2023-SOLIDER_PersonSearch（实验记录）

SOLIDER-person search：tinyvision/solider-personsearch (github.com)

SOLIDER：tinyvision/SOLIDER：一个语义可控的自监督学习框架，用于从大量未标记的人类图像中学习一般的人类表示，这可以最大程度地使下游以人为中心的任务受益 (github.com)

SeqNet： AAAI 2021] 用于高效人员搜索的顺序端到端网络 (github.com)

1.配置环境

环境	torch	python	cuda	
fcsj	1.7.1	3.7	9.2	

报错： ModuleNotFoundError: No module named 'mmcv'

安装pip install mmcv-full=={mmcv_version} -f https://download.openmmlab.com/mmcv/dist/cu111/torch1.8.0/index.html

继续报错：ModuleNotFoundError: No module named 'mmcv.runner'

mmcv安装问题

解决：

网上的方法大多数都无法解决，接连报错，复制最后一行代码可以完全解决。

安装 MMCV — mmcv 1.7.1 文档

> 根据系统的类型、CUDA 版本、PyTorch 版本以及 MMCV 版本选择相应的安装命令
>
> Linux | cuda 9.2 | torch 1.7.x | mmcv 1.2.0
>
> ```
> pip install mmcv-full==1.2.0 -f
> https://download.openmmlab.com/mmcv/dist/cu92/torch1.7/index.html
> ```
>
> 如果在上面的下拉框中没有找到对应的版本，则可能是没有对应 PyTorch 或者 CUDA 或者 mmcv-full 版本的预编译包，此时，你可以源码安装 mmcv-full。

```
pip install mmcv-full==1.2.0 -f
https://download.openmmlab.com/mmcv/dist/cu92/torch1.7/index.html
```

win安装

download.openmmlab.com/mmcv/dist/cu102/torch1.7.0/index.html

mmcv_full-1.4.0-cp38-cp38-win_amd64.whl	2023/6/6 11:21	WHL 文件	4,971 KB

e:

pip

准备预训练模型

您可以从 SOLIDER 下载模型，或使用 SOLIDER 训练您自己的模型。 在训练之前，应先转换模型。

```
python convert_model.py /public/home/G19830015/Group/CSJ/projects/SOLIDER-PersonSearch-master/configs/swin_tiny.pth /public/home/G19830015/Group/CSJ/projects/SOLIDER-PersonSearch-master/configs/swin_tiny_tea.pth
```

报错：

```
=> CUHK-SYSU-query loaded:
|  dataset  |  split  |  num_images  |  num_boxes  |
|:---------:|:-------:|:------------:|:-----------:|
| CUHK-SYSU |  query  |     2900     |    2900     |
205 loaded, 8 missed: ['head.mlp.0.weight', 'head.mlp.0.bias', 'head.mlp.2.weight', 'head.mlp.2.bias', 'head.mlp.4.weight', 'head.mlp.4.bias', 'head.last_lay
Creating output folder
Full config is saved to ./results/cuhk_sysu/swin_tiny/config.yaml
Traceback (most recent call last):
  File "train.py", line 131, in <module>
    main(args)
  File "train.py", line 75, in main
    from torch.utils.tensorboard import SummaryWriter
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/torch/utils/tensorboard/__init__.py", line 8, in <module>
    from .writer import FileWriter, SummaryWriter  # noqa F401
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/torch/utils/tensorboard/writer.py", line 10, in <module>
    from tensorboard.compat.proto.event_pb2 import SessionLog
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/tensorboard/compat/proto/event_pb2.py", line 17, in <module>
    from tensorboard.compat.proto import summary_pb2 as tensorboard_dot_compat_dot_proto_dot_summary__pb2
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/tensorboard/compat/proto/summary_pb2.py", line 17, in <module>
    from tensorboard.compat.proto import tensor_pb2 as tensorboard_dot_compat_dot_proto_dot_tensor__pb2
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/tensorboard/compat/proto/tensor_pb2.py", line 16, in <module>
    from tensorboard.compat.proto import resource_handle_pb2 as tensorboard_dot_compat_dot_proto_dot_resource__handle__pb2
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/tensorboard/compat/proto/resource_handle_pb2.py", line 16, in <module>
    from tensorboard.compat.proto import tensor_shape_pb2 as tensorboard_dot_compat_dot_proto_dot_tensor__shape__pb2
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/tensorboard/compat/proto/tensor_shape_pb2.py", line 42, in <module>
    serialized_options=None, file=DESCRIPTOR),
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/google/protobuf/descriptor.py", line 561, in __new__
    _message.Message._CheckCalledFromGeneratedFile()
TypeError: Descriptors cannot not be created directly.
If this call came from a _pb2.py file, your generated code is out of date and must be regenerated with protoc >= 3.19.0.
If you cannot immediately regenerate your protos, some other possible workarounds are:
 1. Downgrade the protobuf package to 3.20.x or lower.
 2. Set PROTOCOL_BUFFERS_PYTHON_IMPLEMENTATION=python (but this will use pure-Python parsing and will be much slower).

More information: https://developers.google.com/protocol-buffers/docs/news/2022-05-06#python-updates
(fcsj) [G19830015@gpu1 SOLIDER-PersonSearch-master]$ exit
```

解决：

python - 类型错误：无法直接创建描述符 - 堆栈溢出 (stackoverflow.com)

```
pip install protobuf==3.20.*
```

2.训练

1.原论文精度

参数设置: batch size=4

```
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/torch/nn/modules/normalization.py", line 170, in forward
    input, self.normalized_shape, self.weight, self.bias, self.eps)
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/torch/nn/functional.py", line 2095, in layer_norm
    torch.backends.cudnn.enabled)
RuntimeError: CUDA out of memory. Tried to allocate 148.00 MiB (GPU 0; 15.90 GiB total capacity; 14.75 GiB already allocated; 89.88 MiB free; 15.08 GiB reserved in total by PyTorch)
(fcsj) [G19830015@gpu1 SOLIDER-PersonSearch-master]$
```

```
GPU1   tmux a -t chai
```

Performance

Method	Model	CUHK-SYSU (mAP/R1)	PRW (mAP/R1)
SOLIDER	Swin Tiny	94.91/95.72	56.84/86.78
SOLIDER	Swin Small	95.46/95.79	59.84/86.73
SOLIDER	Swin Base	94.93/95.52	59.72/86.83

2.复现Swin Tiny

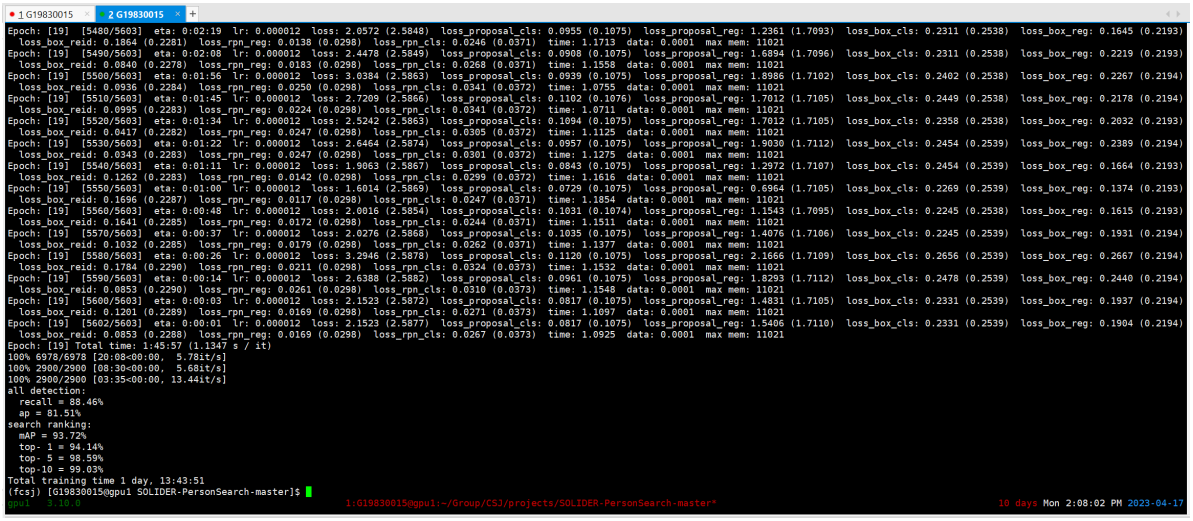
```
CUDA_VISIBLE_DEVICES=1 python train.py --cfg configs/cuhk_sysu.yaml --resume --
ckpt /public/home/G19830015/Group/CSJ/projects/SOLIDER-PersonSearch-
master/configs/swin_tiny_tea.pth OUTPUT_DIR './results/cuhk_sysu/swin_tiny'
SOLVER.BASE_LR 0.0003 EVAL_PERIOD 5 MODEL.BONE 'swin_tiny' INPUT.BATCH_SIZE_TRAIN
3 MODEL.SEMANTIC_WEIGHT 0.6
```

SYSU-94.91/95.72

训练参数：swin_tiny_tea.pth LR 0.0003 BATCH_SIZE_TRAIN 2

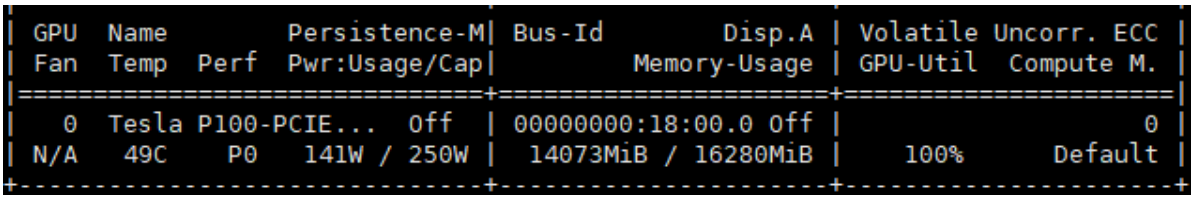
```
+-----------------------------------+----------------------+----------------------
|   1  Tesla P100-PCIE...  Off   | 00000000:3B:00.0 Off |                    0
| N/A   59C    P0   168W / 250W |  13629MiB / 16280MiB |     88%      Default
+-----------------------------------+----------------------+----------------------
```

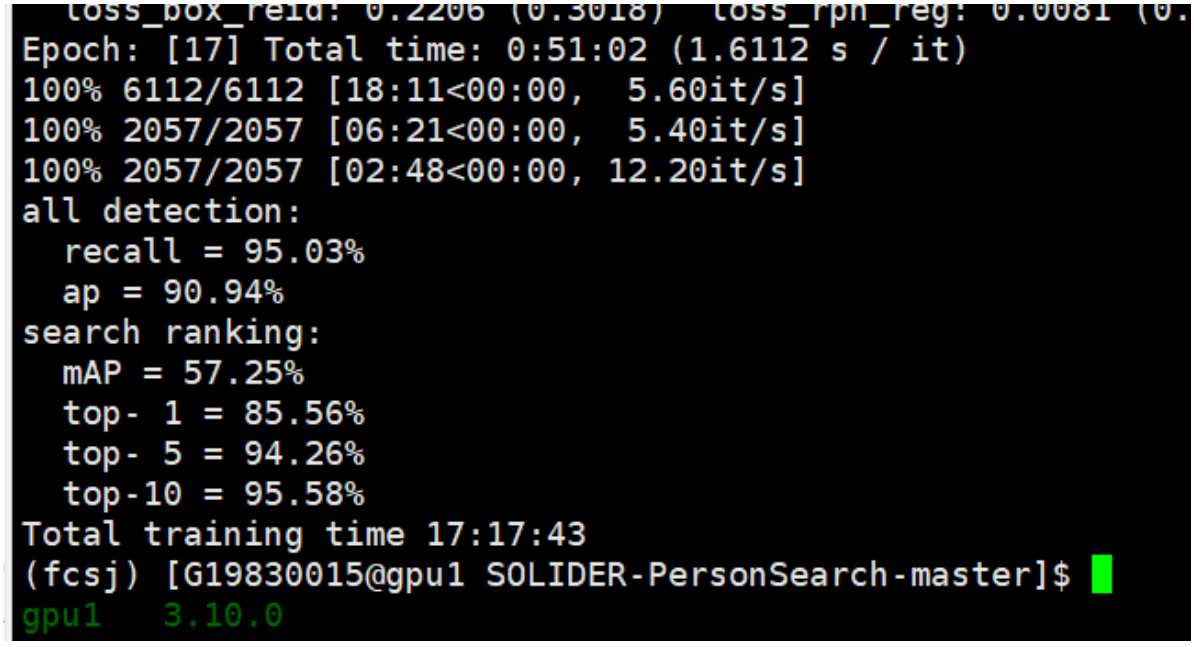
```
Epoch: [19] Total time: 1:45:57 (1.1347 s / it)
100% 6978/6978 [20:08<00:00,  5.78it/s]
100% 2900/2900 [08:30<00:00,  5.68it/s]
100% 2900/2900 [03:35<00:00, 13.44it/s]
all detection:
  recall = 88.46%
  ap = 81.51%
search ranking:
  mAP = 93.72%
  top- 1 = 94.14%
  top- 5 = 98.59%
  top-10 = 99.03%
Total training time 1 day, 13:43:51
(fcsj) [G19830015@gpu1 SOLIDER-PersonSearch-master]$
gpu1   3.10.0                                    1:G19830015@gpu1:~/Group/
```

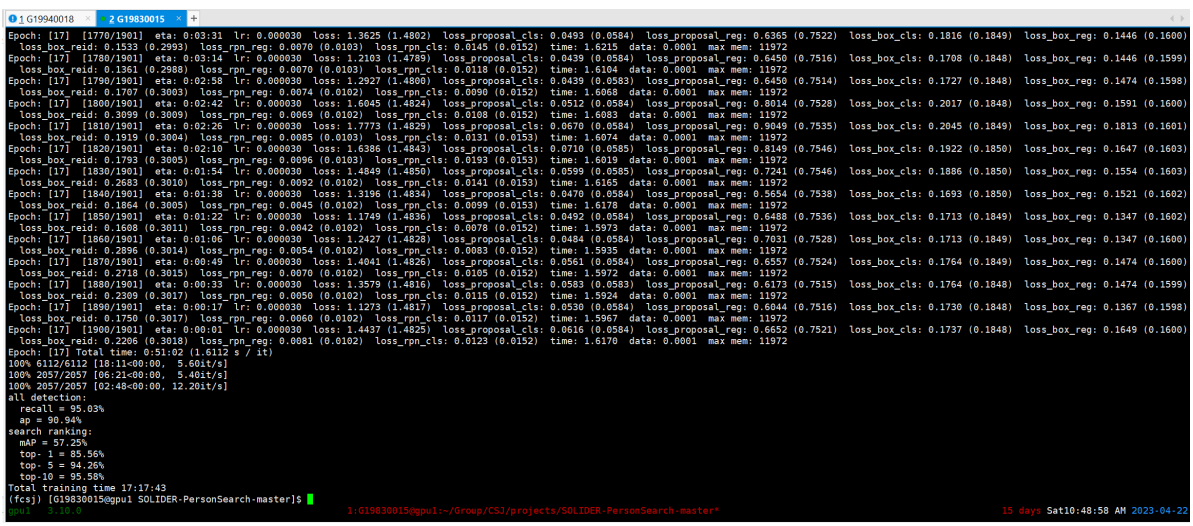


PRW-56.84/86.78

swin_tiny_tea.pth BATCH_SIZE 3







3.复现Swin Small

SYSU

batch size=2

```
+-------------------------------+----------------------+----------------------+
|   2  Tesla P100-PCIE...  Off  | 00000000:86:00.0 Off |                    0 |
| N/A   37C    P0   121W / 250W |  15537MiB / 16280MiB |    100%      Default |
+-------------------------------+----------------------+----------------------+
```

prw

batch size=3

OUT OF MEMORT

batch size=2

4.改分布式

```
  File "trainDP1.py", line 68, in main
    start_epoch = resume_from_ckpt(args.ckpt, model, optimizer, lr_scheduler)
  File "/public/home/G19830015/Group/CSJ/projects/SOLIDER-PersonSearch-master/utils/utils.py", line 420, in resume_from_ckpt
    model.state_dict()[i.replace('backbone.','backbone.swin.')].copy_(ckpt[i])
KeyError: 'backbone.swin.patch_embed.projection.weight'
(fcsj) [G19830015@gpu2 SOLIDER-PersonSearch-master]$
```

```
File "/public/home/G19830015/Group/CSJ/projects/SOLIDER-PersonSearch-master/utils/utils.py", line 420, in resume_from_ckpt
    model.state_dict()[i.replace('backbone.','backbone.swin.')].copy_(ckpt[i])
KeyError: 'backbone.swin.patch_embed.projection.weight'
```

utils中的model改了

```
Traceback (most recent call last):
  File "trainDP1.py", line 135, in <module>
    main(args)
  File "trainDP1.py", line 89, in main
    train_one_epoch(cfg, model, optimizer, train_loader, device, epoch, tfboard)
  File "/public/home/G19830015/Group/CSJ/projects/SOLIDER-PersonSearch-master/engine.py", line 45, in train_one_epoch
    loss_dict = model(images, targets)
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/torch/nn/modules/module.py", line 727, in _call_impl
    result = self.forward(*input, **kwargs)
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/torch/nn/parallel/data_parallel.py", line 161, in forward
    outputs = self.parallel_apply(replicas, inputs, kwargs)
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/torch/nn/parallel/data_parallel.py", line 171, in parallel_apply
    return parallel_apply(replicas, inputs, kwargs, self.device_ids[:len(replicas)])
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/torch/nn/parallel/parallel_apply.py", line 86, in parallel_apply
    output.reraise()
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/torch/_utils.py", line 428, in reraise
    raise self.exc_type(msg)
RuntimeError: Caught RuntimeError in replica 0 on device 0.
Original Traceback (most recent call last):
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/torch/nn/parallel/parallel_apply.py", line 61, in _worker
    output = module(*input, **kwargs)
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/torch/nn/modules/module.py", line 727, in _call_impl
    result = self.forward(*input, **kwargs)
  File "/public/home/G19830015/Group/CSJ/projects/SOLIDER-PersonSearch-master/models/seqnet.py", line 141, in forward
    images, targets = self.transform(images, targets)
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/torch/nn/modules/module.py", line 727, in _call_impl
    result = self.forward(*input, **kwargs)
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/torchvision/models/detection/transform.py", line 104, in forward
    image = self.normalize(image)
  File "/public/home/G19830015/miniconda3/envs/fcsj/lib/python3.7/site-packages/torchvision/models/detection/transform.py", line 124, in normalize
    return (image - mean[:, None, None]) / std[:, None, None]
RuntimeError: The size of tensor a (2) must match the size of tensor b (3) at non-singleton dimension 0

(fcsj) [G19830015@gpu2 SOLIDER-PersonSearch-master]$
gpu2   3.10.0                                  1:G19830015@gpu2:~/Group/CSJ/projects/SOLIDER-PersonSearch-master*
```

这个错误出现在 `trainDP1.py` 文件的第 135 行，主函数 `main()` 中的 `train_one_epoch()` 函数调用中。在 `train_one_epoch()` 函数中，模型 `model` 接收输入图片 `images` 和目标框 `targets`，然后返回损失函数值。然而，在模型的前向计算中，出现了一个 `RuntimeError` 错误。

具体来说，错误的原因是在 `replica 0` 的设备 `device 0` 上，在 `seqnet.py` 文件的第 141 行，函数 `forward()` 中的 `transform()` 调用中，`normalize()` 函数出现了问题。在 `normalize()` 函数中，归一化的均值 `mean` 和标准差 `std` 张量与输入的图片张量 `image` 的维度不匹配，导致运行时出现了错误。具体地，`mean` 和 `std` 张量的第一维的长度为 3，而 `image` 张量的第一维的长度为 2，这两者不

匹配。

要解决这个错误，需要检查代码中的 `normalize()` 函数，确保归一化的均值和标准差张量的维度和输入的图片张量的维度匹配。可能需要对输入图片的张量维度进行调整，或者重新计算均值和标准差张量。

> 这个问题应该是维度上的问题，建议你查看一下张量的shape应该就能解决。
>
> 例如你用了多卡分布式训练，每个卡的向量batch size=总batch/ gpus。如果还是按总batch来算，这就会导致单卡没问题，多卡出现超出维度的问题
>
> 发布于 2021-06-20 14:24

```
RuntimeError: The size of tensor a (2) must match the size of tensor b (3) at
non-singleton dimension 0
```

```
RuntimeError: Caught RuntimeError in replica 0 on device 0.
```

3.实验

SYSU复现-94.91/95.59

#SYSU GPU=1 device=1 csj2 SwinTiny_tea batch=2 lr=0.0002（7/1 9：30）

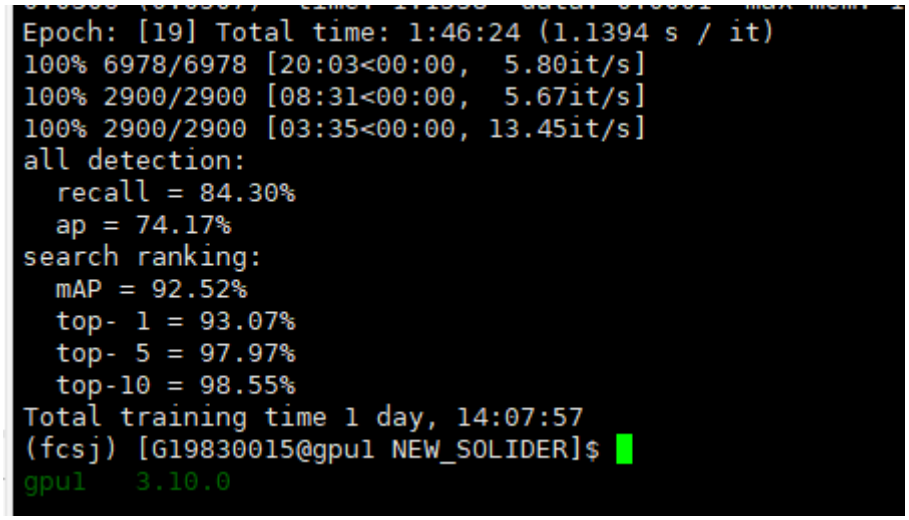
```
#CUDA_VISIBLE_DEVICES=1 python train.py --cfg configs/cuhk_sysu.yaml --resume --
ckpt
/public/home/G19830015/Group/CSJ/projects/NEW_SOLIDER/configs/swin_tiny_tea.pth
OUTPUT_DIR './results/cuhk_sysu/swin_tiny_tea' SOLVER.BASE_LR 0.0002 EVAL_PERIOD
5 MODEL.BONE 'swin_tiny' INPUT.BATCH_SIZE_TRAIN 2 MODEL.SEMANTIC_WEIGHT 0.6
```

```
+-----------------------------+----------------------+----------------------+
|   1  Tesla P100-PCIE...  Off  | 00000000:3B:00.0 Off |                    0 |
| N/A   61C    P0   191W / 250W |  13521MiB / 16280MiB |     90%      Default |
+-----------------------------+----------------------+----------------------+
```

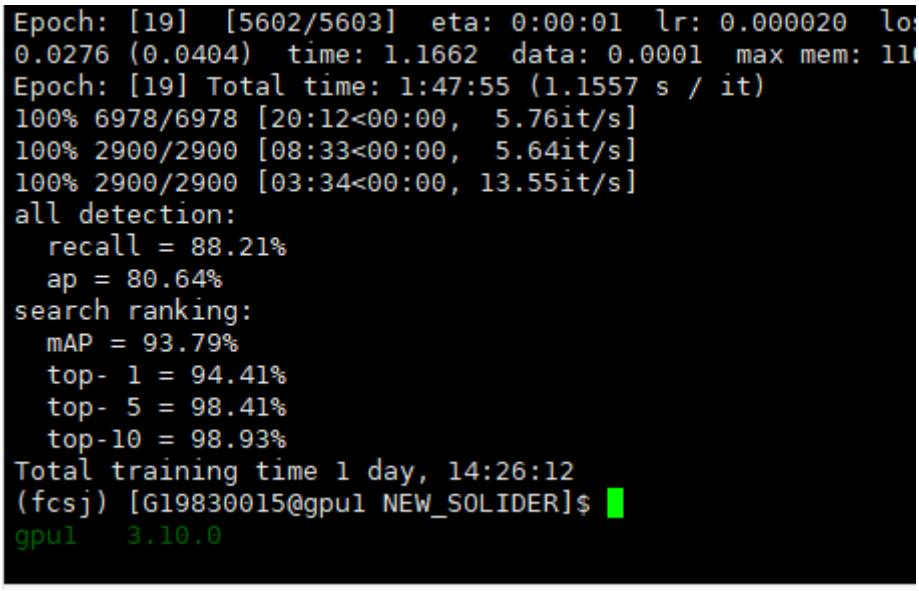
```
Epoch: [19]  [5602/5603]  eta: 0:00:01  lr: 0.000020  loss: 1.9278 (
0.0239 (0.0291)  time: 1.1620  data: 0.0001  max mem: 11021
Epoch: [19] Total time: 1:47:24 (1.1501 s / it)
100% 6978/6978 [20:05<00:00,  5.79it/s]
100% 2900/2900 [08:32<00:00,  5.66it/s]
100% 2900/2900 [03:35<00:00, 13.43it/s]
all detection:
  recall = 91.70%
  ap = 86.97%
search ranking:
  mAP = 94.91%
  top- 1 = 95.59%
  top- 5 = 98.69%
  top-10 = 99.10%
Total training time 1 day, 12:43:11
```

实验一arcface loss 2023/7/6 (10:00)

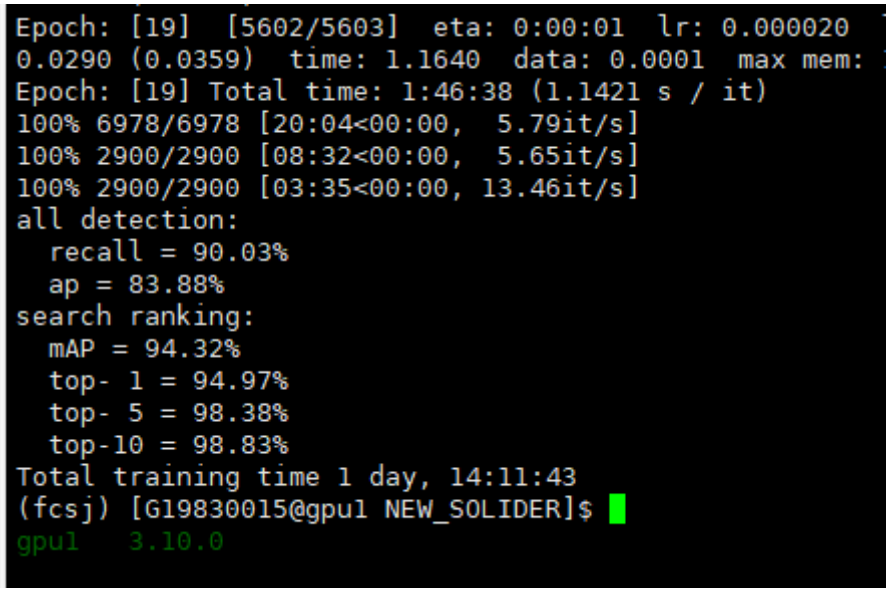
1+1



0.5+1



0.3+1



0.1+1

```
Epoch: [19] Total time: 1:46:59 (1.1458 s / it)
100% 6978/6978 [20:01<00:00,  5.81it/s]
100% 2900/2900 [08:31<00:00,  5.66it/s]
100% 2900/2900 [03:35<00:00, 13.45it/s]
all detection:
  recall = 91.44%
  ap = 86.34%
search ranking:
  mAP = 94.63%
  top- 1 = 95.14%
  top- 5 = 98.72%
  top-10 = 98.93%
Total training time 1 day, 14:07:53
(fcsj) [G19830015@gpu1 NEW_SOLIDER]$
gpu1   3.10.0
```

0.01+1

```
0.0183 (0.0291)  time: 1.1199  data: 0.0001  max mem: 11
Epoch: [19] Total time: 1:46:24 (1.1394 s / it)
100% 6978/6978 [20:02<00:00,  5.80it/s]
100% 2900/2900 [08:31<00:00,  5.67it/s]
100% 2900/2900 [03:35<00:00, 13.47it/s]
all detection:
  recall = 91.85%
  ap = 87.07%
search ranking:
  mAP = 94.85%
  top- 1 = 95.52%
  top- 5 = 98.76%
  top-10 = 99.03%
Total training time 1 day, 14:14:08
(fcsj) [G19830015@gpu2 NEW_SOLIDER]$
gpu2   3.10.0
gpu1   3.10.0
```

0.05+1(MAP+0.14/RANK1-0.03)相比公开

```
Epoch: [20] Total time: 1:48:34 (1.1626 s / it)
all detection:
  recall = 91.58%
  ap = 86.84%
search ranking:
  mAP = 95.05%
  top- 1 = 95.69%
  top- 5 = 98.90%
  top-10 = 99.17%
```

```
Epoch: [21]  [5602/5603]  eta: 0:00:01  lr: 0.000020  los
0.0212 (0.0296)  time: 1.1977  data: 0.0001  max mem: 11
Epoch: [21] Total time: 1:49:20 (1.1709 s / it)
100% 6978/6978 [20:35<00:00,  5.65it/s]
100% 2900/2900 [08:46<00:00,  5.51it/s]
100% 2900/2900 [03:44<00:00, 12.92it/s]
all detection:
  recall = 91.96%
  ap = 87.17%
search ranking:
  mAP = 94.95%
  top- 1 = 95.59%
  top- 5 = 98.69%
  top-10 = 99.00%
Total training time 1 day, 18:35:01
(fcsj) [G19830015@gpu4 NEW_SOLIDER]$
gpu4   3.10.0
```

0.07+1

```
Epoch: [21] Total time: 1:48:41 (1.1640 s / it)
100% 6978/6978 [20:37<00:00,  5.64it/s]
100% 2900/2900 [08:46<00:00,  5.51it/s]
100% 2900/2900 [03:45<00:00, 12.85it/s]
all detection:
  recall = 91.51%
  ap = 86.81%
search ranking:
  mAP = 94.77%
  top- 1 = 95.28%
  top- 5 = 98.69%
  top-10 = 99.10%
Total training time 1 day, 18:43:59
(fcsj) [G19830015@gpu4 NEW_SOLIDER]$
gpu4   3.10.0
```

0.08+1

```
Epoch: [21] Total time: 1:48:51 (1.1657 s / it)
100% 6978/6978 [20:32<00:00,  5.66it/s]
100% 2900/2900 [08:44<00:00,  5.53it/s]
100% 2900/2900 [03:53<00:00, 12.42it/s]
all detection:
  recall = 91.25%
  ap = 86.35%
search ranking:
  mAP = 94.71%
  top- 1 = 95.34%
  top- 5 = 98.66%
  top-10 = 99.10%
Total training time 1 day, 21:54:28
(fcsj) [G19830015@gpu4 NEW_SOLIDER]$ tmux detach
(fcsj) [G19830015@gpu4 NEW_SOLIDER]$
gpu4   3.10.0
```

0.02+1

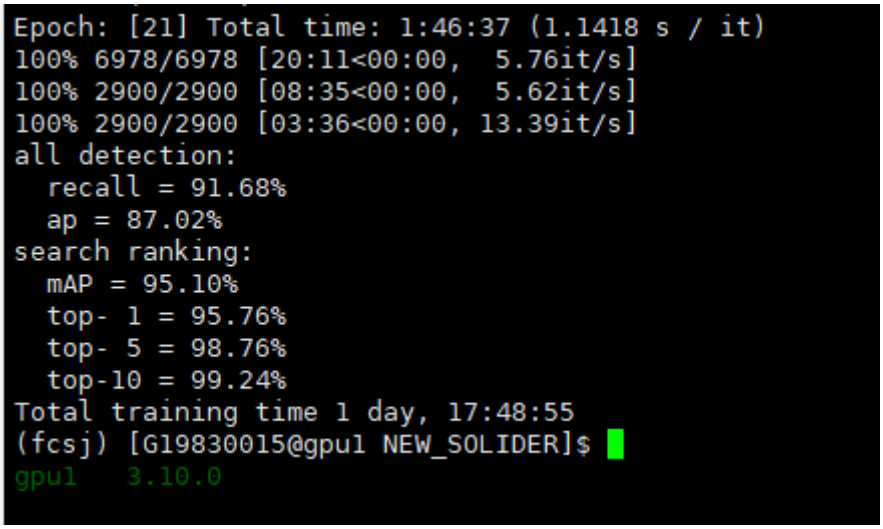
```
Epoch: [21] Total time: 1:46:34 (1.1413 s / it)
100% 6978/6978 [20:01<00:00,  5.81it/s]
100% 2900/2900 [08:31<00:00,  5.67it/s]
100% 2900/2900 [03:35<00:00, 13.46it/s]
all detection:
  recall = 91.65%
  ap = 86.84%
search ranking:
  mAP = 94.76%
  top- 1 = 95.31%
  top- 5 = 98.72%
  top-10 = 99.14%
Total training time 1 day, 17:44:52
(fcsj) [G19830015@gpu1 NEW_SOLIDER]$
gpu1    3.10.0
```

0.03+1

```
Epoch: [21] Total time: 1:47:26 (1.1506 s / it)
100% 6978/6978 [20:03<00:00,  5.80it/s]
100% 2900/2900 [08:32<00:00,  5.66it/s]
100% 2900/2900 [03:36<00:00, 13.37it/s]
all detection:
  recall = 91.56%
  ap = 86.76%
search ranking:
  mAP = 94.82%
  top- 1 = 95.28%
  top- 5 = 98.66%
  top-10 = 99.00%
Total training time 1 day, 17:52:20
(fcsj) [G19830015@gpu1 NEW_SOLIDER]$
gpu1    3.10.0
```

0.04+1(MAP+0.24/RANK+0.04))相比公开

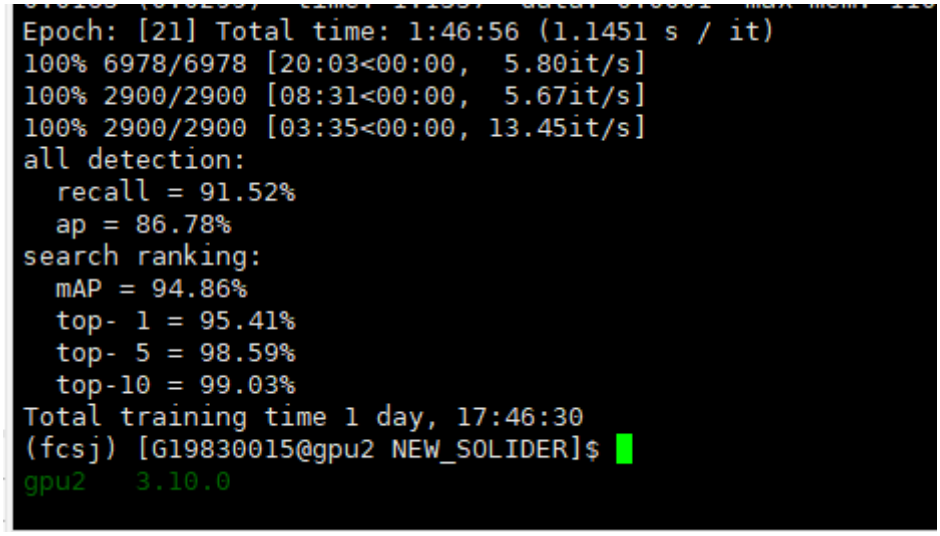
```
Epoch: [20] Total time: 1:46:58 (1.1455 s / it)
all detection:
  recall = 91.38%
  ap = 86.88%
search ranking:
  mAP = 95.15%
  top- 1 = 95.79%
  top- 5 = 98.69%
  top-10 = 99.24%
```



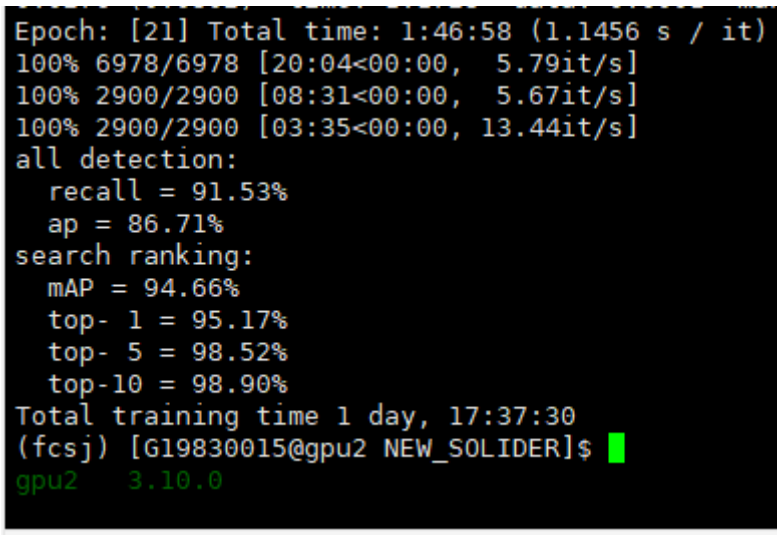
cosine	map	top
0.1		
0.2		
0.3[20]	mAP = 94.97%	top- 1 = 95.76%
0.4[21]	mAP = 95.00%	top- 1 = 95.62%
0.5[19]	mAP = 94.88%	top- 1 = 95.62%
0.6[20]	mAP = 94.78%	top- 1 = 95.14%
0.7[21]	mAP = 95.04%	top- 1 = 95.76%
0.8[18]	mAP = 95.05%	top- 1 = 95.79%
0.9		

0.06+1

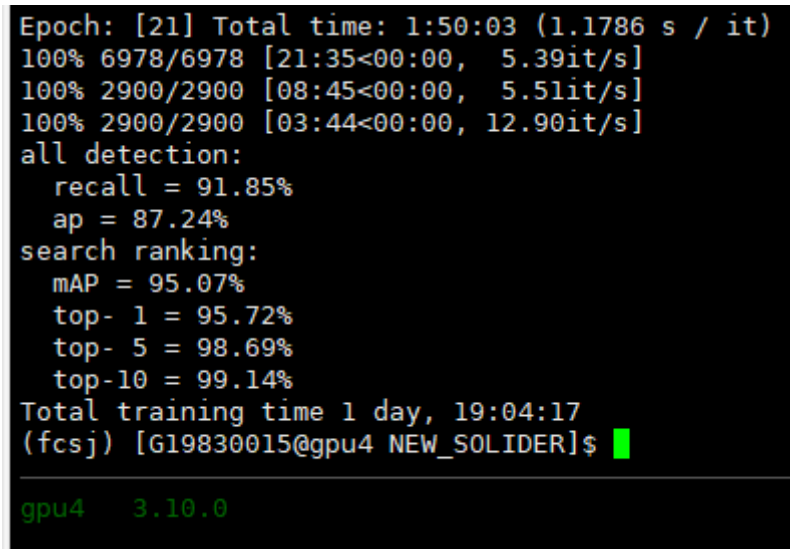
0.07+1



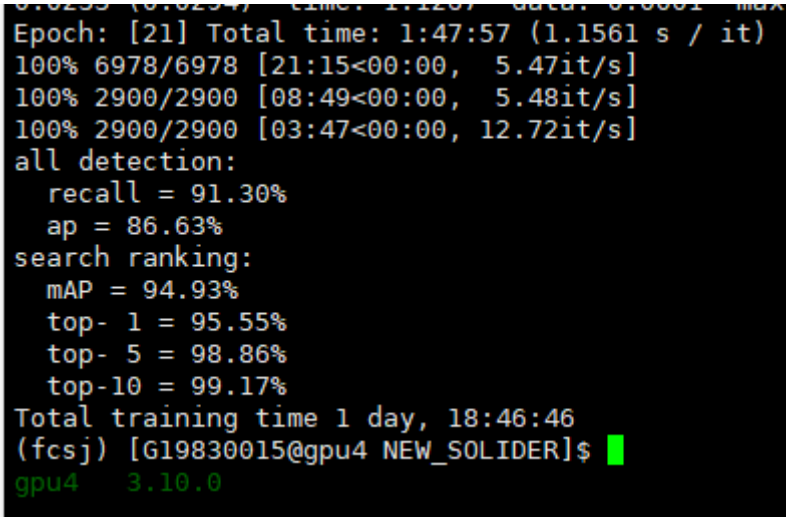
0.09+1



0.05+0.4+1



0.05+0.6+1



实验二

0.02

POS_THRESH_TRAIN	TRAIN_2ND	TRAIN_3RD	MAP	TOP
0.5	0.6	0.7	[11]mAP = 93.41%	top- 1 = 93.90%
0.3	0.3	0.3	[16]mAP = 93.07%	top- 1 = 93.66%
0.4	0.4	0.4	[21] mAP = 93.25%	top- 1 = 94.00%
0.5	0.5	0.5	[15] mAP = 93.41%	top- 1 = 94.00%
0.6	0.6	0.6	[11]mAP = 92.41%	top- 1 = 93.17%
0.4	0.5	0.6	[19]mAP = 93.50%	top- 1 = 94.14%
0.5	0.6	0.6	[14] mAP = 93.38%	top- 1 = 93.93%
0.3	0.4	0.5	[13]mAP = 92.54%	top- 1 = 93.10%
0.6	0.7	0.8		

0.04

POS_THRESH_TRAIN	TRAIN_2ND	TRAIN_3RD	MAP	TOP
0.5	0.6	0.7	[13] mAP = 93.23%	top- 1 = 93.79%
swin_tiny_resnetCAS			[14] mAP = 93.47%	top- 1 = 94.14%

PRW复现-57.28/86.78

#PRW GPU=1 device=0 csj1 SwinTiny_tea batch=3 lr=0.0003（7/1 9：30）

```
#CUDA_VISIBLE_DEVICES=0 python train.py --cfg configs/prw.yaml --resume --ckpt
/public/home/G19830015/Group/CSJ/projects/NEW_SOLIDER/configs/swin_tiny_tea.pth
OUTPUT_DIR './results/prw/swin_tiny_tea' SOLVER.BASE_LR 0.0003 EVAL_PERIOD 5
MODEL.BONE 'swin_tiny' INPUT.BATCH_SIZE_TRAIN 3 MODEL.SEMANTIC_WEIGHT 0.6
```

```
Epoch: [17] Total time: 0:49:49 (1.5724 s / it)
100% 6112/6112 [18:19<00:00,  5.56it/s]
100% 2057/2057 [06:48<00:00,  5.04it/s]
100% 2057/2057 [02:50<00:00, 12.10it/s]
all detection:
  recall = 95.18%
  ap = 91.10%
search ranking:
  mAP = 57.28%
  top- 1 = 86.78%
  top- 5 = 94.56%
  top-10 = 95.92%
Total training time 16:01:20
(fcsj) [G19830015@gpu2 NEW_SOLIDER]$
gpu2   3.10.0
```

```
+-------------------------------+----------------------+----------------------+
|   2  Tesla P100-PCIE...  Off  | 00000000:86:00.0 Off |                    0 |
| N/A   59C    P0   203W / 250W |  13907MiB / 16280MiB |     96%      Default |
+-------------------------------+----------------------+----------------------+
```

实验一arcface loss 2023/7/1 (15:58)

- #PRW-arcfaceloss GPU=2 device=2 csj1 SwinTiny_tea batch=3 lr=0.0003（15：00）
- 原论文epoch=18增加到20

	arcface_loss_weight	cosine	self.s		
	1/0.9/0.8/0.7/0.6/0.5/0.4/0.3/0.2/0.1	0.5	30		

1:1

```
Epoch: [17] Total time: 0:50:32 (1.5951 s / it)
100% 6112/6112 [17:58<00:00,  5.67it/s]
100% 2057/2057 [06:14<00:00,  5.49it/s]
100% 2057/2057 [02:51<00:00, 11.98it/s]
all detection:
  recall = 89.53%
  ap = 81.06%
search ranking:
  mAP = 48.55%
  top- 1 = 79.19%
  top- 5 = 89.21%
  top-10 = 91.59%
Total training time 20:22:32
(fcsj) [G19830015@gpu1 NEW_SOLIDER]$
gpu1   3.10.0
```

```
Epoch: [19] Total time: 0:50:28 (1.5933 s / it)
100% 6112/6112 [18:00<00:00,  5.66it/s]
100% 2057/2057 [06:14<00:00,  5.50it/s]
100% 2057/2057 [02:51<00:00, 12.00it/s]
all detection:
  recall = 89.69%
  ap = 81.57%
search ranking:
  mAP = 49.08%
  top- 1 = 79.63%
  top- 5 = 88.38%
  top-10 = 91.25%
Total training time 20:59:42
(fcsj) [G19830015@gpu1 NEW_SOLIDER]$
gpu1   3.10.0
```

```
Epoch: [19] Total time: 0:50:35 (1.5969 s / it)
100% 6112/6112 [17:58<00:00,  5.67it/s]
100% 2057/2057 [06:17<00:00,  5.45it/s]
100% 2057/2057 [02:51<00:00, 12.01it/s]
all detection:
  recall = 89.30%
  ap = 81.02%
search ranking:
  mAP = 48.46%
  top- 1 = 79.00%
  top- 5 = 88.04%
  top-10 = 90.62%
Total training time 21:00:01
(fcsj) [G19830015@gpu1 NEW_SOLIDER]$
gpu1   3.10.0
```

0.3+1

```
Epoch: [19] Total time: 0:49:58 (1.5773 s / it)
100% 6112/6112 [18:02<00:00,  5.65it/s]
100% 2057/2057 [06:16<00:00,  5.46it/s]
100% 2057/2057 [02:49<00:00, 12.16it/s]
all detection:
  recall = 93.68%
  ap = 88.66%
search ranking:
  mAP = 55.05%
  top- 1 = 83.76%
  top- 5 = 91.88%
  top-10 = 94.07%
Total training time 19:16:39
(fcsj) [G19830015@gpu2 NEW_SOLIDER]$
gpu2   3.10.0
```

0.2+1

```
Epoch: [19] Total time: 0:50:45 (1.6019 s / it)
100% 6112/6112 [18:08<00:00,  5.62it/s]
100% 2057/2057 [06:19<00:00,  5.42it/s]
100% 2057/2057 [02:49<00:00, 12.11it/s]
all detection:
  recall = 94.07%
  ap = 89.46%
search ranking:
  mAP = 56.63%
  top- 1 = 84.10%
  top- 5 = 92.85%
  top-10 = 94.70%
Total training time 19:31:15
(fcsj) [G19830015@gpu1 NEW_SOLIDER]$
gpu1   3.10.0
```

0.05+1(MAP+1.32/RANK1-1.22)

```
Epoch: [19] Total time: 0:50:48 (1.6036 s / it)
100% 6112/6112 [17:58<00:00,  5.67it/s]
100% 2057/2057 [06:16<00:00,  5.46it/s]
100% 2057/2057 [02:47<00:00, 12.24it/s]
all detection:
  recall = 94.76%
  ap = 90.65%
search ranking:
  mAP = 58.16%
  top- 1 = 85.56%
  top- 5 = 93.58%
  top-10 = 95.53%
Total training time 19:33:42
(fcsj) [G19830015@gpu1 NEW_SOLIDER]$
gpu1   3.10.0
```

0.01+1(MAP+0.8/RANK1+0.24)

```
Epoch: [19] Total time: 0:50:46 (1.6025 s / it)
100% 6112/6112 [17:53<00:00,  5.70it/s]
100% 2057/2057 [06:12<00:00,  5.52it/s]
100% 2057/2057 [02:47<00:00, 12.27it/s]
all detection:
  recall = 95.04%
  ap = 90.94%
search ranking:
  mAP = 57.69%
  top- 1 = 86.83%
  top- 5 = 93.83%
  top-10 = 95.24%
Total training time 19:27:27
(fcsj) [G19830015@gpu1 NEW_SOLIDER]$
gpu1   3.10.0
```

最好：epoch=18 0.01+1(MAP+0.8/RANK1+0.24)

```
Epoch: [17] Total time: 0:50:43 (1.6011 s / it)
all detection:
  recall = 95.16%
  ap = 90.95%
search ranking:
  mAP = 57.64%
  top- 1 = 87.02%
  top- 5 = 93.92%
  top-10 = 95.33%
Epoch: [18]  [   0/1901]  eta: 1:11:41  lr: 0.000
```

0.02/0.03/0.04-GPU1-0,1,3

0.04+1(MAP+0.78/RANK1-0.29)

最好：epoch=20 0.04+1(MAP+0.78/RANK1-0.29)

```
Epoch: [19]  [1900/1901]  eta: 0:00:01  lr: 0.000030  loss:
0.0122 (0.0153)  time: 1.6237  data: 0.0001  max mem: 11972
Epoch: [19] Total time: 0:50:38 (1.5986 s / it)
100% 6112/6112 [18:01<00:00,  5.65it/s]
100% 2057/2057 [06:17<00:00,  5.44it/s]
100% 2057/2057 [02:51<00:00, 12.02it/s]
all detection:
  recall = 94.98%
  ap = 91.07%
search ranking:
  mAP = 57.62%
  top- 1 = 86.49%
  top- 5 = 93.78%
  top-10 = 95.19%
Total training time 19:27:19
(fcsj) [G19830015@gpu1 NEW_SOLIDER]$
gpu1   3.10.0
```

0.03+1(MAP+1.3/RANK1-0.44)

最好：epoch=20 0.03+1(MAP+1.3/RANK1-0.44)

```
Epoch: [19]  [1900/1901]  eta: 0:00:01  lr: 0.000030  lo
0.0125 (0.0152)  time: 1.6039  data: 0.0001  max mem: 11
Epoch: [19] Total time: 0:50:32 (1.5951 s / it)
100% 6112/6112 [17:54<00:00,  5.69it/s]
100% 2057/2057 [06:13<00:00,  5.51it/s]
100% 2057/2057 [02:48<00:00, 12.23it/s]
all detection:
  recall = 94.87%
  ap = 90.85%
search ranking:
  mAP = 58.14%
  top- 1 = 86.34%
  top- 5 = 93.68%
  top-10 = 95.19%
Total training time 19:27:17
(fcsj) [G19830015@gpu1 NEW_SOLIDER]$
gpu1   3.10.0
```

0.02+1(MAP+0.63/RANK1+0.29)

```
Epoch: [19]  [1900/1901]  eta: 0:00:01  lr: 0.000030
0.0130 (0.0153)  time: 1.6016  data: 0.0001  max mem:
Epoch: [19] Total time: 0:51:03 (1.6114 s / it)
100% 6112/6112 [17:59<00:00,  5.66it/s]
100% 2057/2057 [06:15<00:00,  5.48it/s]
100% 2057/2057 [02:48<00:00, 12.18it/s]
all detection:
  recall = 94.99%
  ap = 90.89%
search ranking:
  mAP = 57.54%
  top- 1 = 86.53%
  top- 5 = 93.53%
  top-10 = 95.19%
Total training time 19:33:10
(fcsj) [G19830015@gpu1 NEW_SOLIDER]$
gpu1   3.10.0
```

最好：epoch=18 0.02+1(MAP+0.63/RANK1+0.29)

```
Epoch: [17] Total time: 0:50:56 (1.6081 s / it)
all detection:
  recall = 95.12%
  ap = 90.96%
search ranking:
  mAP = 57.47%
  top- 1 = 87.07%
  top- 5 = 93.92%
  top-10 = 95.19%
Epoch: [18]  [   0/1901]  eta: 1:19:50  lr: 0.000030
```

0.009+1(MAP+0.24/RANK1-0.34)

最好：epoch=20 0.009+1(MAP+0.24/RANK1-0.34)

```
Epoch: [19]  [1900/1901]  eta: 0:00:01  lr: 0.000030  loss:
0.0109 (0.0152)  time: 1.5915  data: 0.0001  max mem: 11972
Epoch: [19] Total time: 0:50:24 (1.5907 s / it)
100% 6112/6112 [18:10<00:00,  5.60it/s]
100% 2057/2057 [06:15<00:00,  5.48it/s]
100% 2057/2057 [02:49<00:00, 12.15it/s]
all detection:
  recall = 95.03%
  ap = 90.93%
search ranking:
  mAP = 57.08%
  top- 1 = 86.44%
  top- 5 = 93.97%
  top-10 = 95.77%
Total training time 19:22:58
(fcsj) [G19830015@gpu2 NEW_SOLIDER]$
gpu2   3.10.0
```

实验二 cascade rcnn

```
Epoch: [19]  [1900/1901]  eta: 0:00:01  lr: 0.000020
loss_box_cls: 0.2186 (0.2236)  loss_box_reg: 0.1188
0.1184 (0.2091)  loss_rcnn_reid_3rd: 0.1179 (0.2052)
loss_box_softmax_3rd: 0.4439 (0.5368)  time: 2.0071
Epoch: [19] Total time: 1:03:21 (1.9995 s / it)
all detection:
  recall = 93.59%
  ap = 88.23%
search ranking:
  mAP = 58.02%
  top- 1 = 86.53%
  top- 5 = 94.07%
  top-10 = 95.48%
Total training time 1 day, 8:16:18
```

```
0.1127 (0.2160)  loss_rcnn_reid_3rd: 0.1038 (0.2113)
loss_box_softmax_3rd: 0.5411 (0.5380)  time: 2.0000  d
Epoch: [19] Total time: 1:03:41 (2.0100 s / it)
all detection:
  recall = 93.64%
  ap = 88.65%
search ranking:
  mAP = 58.07%
  top- 1 = 86.73%
  top- 5 = 94.46%
  top-10 = 95.33%
Total training time 1 day, 7:59:45
```

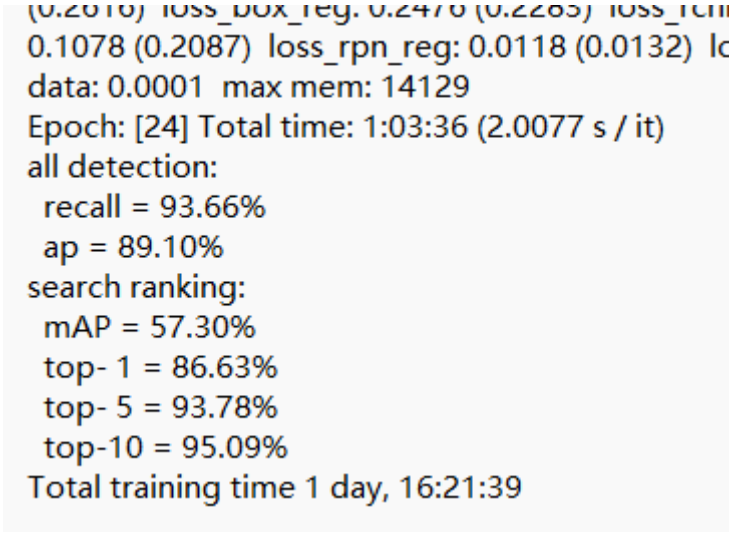
```
Epoch: [18] Total time: 1:03:48 (2.0138 s / it)
all detection:
  recall = 93.59%
  ap = 88.51%
search ranking:
  mAP = 58.06%
  top- 1 = 86.97%
  top- 5 = 93.58%
  top-10 = 95.38%
```

log-20240107-111407.log	11.17MB	文本文档
log-20240107-111421.log	11.18MB	文本文档

```
Epoch: [24] Total time: 1:03:01 (1.9890 s / it)
all detection:
 recall = 93.66%
 ap = 88.73%
search ranking:
 mAP = 58.24%
 top- 1 = 87.02%
 top- 5 = 93.83%
 top-10 = 95.19%
```

POS_THRESH_TRAIN	TRAIN_2ND	TRAIN_3RD	MAP	TOP
0.5/0.5	0.6/0.6	0.7/0.7	[18]mAP = 58.06%	top- 1 = 86.97%
0.4/0.4	0.4/0.4	0.4/0.4	mAP = 56.89%	top- 1 = 86.53%
0.5/0.5	0.5/0.5	0.5/0.5	mAP = 57.57%	top- 1 = 86.24%
0.6/0.6	0.6/0.6	0.6/0.6	mAP = 57.06%	top- 1 = 86.00%
0.7/0.7	0.7/0.7	0.7/0.7		
0.4	0.5	0.6	[18]mAP = 57.04%	top- 1 = 86.44%
0.3	0.4	0.5		

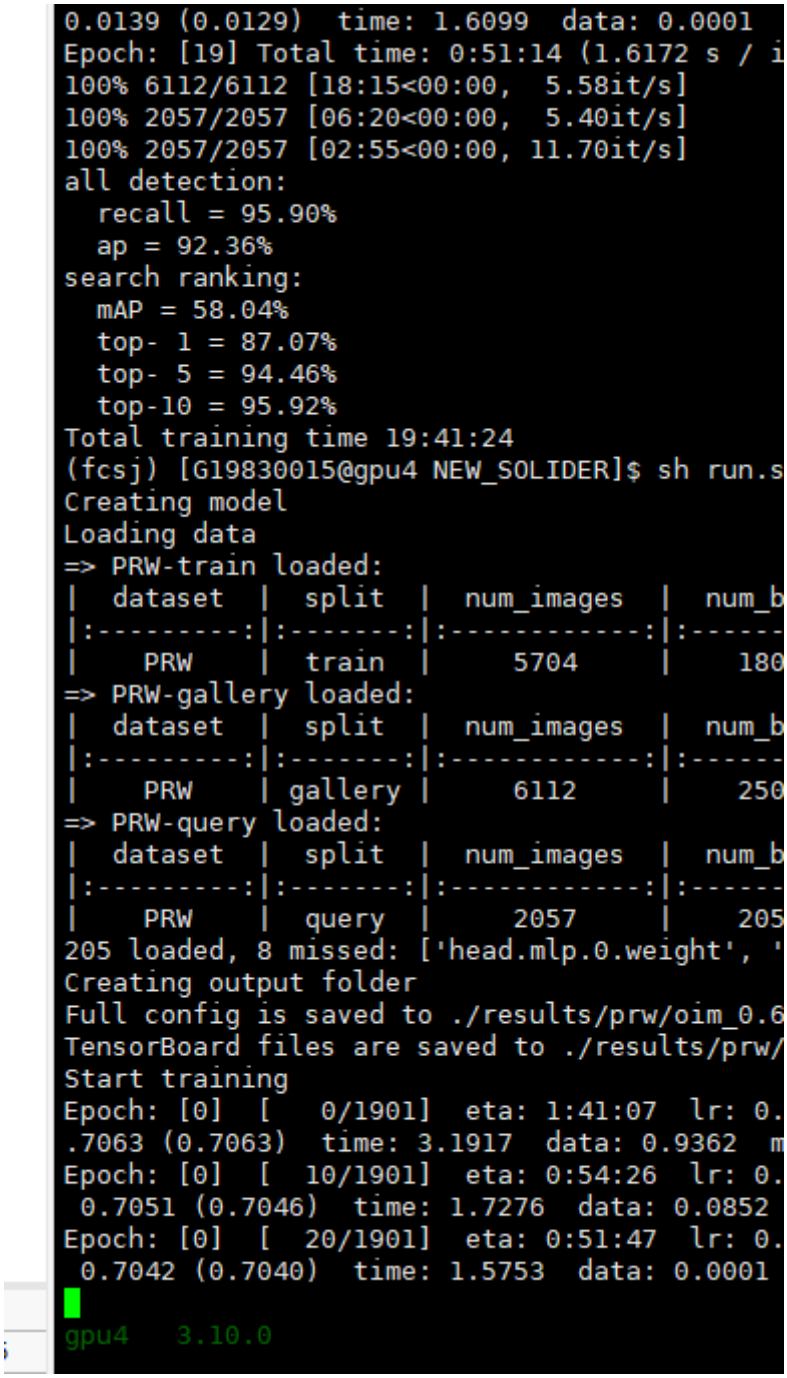
只有cascade没有改损失



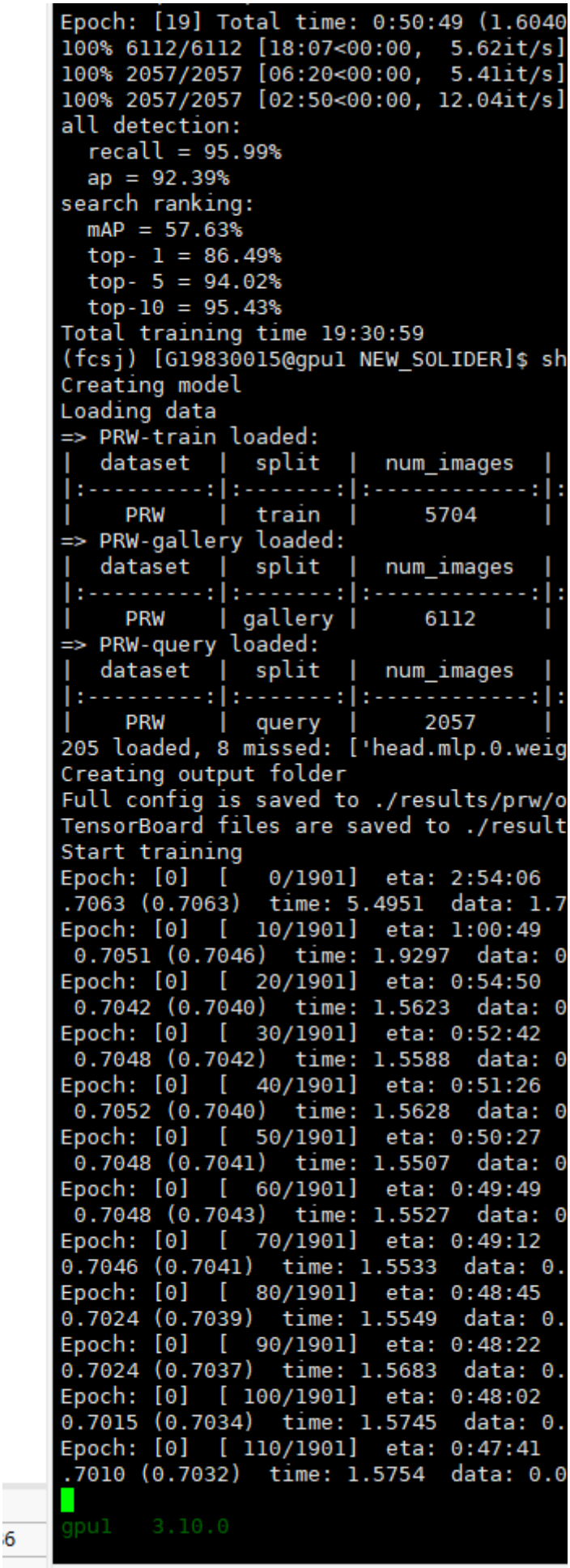
SEMANTIC_WEIGHTcosine=0.02_0.5

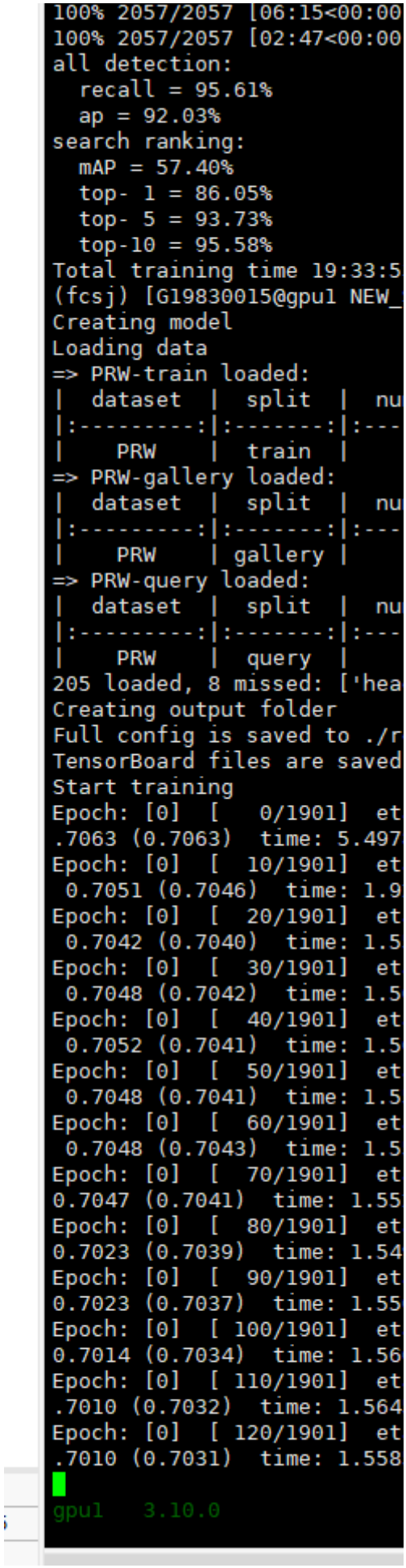
SEMANTIC_WEIGHT_SYSU	map	rank
0.6(原始)	56.84	86.78
0.9		
0.8【19】	mAP = 57.89%	top- 1 = 86.73%
0.7	mAP = 57.37%	top- 1 = 86.78%
0.6	mAP = 57.35%	top- 1 = 86.97%
0.5	mAP = 57.06%	top- 1 = 86.53%
0.4	mAP = 57.48%	top- 1 = 85.90%
0.3		
0.2		

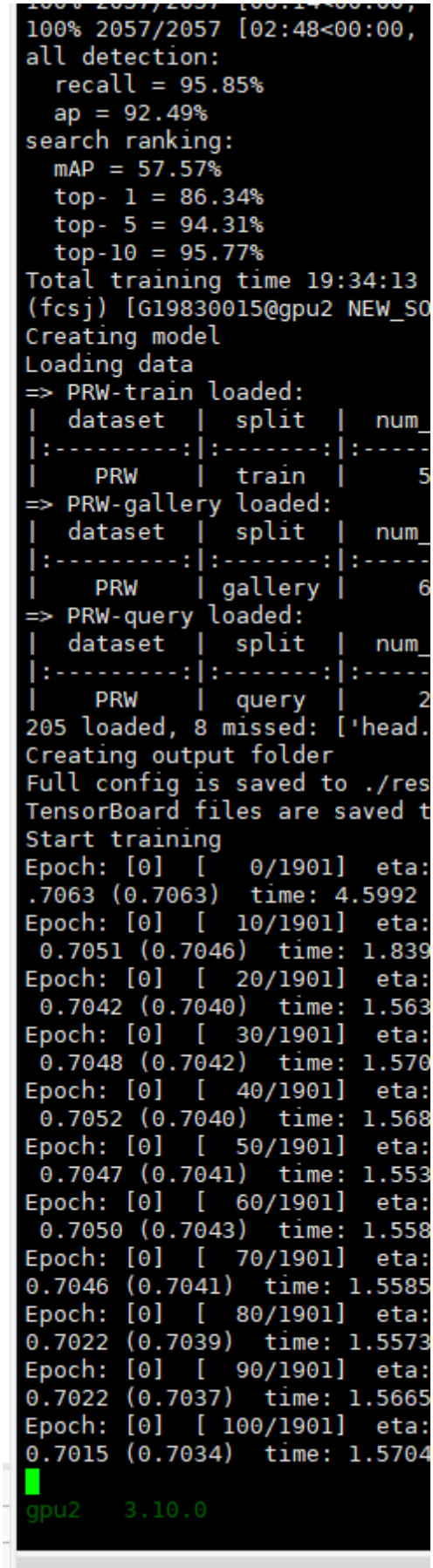
SEMANTIC_WEIGHT_PRW	map	rank
0.61	mAP = 57.55%	top- 1 = 86.49%
0.62	mAP = 57.08%	top- 1 = 85.80%
0.63		
0.64	mAP = 57.56%	top- 1 = 86.39%
0.65	mAP = 57.27%	top- 1 = 86.44%
0.66	mAP = 57.88%	top- 1 = 87.02%


0.0139 (0.0129) time: 1.6099 data: 0.0001
Epoch: [19] Total time: 0:51:14 (1.6172 s / i
100% 6112/6112 [18:15<00:00, 5.58it/s]
100% 2057/2057 [06:20<00:00, 5.40it/s]
100% 2057/2057 [02:55<00:00, 11.70it/s]
all detection:
recall = 95.90%
ap = 92.36%
search ranking:
mAP = 58.04%
top- 1 = 87.07%
top- 5 = 94.46%
top-10 = 95.92%
Total training time 19:41:24
(fcsj) [G19830015@gpu4 NEW_SOLIDER]$ sh run.s
Creating model
Loading data
=> PRW-train loaded:
dataset	split	num_images	num_b
PRW	train	5704	180
=> PRW-gallery loaded:
dataset	split	num_images	num_b
PRW	gallery	6112	250
=> PRW-query loaded:
dataset	split	num_images	num_b
PRW	query	2057	205
205 loaded, 8 missed: ['head.mlp.0.weight', '
Creating output folder
Full config is saved to ./results/prw/oim_0.6
TensorBoard files are saved to ./results/prw/
Start training
Epoch: [0] [0/1901] eta: 1:41:07 lr: 0.
.7063 (0.7063) time: 3.1917 data: 0.9362 m
Epoch: [0] [10/1901] eta: 0:54:26 lr: 0.
0.7051 (0.7046) time: 1.7276 data: 0.0852
Epoch: [0] [20/1901] eta: 0:51:47 lr: 0.
0.7042 (0.7040) time: 1.5753 data: 0.0001
gpu4 3.10.0

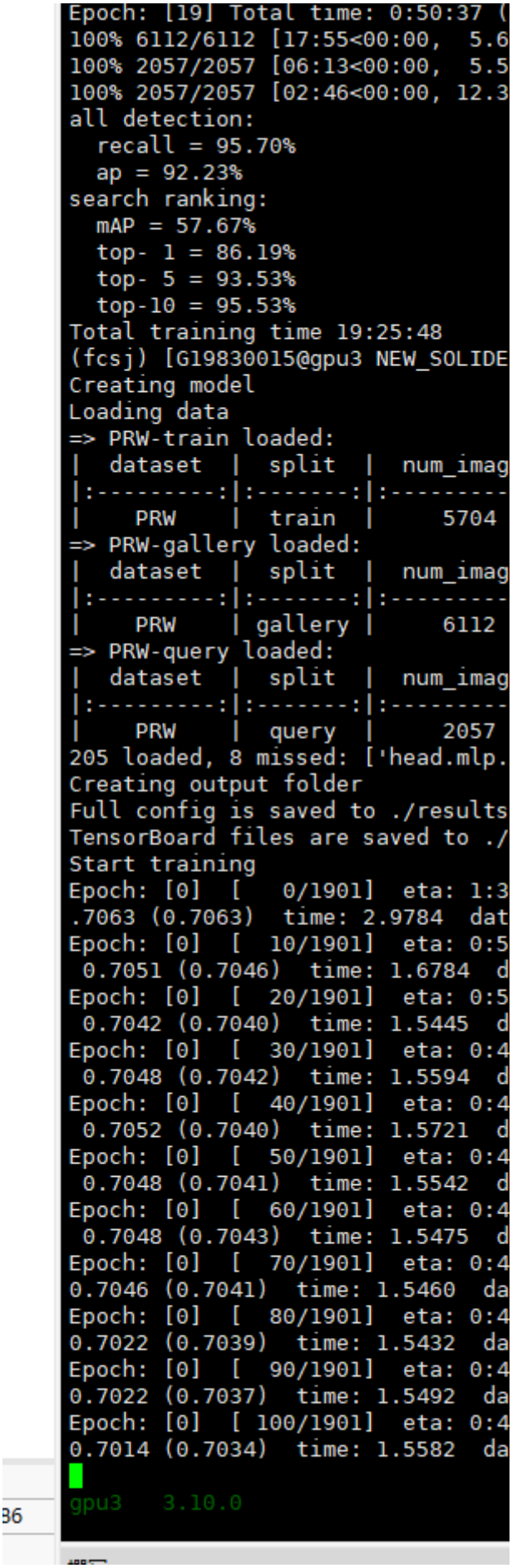
GPU4精度最高

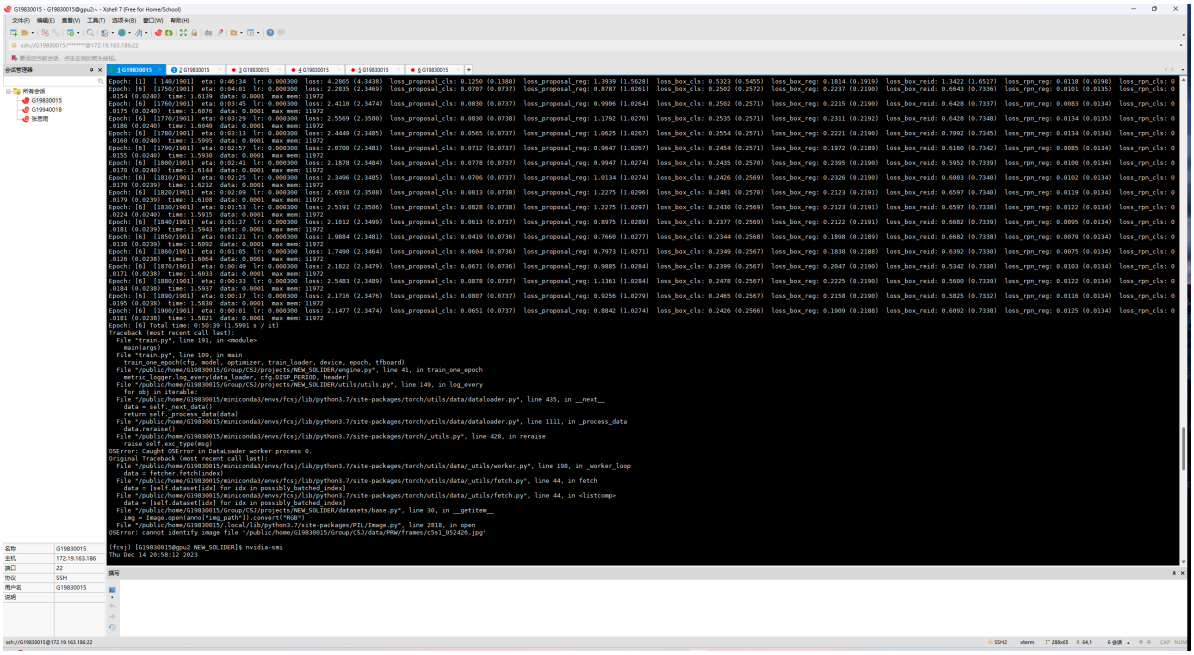

Epoch: [19] Total time: 0:50:49 (1.6040
100% 6112/6112 [18:07<00:00, 5.62it/s]
100% 2057/2057 [06:20<00:00, 5.41it/s]
100% 2057/2057 [02:50<00:00, 12.04it/s]
all detection:
recall = 95.99%
ap = 92.39%
search ranking:
mAP = 57.63%
top- 1 = 86.49%
top- 5 = 94.02%
top-10 = 95.43%
Total training time 19:30:59
(fcsj) [G19830015@gpu1 NEW_SOLIDER]$ sh
Creating model
Loading data
=> PRW-train loaded:
dataset	split	num_images
PRW	train	5704
=> PRW-gallery loaded:
dataset	split	num_images
PRW	gallery	6112
=> PRW-query loaded:
dataset	split	num_images
PRW	query	2057
205 loaded, 8 missed: ['head.mlp.0.weig
Creating output folder
Full config is saved to ./results/prw/o
TensorBoard files are saved to ./result
Start training
Epoch: [0] [0/1901] eta: 2:54:06
.7063 (0.7063) time: 5.4951 data: 1.7
Epoch: [0] [10/1901] eta: 1:00:49
0.7051 (0.7046) time: 1.9297 data: 0
Epoch: [0] [20/1901] eta: 0:54:50
0.7042 (0.7040) time: 1.5623 data: 0
Epoch: [0] [30/1901] eta: 0:52:42
0.7048 (0.7042) time: 1.5588 data: 0
Epoch: [0] [40/1901] eta: 0:51:26
0.7052 (0.7040) time: 1.5628 data: 0
Epoch: [0] [50/1901] eta: 0:50:27
0.7048 (0.7041) time: 1.5507 data: 0
Epoch: [0] [60/1901] eta: 0:49:49
0.7048 (0.7043) time: 1.5527 data: 0
Epoch: [0] [70/1901] eta: 0:49:12
0.7046 (0.7041) time: 1.5533 data: 0.
Epoch: [0] [80/1901] eta: 0:48:45
0.7024 (0.7039) time: 1.5549 data: 0.
Epoch: [0] [90/1901] eta: 0:48:22
0.7024 (0.7037) time: 1.5683 data: 0.
Epoch: [0] [100/1901] eta: 0:48:02
0.7015 (0.7034) time: 1.5745 data: 0.
Epoch: [0] [110/1901] eta: 0:47:41
.7010 (0.7032) time: 1.5754 data: 0.0
gpu1 3.10.0


100% 2057/2057 [06:15<00:00
100% 2057/2057 [02:47<00:00
all detection:
recall = 95.61%
ap = 92.03%
search ranking:
mAP = 57.40%
top- 1 = 86.05%
top- 5 = 93.73%
top-10 = 95.58%
Total training time 19:33:5
(fcsj) [G19830015@gpu1 NEW_
Creating model
Loading data
=> PRW-train loaded:
dataset	split	nu
PRW	train
=> PRW-gallery loaded:
dataset	split	nu
PRW	gallery
=> PRW-query loaded:
dataset	split	nu
PRW	query
205 loaded, 8 missed: ['hea
Creating output folder
Full config is saved to ./r
TensorBoard files are saved
Start training
Epoch: [0] [0/1901] et
.7063 (0.7063) time: 5.497
Epoch: [0] [10/1901] et
0.7051 (0.7046) time: 1.9
Epoch: [0] [20/1901] et
0.7042 (0.7040) time: 1.5
Epoch: [0] [30/1901] et
0.7048 (0.7042) time: 1.5
Epoch: [0] [40/1901] et
0.7052 (0.7041) time: 1.5
Epoch: [0] [50/1901] et
0.7048 (0.7041) time: 1.5
Epoch: [0] [60/1901] et
0.7048 (0.7043) time: 1.5
Epoch: [0] [70/1901] et
0.7047 (0.7041) time: 1.55
Epoch: [0] [80/1901] et
0.7023 (0.7039) time: 1.54
Epoch: [0] [90/1901] et
0.7023 (0.7037) time: 1.55
Epoch: [0] [100/1901] et
0.7014 (0.7034) time: 1.56
Epoch: [0] [110/1901] et
.7010 (0.7032) time: 1.564
Epoch: [0] [120/1901] et
.7010 (0.7031) time: 1.558
gpu1 3.10.0


100% 2057/2057 [02:48<00:00,
all detection:
recall = 95.85%
ap = 92.49%
search ranking:
mAP = 57.57%
top- 1 = 86.34%
top- 5 = 94.31%
top-10 = 95.77%
Total training time 19:34:13
(fcsj) [G19830015@gpu2 NEW_SO
Creating model
Loading data
=> PRW-train loaded:
dataset	split	num_
PRW	train	5
=> PRW-gallery loaded:
dataset	split	num_
PRW	gallery	6
=> PRW-query loaded:
dataset	split	num_
PRW	query	2
205 loaded, 8 missed: ['head.
Creating output folder
Full config is saved to ./res
TensorBoard files are saved t
Start training
Epoch: [0] [0/1901] eta:
.7063 (0.7063) time: 4.5992
Epoch: [0] [10/1901] eta:
0.7051 (0.7046) time: 1.839
Epoch: [0] [20/1901] eta:
0.7042 (0.7040) time: 1.563
Epoch: [0] [30/1901] eta:
0.7048 (0.7042) time: 1.570
Epoch: [0] [40/1901] eta:
0.7052 (0.7040) time: 1.568
Epoch: [0] [50/1901] eta:
0.7047 (0.7041) time: 1.553
Epoch: [0] [60/1901] eta:
0.7050 (0.7043) time: 1.558
Epoch: [0] [70/1901] eta:
0.7046 (0.7041) time: 1.5585
Epoch: [0] [80/1901] eta:
0.7022 (0.7039) time: 1.5573
Epoch: [0] [90/1901] eta:
0.7022 (0.7037) time: 1.5665
Epoch: [0] [100/1901] eta:
0.7015 (0.7034) time: 1.5704
gpu2 3.10.0

```
100% 2057/2057 [02:46<00:0
all detection:
  recall = 95.51%
  ap = 92.13%
search ranking:
  mAP = 57.26%
  top- 1 = 86.10%
  top- 5 = 93.58%
  top-10 = 95.28%
Total training time 19:22:
(fcsj) [G19830015@gpu3 NEW
Creating model
Loading data
=> PRW-train loaded:
|  dataset  |  split  |  n
|:---------:|:-------:|:--
|    PRW    |  train  |
=> PRW-gallery loaded:
|  dataset  |  split  |  n
|:---------:|:-------:|:--
|    PRW    | gallery |
=> PRW-query loaded:
|  dataset  |  split  |  n
|:---------:|:-------:|:--
|    PRW    |  query  |
205 loaded, 8 missed: ['he
Creating output folder
Full config is saved to ./
TensorBoard files are save
Start training
Epoch: [0]  [   0/1901]  e
.7063 (0.7063)  time: 4.37
Epoch: [0]  [  10/1901]  e
 0.7051 (0.7046)  time: 1.
Epoch: [0]  [  20/1901]  e
 0.7042 (0.7040)  time: 1.
Epoch: [0]  [  30/1901]  e
 0.7048 (0.7042)  time: 1.
Epoch: [0]  [  40/1901]  e
 0.7052 (0.7040)  time: 1.
Epoch: [0]  [  50/1901]  e
 0.7047 (0.7041)  time: 1.
Epoch: [0]  [  60/1901]  e
0.7049 (0.7043)  time: 1.5
Epoch: [0]  [  70/1901]  e
0.7045 (0.7041)  time: 1.5
Epoch: [0]  [  80/1901]  e
0.7021 (0.7039)  time: 1.5
Epoch: [0]  [  90/1901]  e
0.7021 (0.7036)  time: 1.5
Epoch: [0]  [ 100/1901]  e
0.7014 (0.7034)  time: 1.5
gpu3   3.10.0
```


Epoch: [19] Total time: 0:50:37 (
100% 6112/6112 [17:55<00:00, 5.6
100% 2057/2057 [06:13<00:00, 5.5
100% 2057/2057 [02:46<00:00, 12.3
all detection:
recall = 95.70%
ap = 92.23%
search ranking:
mAP = 57.67%
top- 1 = 86.19%
top- 5 = 93.53%
top-10 = 95.53%
Total training time 19:25:48
(fcsj) [G19830015@gpu3 NEW_SOLIDE
Creating model
Loading data
=> PRW-train loaded:
dataset	split	num_imag
PRW	train	5704
=> PRW-gallery loaded:
dataset	split	num_imag
PRW	gallery	6112
=> PRW-query loaded:
dataset	split	num_imag
PRW	query	2057
205 loaded, 8 missed: ['head.mlp.
Creating output folder
Full config is saved to ./results
TensorBoard files are saved to ./
Start training
Epoch: [0] [0/1901] eta: 1:3
.7063 (0.7063) time: 2.9784 dat
Epoch: [0] [10/1901] eta: 0:5
0.7051 (0.7046) time: 1.6784 d
Epoch: [0] [20/1901] eta: 0:5
0.7042 (0.7040) time: 1.5445 d
Epoch: [0] [30/1901] eta: 0:4
0.7048 (0.7042) time: 1.5594 d
Epoch: [0] [40/1901] eta: 0:4
0.7052 (0.7040) time: 1.5721 d
Epoch: [0] [50/1901] eta: 0:4
0.7048 (0.7041) time: 1.5542 d
Epoch: [0] [60/1901] eta: 0:4
0.7048 (0.7043) time: 1.5475 d
Epoch: [0] [70/1901] eta: 0:4
0.7046 (0.7041) time: 1.5460 da
Epoch: [0] [80/1901] eta: 0:4
0.7022 (0.7039) time: 1.5432 da
Epoch: [0] [90/1901] eta: 0:4
0.7022 (0.7037) time: 1.5492 da
Epoch: [0] [100/1901] eta: 0:4
0.7014 (0.7034) time: 1.5582 da
gpu3 3.10.0



补充实验

Ours + Ground Truth

+CBGM