HOW INFO: Initializing network whitening

>> Initializing dim reduction

/usr/local/lib/python3.7/dist-packages/torch/utils/data/dataloader.py:481: UserWarning: This DataLoader will create 6 worker processes in total. Our suggested max number of worker in current system is 2, which is smaller than what this DataLoader is going to create. Please be aware that excessive worker creation might get DataLoader running slow or even freeze, lower the worker number to avoid potential slowness/freeze if necessary.

cpuset\_checked))

/usr/local/lib/python3.7/dist-packages/torch/nn/functional.py:718: UserWarning: Named tensors and all their associated APIs are an experimental feature and subject to change. Please do not use them for anything important until they are released as stable. (Triggered internally at /pytorch/c10/core/TensorImpl.h:1156.)

return torch.max\_pool2d(input, kernel\_size, stride, padding, dilation, ceil\_mode)

>>>> 1885/1885 done...

tcmalloc: large alloc 2841313280 bytes == 0x561700216000 @ 0x7fc3de11b1e7 0x7fc38151e46e 0x7fc38156ec7b 0x7fc38156ed18 0x7fc381616010 0x7fc38161673c 0x7fc38161685d 0x5615bd5bff68 0x7fc38155bef7 0x5615bd5bdc47 0x5615bd5bda50 0x5615bd631453 0x5615bd62c4ae 0x5615bd5bf3ea 0x5615bd6317f0 0x5615bd4fed14 0x7fc38155bef7 0x5615bd5bdc47 0x5615bd5bda50 0x5615bd631453 0x5615bd62c4ae 0x5615bd5bf3ea 0x5615bd6317f0 0x5615bd62c7ad 0x5615bd5bf3ea 0x5615bd62e32a 0x5615bd62c7ad 0x5615bd4fee2c 0x5615bd62ebb5 0x5615bd62c4ae 0x5615bd4fee2c

tcmalloc: large alloc 2841313280 bytes == 0x5617a97c6000 @ 0x7fc3de11b1e7 0x7fc38151e46e 0x7fc38156ec7b 0x7fc38156ed18 0x7fc38162ad79 0x7fc38162de4c 0x7fc38174ce7f 0x7fc381752fb5 0x7fc381754e3d 0x7fc381756516 0x5615bd5bef30 0x5615bd5beb09 0x7fc3816350db 0x5615bd6a7252 0x5615bd62e0d2 0x5615bd62c4ae 0x5615bd5bf3ea 0x5615bd6317f0 0x5615bd5bf30a 0x5615bd6317f0 0x5615bd62c4ae 0x5615bd4fee2c 0x5615bd62ebb5 0x5615bd62c4ae 0x5615bd4fee2c 0x5615bd62ebb5 0x5615bd5bf30a 0x5615bd62d3b5 0x5615bd62c4ae 0x5615bd62c1b3 0x5615bd6f6182

changed retrieval-SfM-120k => mitsubishi\_dataset

#######check loaded content######

scores : {'global\_descriptor': defaultdict(<class 'list'>, {}), 'local\_descriptor': defaultdict(<class 'list'>, {}), 'train\_loss': [(1, 0.222818398039788), (2, 0.10378619345836342), (3, 0.06189663992577698), (4, 0.04006348572089337), (5, 0.021295666891150176), (6, 0.013496961122844368), (7, 0.00987832142226398), (8, 0.007607022781623528), (9, 0.006161538298561936), (10, 0.004728799684060505), (11, 0.003980073045298923), (12, 0.003172640458898968), (13, 0.0028241200090560596), (14, 0.0023239940144267166), (15, 0.0019118975398741895), (16, 0.0016369154750573217), (17, 0.0015146504850126804), (18, 0.0013062166194722522), (19, 0.001370452634364483), (20, 0.0010906045551018907)]}

net\_params : {'architecture': 'resnet18', 'pretrained': True, 'skip\_layer': 0, 'dim\_reduction': {'dim': 128}, 'smoothing': {'kernel\_size': 3}, 'runtime': {'mean\_std': [[0.485, 0.456, 0.406], [0.229, 0.224, 0.225]], 'image\_size': 1024, 'features\_num': 1000, 'scales': [2.0, 1.414, 1.0, 0.707, 0.5, 0.353, 0.25], 'training\_scales': [1]}}

losslogger : 0.0010906045551018907

######loaded at 21#######

HOW INFO: Starting asmk evaluation

[W pthreadpool-cpp.cc:90] Warning: Leaking Caffe2 thread-pool after fork. (function pthreadpool)

[W pthreadpool-cpp.cc:90] Warning: Leaking Caffe2 thread-pool after fork. (function pthreadpool)

[W pthreadpool-cpp.cc:90] Warning: Leaking Caffe2 thread-pool after fork. (function pthreadpool)

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[W pthreadpool-cpp.cc:90] Warning: Leaking Caffe2 thread-pool after fork. (function pthreadpool)

[W pthreadpool-cpp.cc:90] Warning: Leaking Caffe2 thread-pool after fork. (function pthreadpool)

>>>> 1885/1885 done...

WARNING clustering 1387360 points to 65536 centroids: please provide at least 2555904 training points

HOW INFO: Codebook trained in 105.3s

HOW INFO: Evaluating 'val\_eccv20'

[W pthreadpool-cpp.cc:90] Warning: Leaking Caffe2 thread-pool after fork. (function pthreadpool)

[W pthreadpool-cpp.cc:90] Warning: Leaking Caffe2 thread-pool after fork. (function pthreadpool)

[W pthreadpool-cpp.cc:90] Warning: Leaking Caffe2 thread-pool after fork. (function pthreadpool)

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[W pthreadpool-cpp.cc:90] Warning: Leaking Caffe2 thread-pool after fork. (function pthreadpool)

[W pthreadpool-cpp.cc:90] Warning: Leaking Caffe2 thread-pool after fork. (function pthreadpool)

/usr/local/lib/python3.7/dist-packages/torch/nn/functional.py:3658: UserWarning: The default behavior for interpolate/upsample with float scale\_factor changed in 1.6.0 to align with other frameworks/libraries, and now uses scale\_factor directly, instead of relying on the computed output size. If you wish to restore the old behavior, please set recompute\_scale\_factor=True. See the documentation of nn.Upsample for details.

"The default behavior for interpolate/upsample with float scale\_factor changed "

>>>> 1885/1885 done...

HOW INFO: Indexed images in 46.60s

[W pthreadpool-cpp.cc:90] Warning: Leaking Caffe2 thread-pool after fork. (function pthreadpool)

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[W pthreadpool-cpp.cc:90] Warning: Leaking Caffe2 thread-pool after fork. (function pthreadpool)

>>>> 980/980 done...

HOW INFO: Evaluated val\_eccv20: mAP 14.15, mP@k [43.78 22.64 16.51]

HOW INFO: Finished asmk evaluation in 14 min

#######check saved content######

scores : {'global\_descriptor': defaultdict(<class 'list'>, {}), 'local\_descriptor': defaultdict(<class 'list'>, {'val\_eccv20': [(20, 0.1414915288706461)]}), 'train\_loss': [(1, 0.222818398039788), (2, 0.10378619345836342), (3, 0.06189663992577698), (4, 0.04006348572089337), (5, 0.021295666891150176), (6, 0.013496961122844368), (7, 0.00987832142226398), (8, 0.007607022781623528), (9, 0.006161538298561936), (10, 0.004728799684060505), (11, 0.003980073045298923), (12, 0.003172640458898968), (13, 0.0028241200090560596), (14, 0.0023239940144267166), (15, 0.0019118975398741895), (16, 0.0016369154750573217), (17, 0.0015146504850126804), (18, 0.0013062166194722522), (19, 0.001370452634364483), (20, 0.0010906045551018907)]}

net\_params : {'architecture': 'resnet18', 'pretrained': True, 'skip\_layer': 0, 'dim\_reduction': {'dim': 128}, 'smoothing': {'kernel\_size': 3}, 'runtime': {'mean\_std': [[0.485, 0.456, 0.406], [0.229, 0.224, 0.225]], 'image\_size': 1024, 'features\_num': 1000, 'scales': [2.0, 1.414, 1.0, 0.707, 0.5, 0.353, 0.25], 'training\_scales': [1]}}

losslogger : 0.0010906045551018907

scheduler : <torch.optim.lr\_scheduler.ExponentialLR object at 0x7fc35066fe90>

######saved after 20#######

HOW INFO: Epoch 20 finished in 846.4s