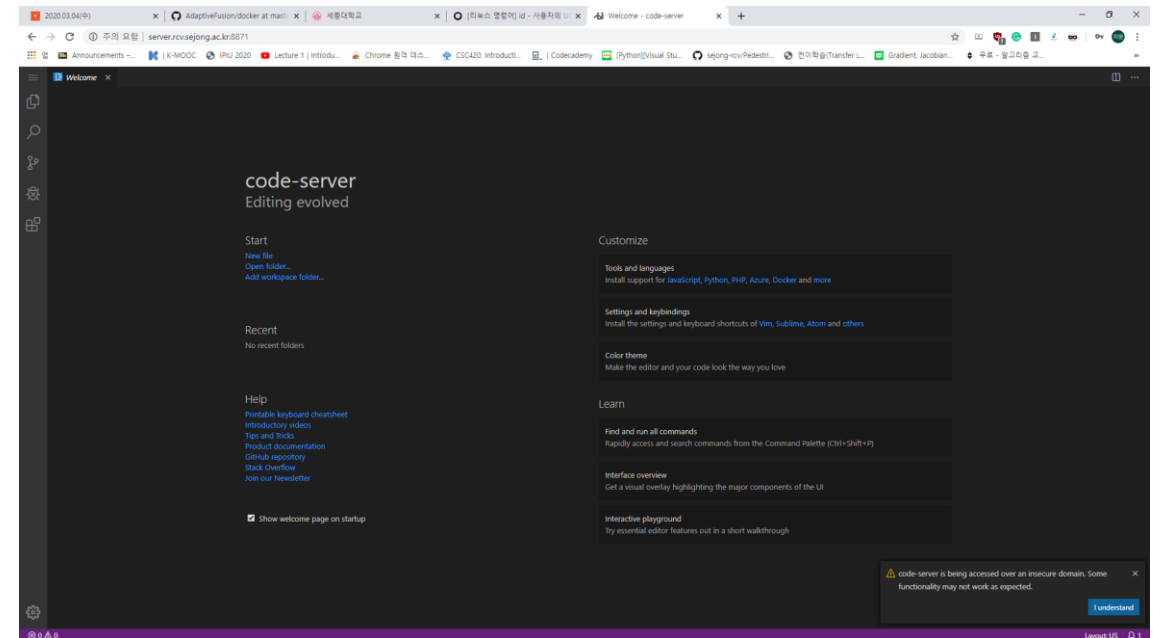
```
total 888  
drwxrwxrwx 3 guest guest 4096 Mar 4 12:06   
drwxrwxr-x 4 guest guest 4096 Mar 4 08:30 ..  
-rwxrwxrwx 1 guest guest 7639 Mar 4 08:30 Draw_GT.py  
-rwxrwxrwx 1 guest guest 2 Mar 4 08:30 README.md  
-rwxrwxrwx 1 guest guest 760524 Mar 4 08:30 calibril.ttf  
-rwxrwxrwx 1 guest guest 234 Mar 4 08:30 create_data_lists.py  
lrwxrwxrwx 1 guest guest 15 Mar 4 12:06 datasets -> /raid/datasets/  
-rwxrwxrwx 1 guest guest 5307 Mar 4 08:30 datasets.py  
-rwxrwxrwx 1 guest guest 5660 Mar 4 08:30 detect.py  
-rwxrwxrwx 1 guest guest 3719 Mar 4 08:30 eval.py  
-rwxrwxrwx 1 guest guest 6360 Mar 4 08:30 eval_coco.py  
-rwxrwxrwx 1 guest guest 1599 Mar 4 08:30 fail_test.sh  
-rwxrwxrwx 1 guest guest 1664 Mar 4 08:30 find_mean_std.py  
-rwxrwxrwx 1 guest guest 461 Mar 4 08:30 image_to_video.py  
lrwxrwxrwx 1 guest guest 17 Mar 4 08:43 jobs -> /raid/guest/jobs/  
-rwxrwxrwx 1 guest guest 1571 Mar 4 08:30 make_annotation.py  
-rwxrwxrwx 1 guest guest 19987 Mar 4 08:30 model.py  
-rwxrwxrwx 1 guest guest 2 Mar 4 08:30 readme.md  
drwxrwxrwx 9 guest guest 4096 Mar 4 08:30 torchcv  
-rwxrwxrwx 1 guest guest 13158 Mar 4 08:30 train_eval.py  
-rwxrwxrwx 1 guest guest 31226 Mar 4 08:30 utils.py  
(rcv) guest@ccc644eb2356e:~/workspace/2020.RCVWS/5일 차 _Object_Detection/SSD$
```

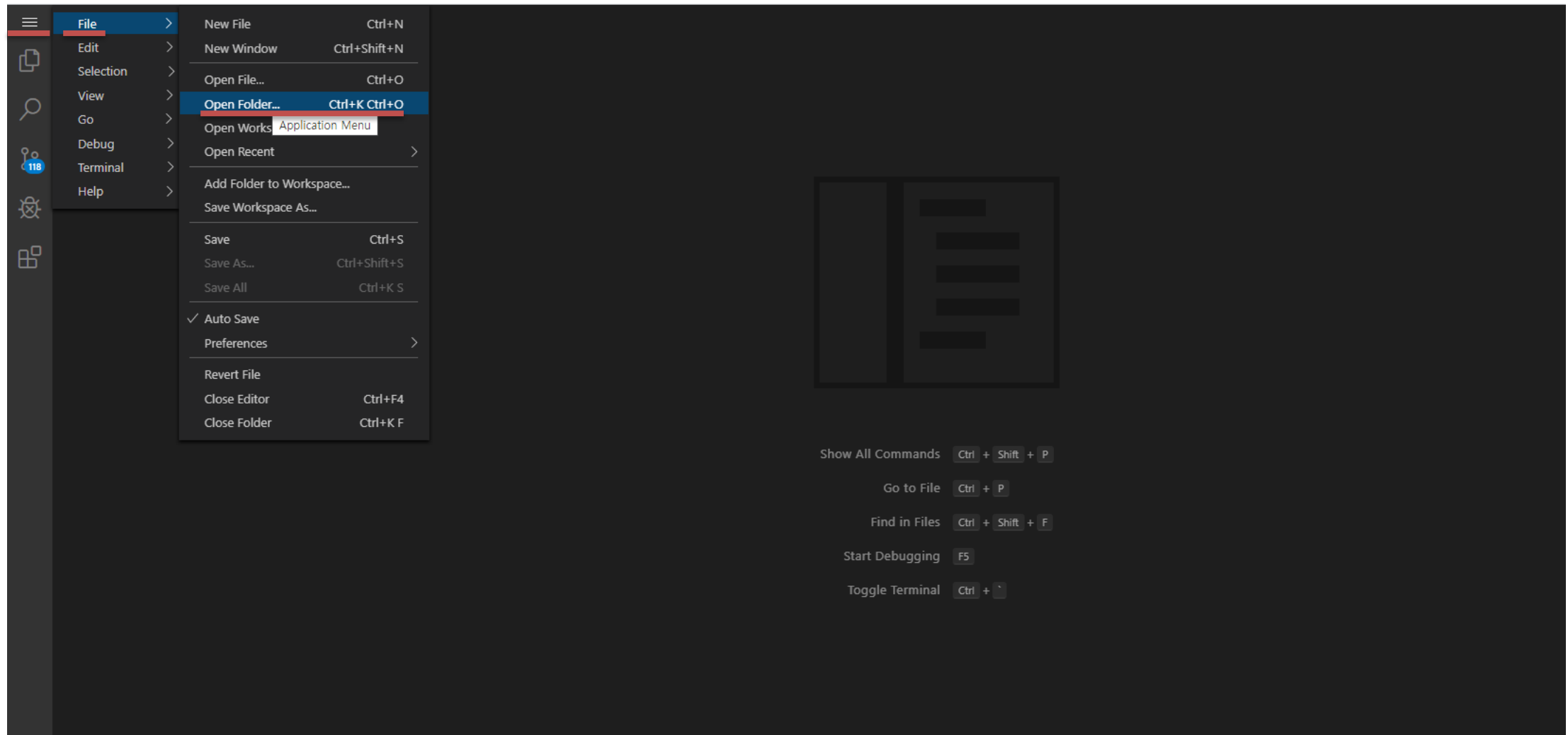
code-server --port 8871

```
(rcv) guest@ccc644eb2356e:~$ code-server --port 8871
warn undefined
info Server listening on http://0.0.0.0:8871
info - Using custom password for authentication
info - Not serving HTTPS
```



0000





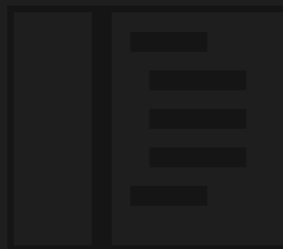
Announcements -... | K-MOOC | IPIU 2020 | Lecture 1 | Introdu... | Chrome 원격 데스크... | CSC420: Introducti... | | Codecademy | [Python] Visual Stu... | sejong-rcv/Pedestri... | 전이학습(Transfer L... | Gradient, Jacobian... | 무료 - 알고리즘 교...

Open Folder

/home/guest/workspace/2020.RCVWS/5월자_Object_Detection/

OK

..
SSD
StaticFusion



Show All Commands **Ctrl** + **Shift** + **P**

Go to File **Ctrl** + **P**

Find in Files **Ctrl** + **Shift** + **F**

Start Debugging **F5**

Toggle Terminal **Ctrl** + **`**

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

1: python

+ □ ✕

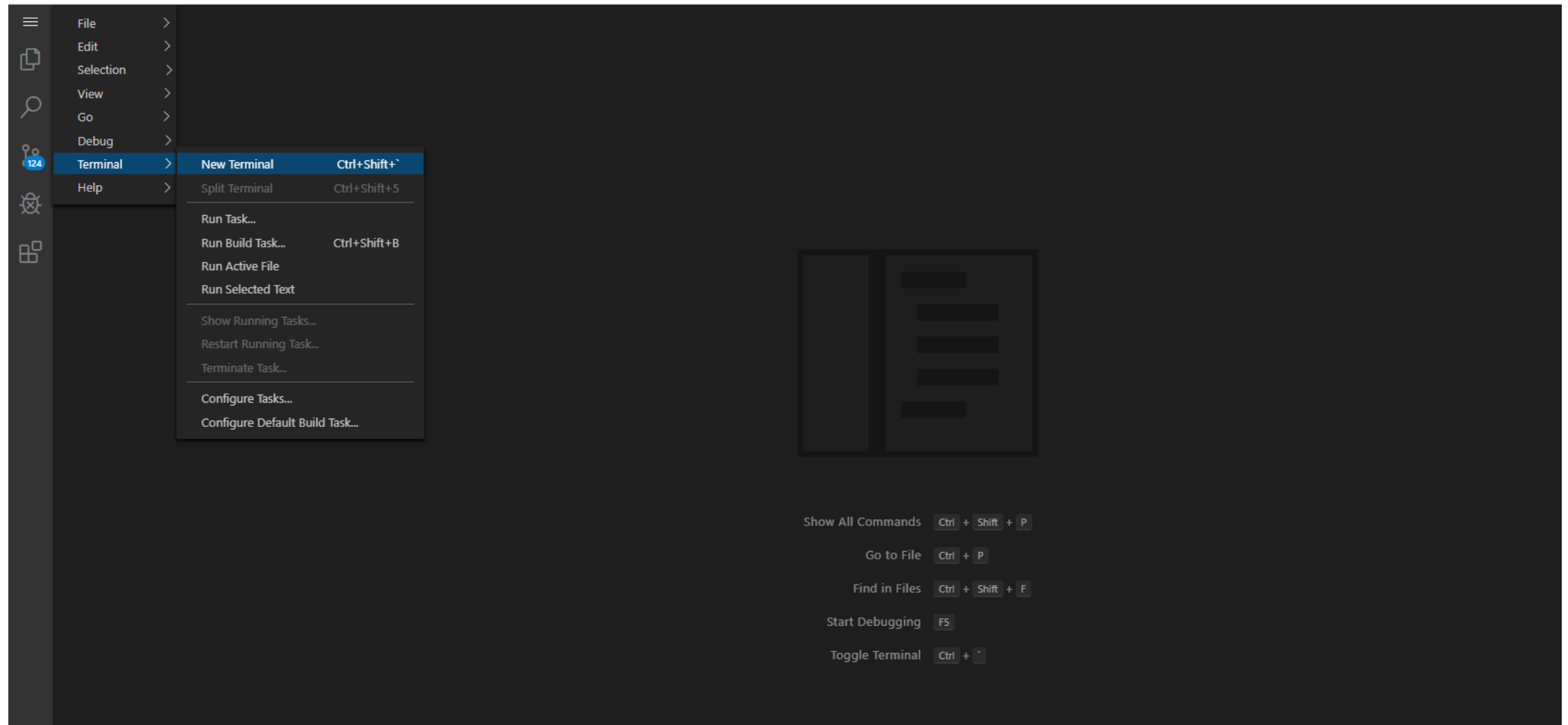
Index created!

Downloading: "https://download.pytorch.org/models/vgg16_bn-6c64b313.pth" to /home/guest/.torch/models/vgg16_bn-6c64b313.pth

0% | 553507836/553507836 [02:35<00:00, 3563546.05it/s]

Loaded base model.

SSD(Single Shot MultiBox Detector)





The image shows a VS Code window with a dark theme. The 'TERMINAL' pane is active, displaying a list of files and their sizes. The terminal output shows a command being executed: `$ OMP_NUM_THREADS=1 python train_eval.py --exp_name test`. The status bar at the bottom indicates the current branch is 'master' and the layout is 'US'.

PROBLEMS	OUTPUT	DEBUG CONSOLE	TERMINAL
-rwxrwxrwx	1	guest	234 Mar 4 13:00 create_data_lists.py
lrwxrwxrwx	1	guest	15 Mar 4 13:05 datasets -> /raid/datasets/
-rwxrwxrwx	1	guest	5307 Mar 4 13:00 datasets.py
-rwxrwxrwx	1	guest	5409 Mar 4 13:31 detect.py
-rwxrwxrwx	1	guest	3719 Mar 4 13:00 eval.py
-rwxrwxrwx	1	guest	6360 Mar 4 13:00 eval_coco.py
-rwxrwxrwx	1	guest	1599 Mar 4 13:00 fail_test.sh
-rwxrwxrwx	1	guest	1664 Mar 4 13:00 find_mean_std.py
-rwxrwxrwx	1	guest	461 Mar 4 13:00 image_to_video.py
lrwxrwxrwx	1	guest	17 Mar 4 13:16 jobs -> /raid/guest/jobs/
-rwxrwxrwx	1	guest	1571 Mar 4 13:00 make_annotation.py
-rwxrwxrwx	1	guest	19938 Mar 4 13:00 model.py
-rwxrwxrwx	1	guest	2 Mar 4 13:00 readme.md
drwxrwxrwx	2	guest	4096 Mar 4 13:00 synthetic_failure_masks
drwxrwxrwx	9	guest	4096 Mar 4 13:00 torchcv
-rwxrwxrwx	1	guest	12362 Mar 4 13:17 train_eval.py
-rwxrwxrwx	1	guest	31226 Mar 4 13:00 utils.py

```
$ OMP_NUM_THREADS=1 python train_eval.py --exp_name test
```

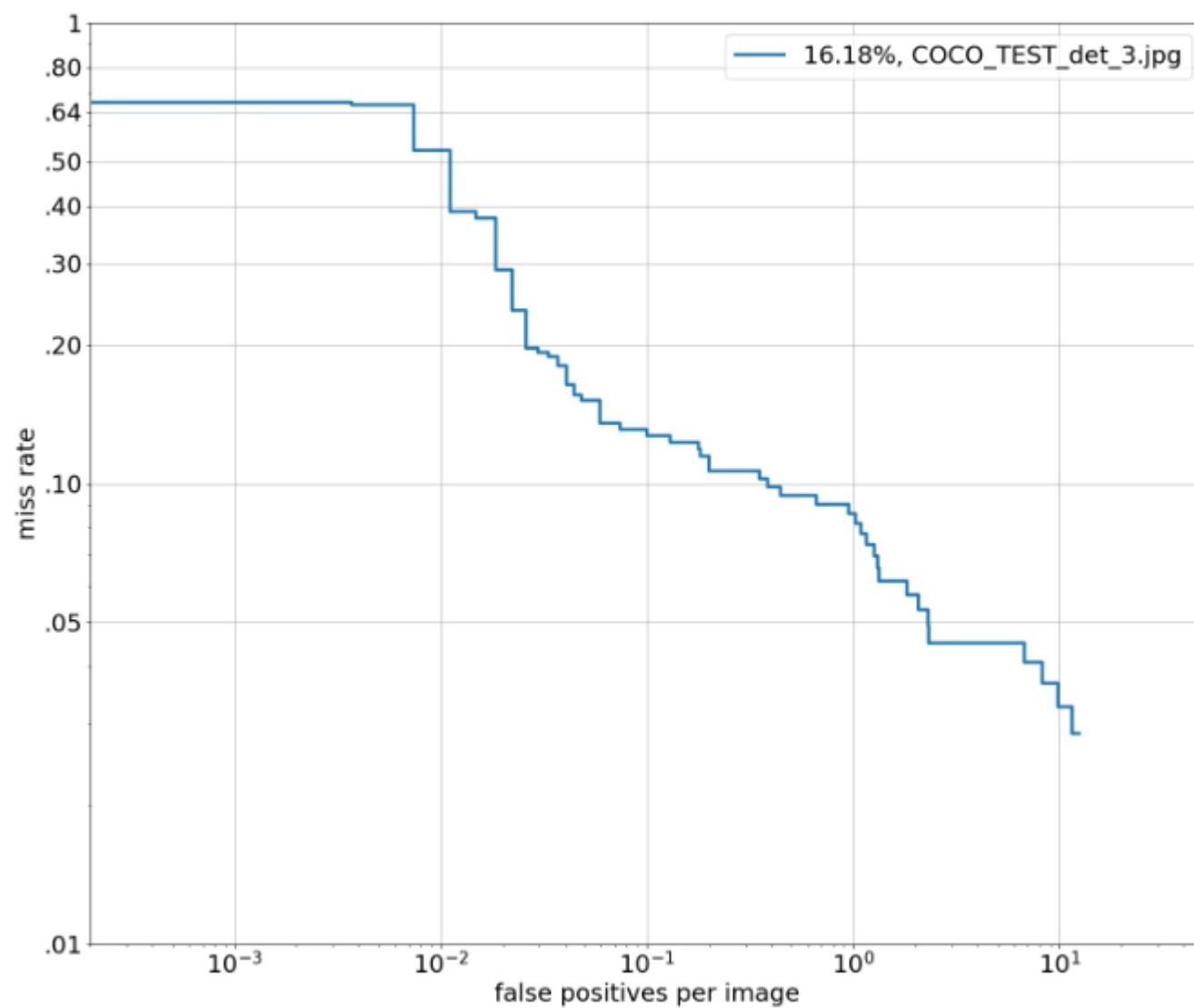
master* 0 0 0 Layout: US 2

OMP_NUM_THREADS=1 python train_eval.py --exp_name test

```
133 | cat >add( __file__ )

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL 1: python + [ ] [ ] ^ X

[INFO] [2020-03-04 13:25:24,832] Epoch: [1][1060/1094] Batch Time 0.217 (0.213) Data Time 0.000 (0.001) Loss 3.5609 (3.8270) num of Positive tensor([35, 39, 0, 63], device='cuda:0')
[INFO] [2020-03-04 13:25:26,921] Epoch: [1][1070/1094] Batch Time 0.209 (0.213) Data Time 0.000 (0.001) Loss 2.8144 (3.8190) num of Positive tensor([ 0, 105, 44, 29], device='cuda:0')
[INFO] [2020-03-04 13:25:29,007] Epoch: [1][1080/1094] Batch Time 0.209 (0.213) Data Time 0.000 (0.001) Loss 3.9598 (3.8332) num of Positive tensor([ 0, 0, 72, 0], device='cuda:0')
[INFO] [2020-03-04 13:25:31,097] Epoch: [1][1090/1094] Batch Time 0.208 (0.212) Data Time 0.000 (0.001) Loss 2.4851 (3.8218) num of Positive tensor([ 0, 33, 111, 96], device='cuda:0')
Evaluating: 100% | 68/68 [00:14<00:00, 4.70it/s]
Write results in COCO format.
Loading and preparing results...
DONE (t=0.07s)
creating index...
index created!
Running per image evaluation...
Evaluate annotation type *bbox*
DONE (t=0.15s).
Accumulating evaluation results...
DONE (t=0.00s).
Average Miss Rate (MR) @ Reasonable [ IoU=0.50 | height=[55:1000000000] | visibility=[none+partial_occ] ] = 31.29%
Recall: 0.9508196721311475
[INFO] [2020-03-04 13:25:48,860] Epoch: [2][0/1094] Batch Time 1.463 (1.463) Data Time 1.148 (1.148) Loss 2.1755 (2.1755) num of Positive tensor([ 59, 107, 0, 0], device='cuda:0')
[INFO] [2020-03-04 13:25:51,010] Epoch: [2][10/1094] Batch Time 0.214 (0.328) Data Time 0.000 (0.105) Loss 2.3275 (2.6927) num of Positive tensor([107, 118, 0, 1], device='cuda:0')
```





```
$ python detect.py
```

```
Loaded checkpoint from epoch 3.
```

```
0.jpg saved  
1.jpg saved  
2.jpg saved  
3.jpg saved  
4.jpg saved  
5.jpg saved  
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15.jpg saved  
16.jpg saved  
17.jpg saved  
18.jpg saved  
19.jpg saved  
20.jpg saved
```

python detect.py