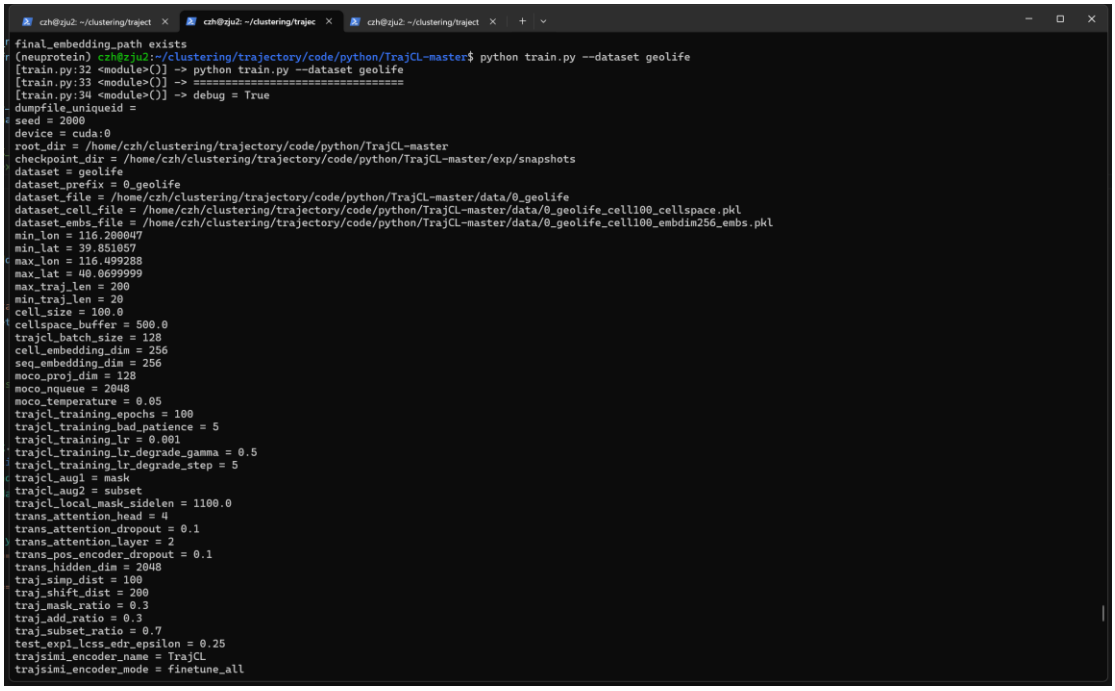
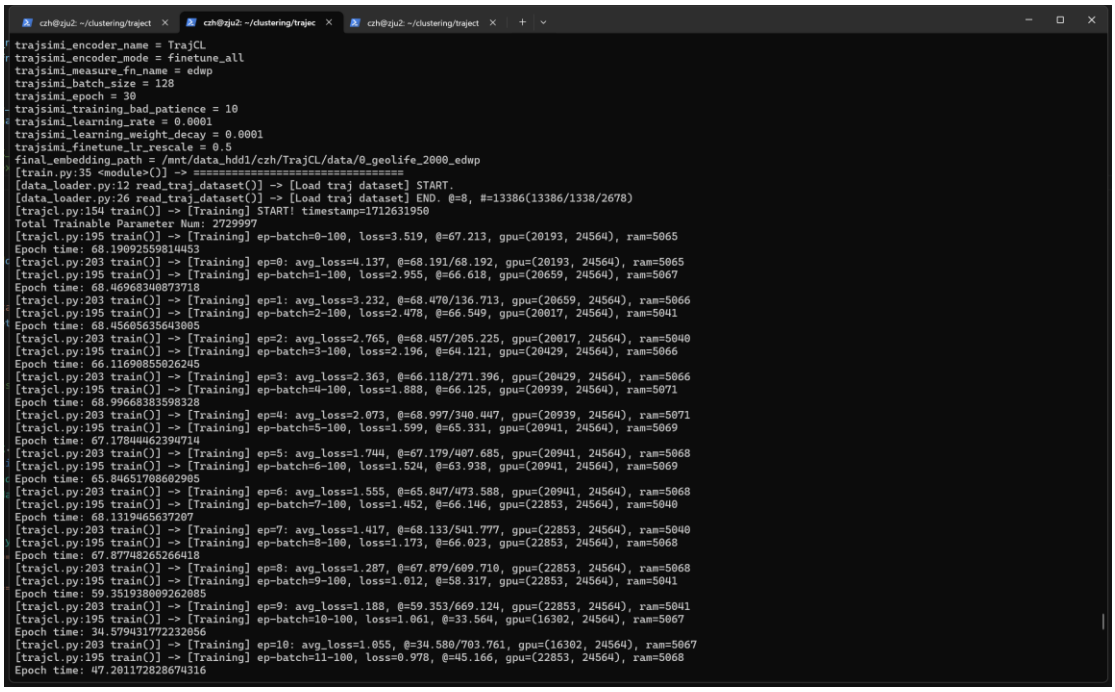
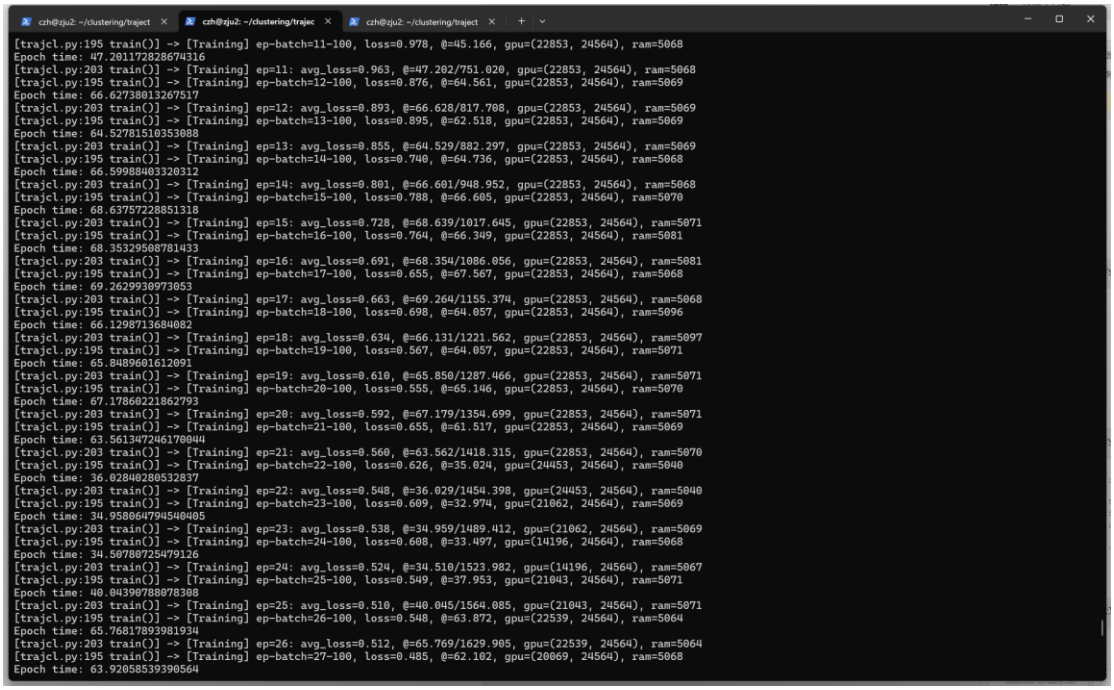
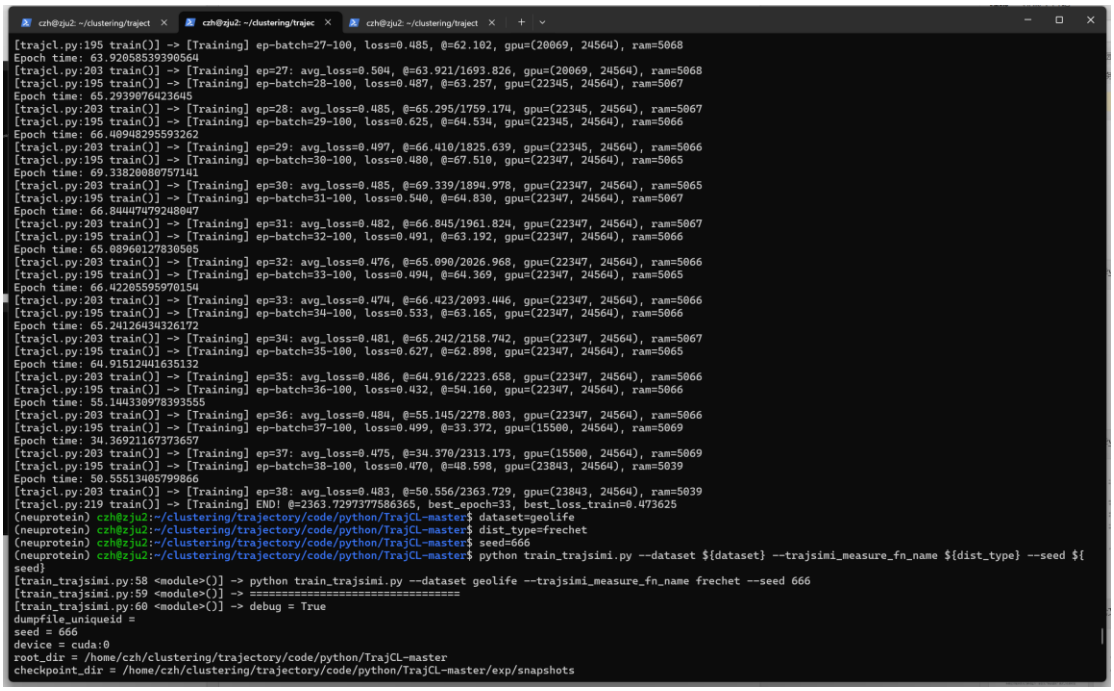
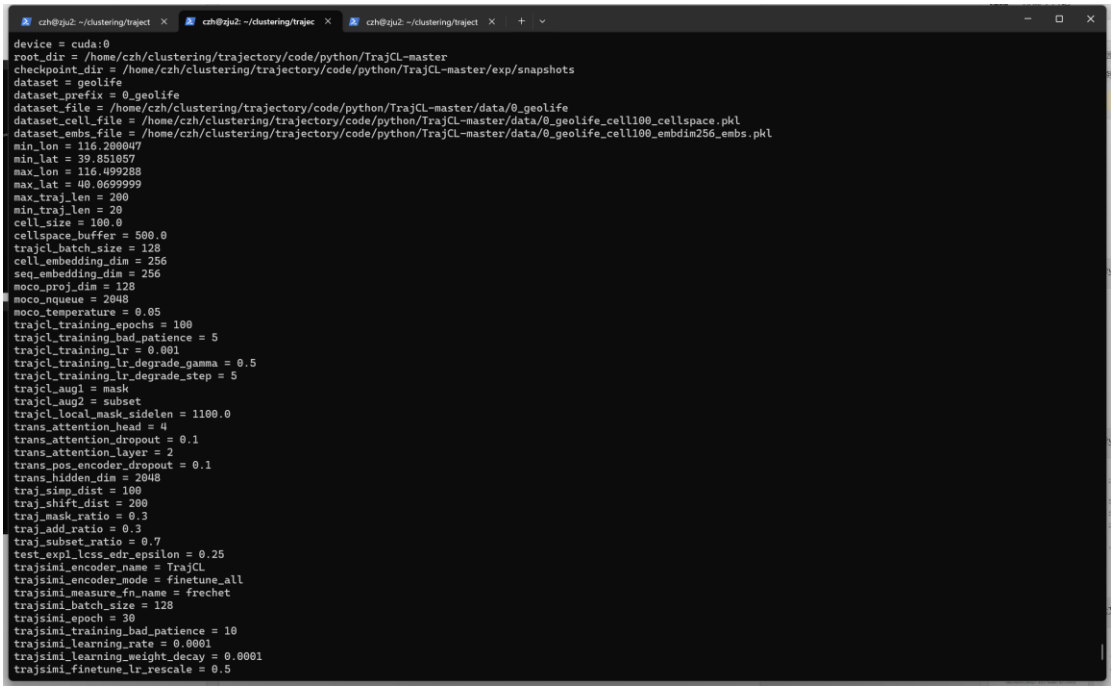
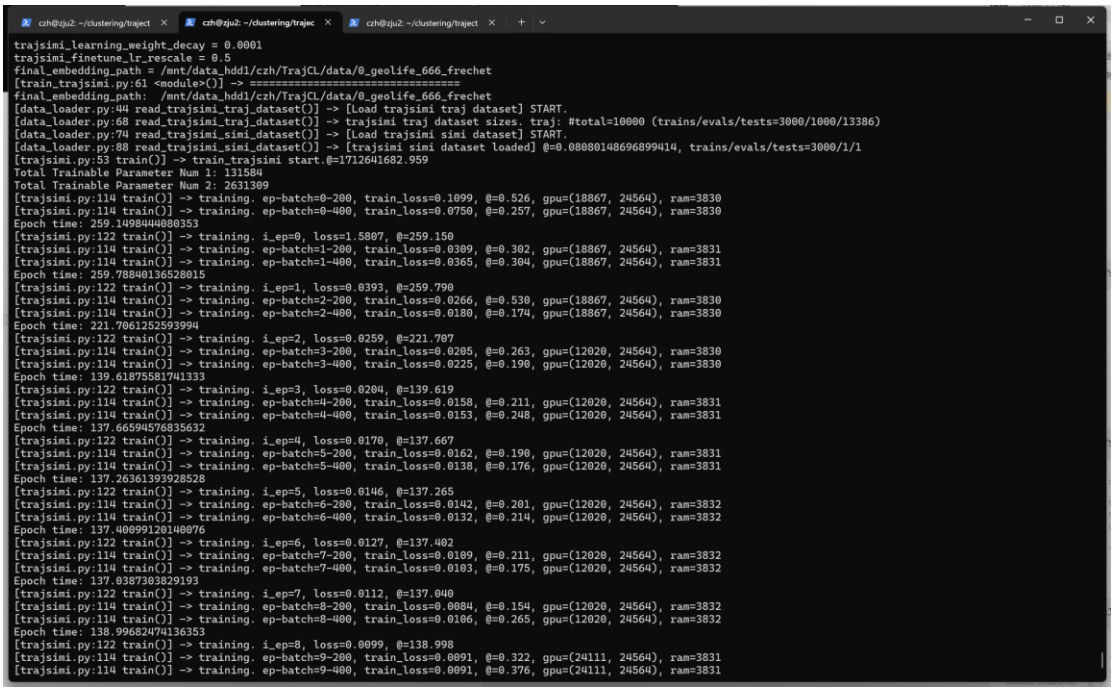

czh@zju2: ~/clustering/traject
czh@zju2: ~/clustering/trajec
czh@zju2: ~/clustering/traject
final_embedding_path exists
(neuprotein) czh@zju2:~/clustering/trajectory/code/python/TrajCL-master$ python train.py --dataset geolife
[train.py:32 <module>()] -> python train.py --dataset geolife
[train.py:33 <module>()] -> ================================
[train.py:34 <module>()] -> debug = True
dumpfile_uniqueid =
seed = 2000
device = cuda:0
root_dir = /home/czh/clustering/trajectory/code/python/TrajCL-master
checkpoint_dir = /home/czh/clustering/trajectory/code/python/TrajCL-master/exp/snapshots
dataset = geolife
dataset_prefix = 0_geolife
dataset_file = /home/czh/clustering/trajectory/code/python/TrajCL-master/data/0_geolife
dataset_cell_file = /home/czh/clustering/trajectory/code/python/TrajCL-master/data/0_geolife_cell100_cellspace.pkl
dataset_embs_file = /home/czh/clustering/trajectory/code/python/TrajCL-master/data/0_geolife_cell100_embdim256_embs.pkl
min_lon = 116.200047
min_lat = 39.851057
max_lon = 116.499288
max_lat = 40.0699999
max_traj_len = 200
min_traj_len = 20
cell_size = 100.0
cellspace_buffer = 500.0
trajcl_batch_size = 128
cell_embedding_dim = 256
seq_embedding_dim = 256
moco_proj_dim = 128
moco_nqueue = 2048
moco_temperature = 0.05
trajcl_training_epochs = 100
trajcl_training_bad_patience = 5
trajcl_training_lr = 0.001
trajcl_training_lr_degrade_gamma = 0.5
trajcl_training_lr_degrade_step = 5
trajcl_aug1 = mask
trajcl_aug2 = subset
trajcl_local_mask_sidelen = 1100.0
trans_attention_head = 4
trans_attention_dropout = 0.1
trans_attention_layer = 2
trans_pos_encoder_dropout = 0.1
trans_hidden_dim = 2048
traj_simp_dist = 100
traj_shift_dist = 200
traj_mask_ratio = 0.3
traj_add_ratio = 0.3
traj_subset_ratio = 0.7
test_expl_lcss_edr_epsilon = 0.25
trajsimi_encoder_name = TrajCL
trajsimi_encoder_mode = finetune_all

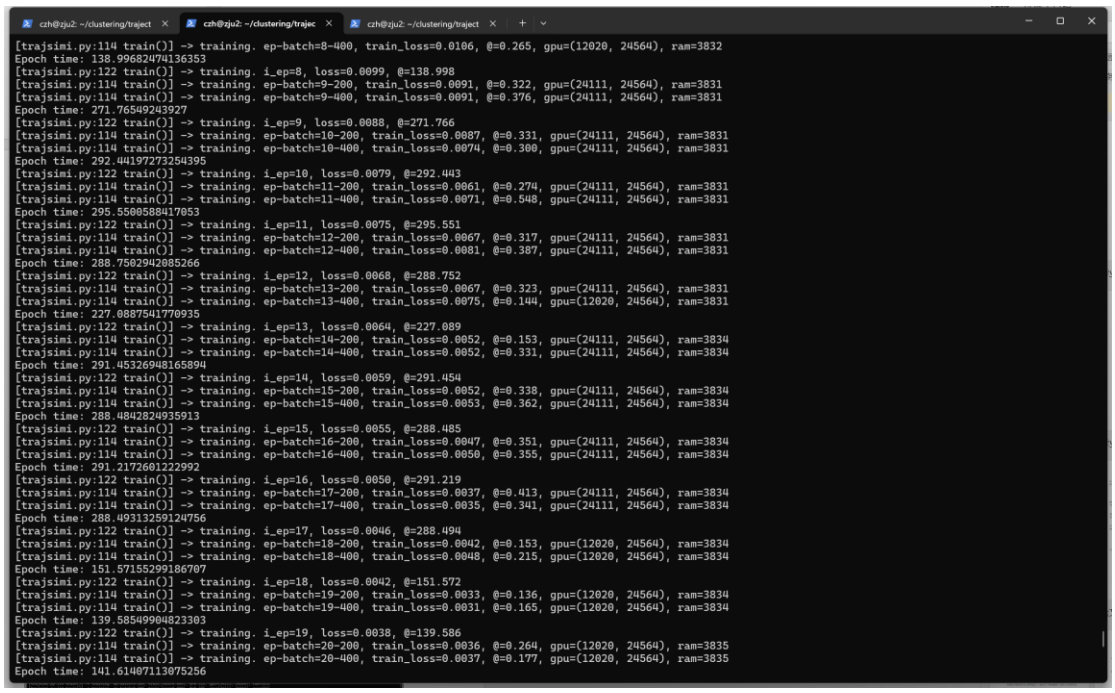

czh@zju2: ~/clustering/traject
czh@zju2: ~/clustering/trajec
czh@zju2: ~/clustering/traject
trajsimi_encoder_name = TrajCL
trajsimi_encoder_mode = finetune_all
trajsimi_measure_fn_name = edwp
trajsimi_batch_size = 128
trajsimi_epoch = 30
trajsimi_training_bad_patience = 10
trajsimi_learning_rate = 0.0001
trajsimi_learning_weight_decay = 0.0001
trajsimi_finetune_lr_rescale = 0.5
final_embedding_path = /mnt/data_hdd1/czh/TrajCL/data/0_geolife_2000_edwp
[train.py:35 <module>()] -> ================================
[data_loader.py:12 read_traj_dataset()] -> [Load traj dataset] START.
[data_loader.py:26 read_traj_dataset()] -> [Load traj dataset] END. @=8, #=13386(13386/1338/2678)
[trajcl.py:154 train()] -> [Training] START! timestamp=1712631950
Total Trainable Parameter Num: 2729997
[trajcl.py:195 train()] -> [Training] ep-batch=0-100, loss=3.519, @=67.213, gpu=(20193, 24564), ram=5065
Epoch time: 68.19092559814453
[trajcl.py:203 train()] -> [Training] ep=0: avg_loss=4.137, @=68.191/68.192, gpu=(20193, 24564), ram=5065
[trajcl.py:195 train()] -> [Training] ep-batch=1-100, loss=2.955, @=66.618, gpu=(20659, 24564), ram=5067
Epoch time: 68.469683408737718
[trajcl.py:203 train()] -> [Training] ep=1: avg_loss=3.232, @=68.470/136.713, gpu=(20659, 24564), ram=5066
[trajcl.py:195 train()] -> [Training] ep-batch=2-100, loss=2.478, @=66.549, gpu=(20017, 24564), ram=5041
Epoch time: 68.456056356643005
[trajcl.py:203 train()] -> [Training] ep=2: avg_loss=2.765, @=68.457/205.225, gpu=(20017, 24564), ram=5040
[trajcl.py:195 train()] -> [Training] ep-batch=3-100, loss=2.196, @=64.121, gpu=(20429, 24564), ram=5066
Epoch time: 66.11690855026245
[trajcl.py:203 train()] -> [Training] ep=3: avg_loss=2.363, @=66.118/271.396, gpu=(20429, 24564), ram=5066
[trajcl.py:195 train()] -> [Training] ep-batch=4-100, loss=1.888, @=66.125, gpu=(20939, 24564), ram=5071
Epoch time: 68.99668383598328
[trajcl.py:203 train()] -> [Training] ep=4: avg_loss=2.073, @=68.997/340.447, gpu=(20939, 24564), ram=5071
[trajcl.py:195 train()] -> [Training] ep-batch=5-100, loss=1.599, @=65.331, gpu=(20941, 24564), ram=5069
Epoch time: 67.178444623947114
[trajcl.py:203 train()] -> [Training] ep=5: avg_loss=1.744, @=67.179/407.685, gpu=(20941, 24564), ram=5068
[trajcl.py:195 train()] -> [Training] ep-batch=6-100, loss=1.524, @=63.938, gpu=(20941, 24564), ram=5069
Epoch time: 65.846517086022905
[trajcl.py:203 train()] -> [Training] ep=6: avg_loss=1.555, @=65.847/473.588, gpu=(20941, 24564), ram=5068
[trajcl.py:195 train()] -> [Training] ep-batch=7-100, loss=1.452, @=66.146, gpu=(22853, 24564), ram=5040
Epoch time: 68.13194656637207
[trajcl.py:203 train()] -> [Training] ep=7: avg_loss=1.417, @=68.133/541.777, gpu=(22853, 24564), ram=5040
[trajcl.py:195 train()] -> [Training] ep-batch=8-100, loss=1.173, @=66.023, gpu=(22853, 24564), ram=5068
Epoch time: 67.877482652664418
[trajcl.py:203 train()] -> [Training] ep=8: avg_loss=1.287, @=67.879/609.710, gpu=(22853, 24564), ram=5068
[trajcl.py:195 train()] -> [Training] ep-batch=9-100, loss=1.012, @=58.317, gpu=(22853, 24564), ram=5041
Epoch time: 59.351938009262085
[trajcl.py:203 train()] -> [Training] ep=9: avg_loss=1.188, @=59.353/669.124, gpu=(22853, 24564), ram=5041
[trajcl.py:195 train()] -> [Training] ep-batch=10-100, loss=1.061, @=33.564, gpu=(16302, 24564), ram=5067
Epoch time: 34.579431772232056
[trajcl.py:203 train()] -> [Training] ep=10: avg_loss=1.055, @=34.580/703.761, gpu=(16302, 24564), ram=5067
[trajcl.py:195 train()] -> [Training] ep-batch=11-100, loss=0.978, @=45.166, gpu=(22853, 24564), ram=5068
Epoch time: 47.201172828674316

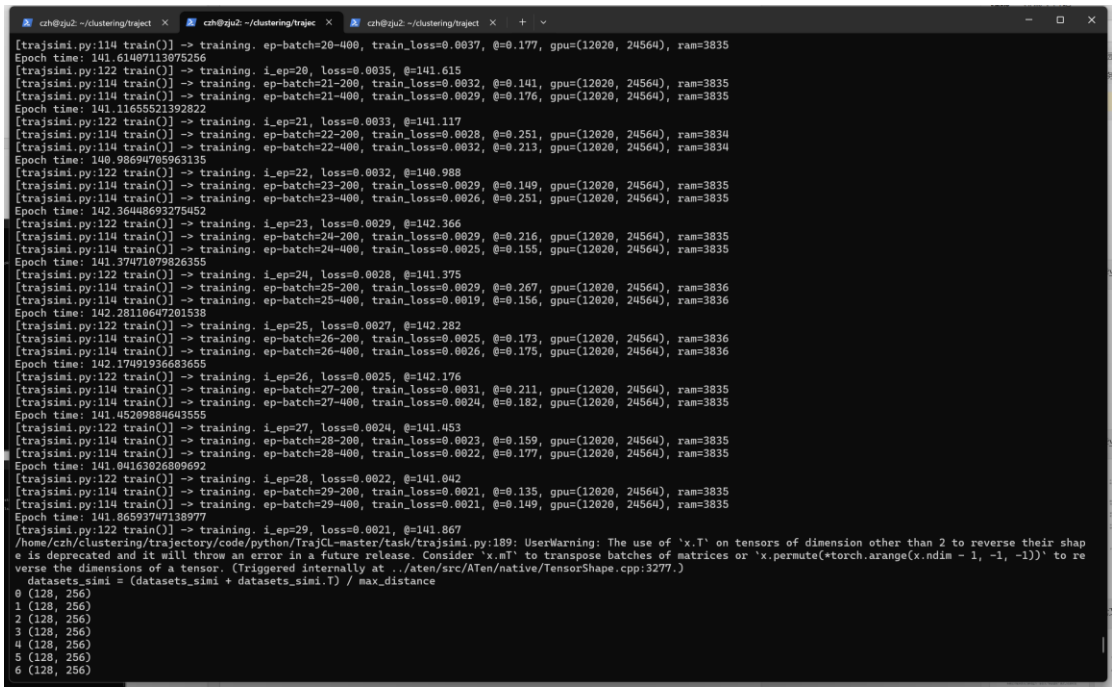

czh@zju2: ~/clustering/traject
czh@zju2: ~/clustering/trajec
czh@zju2: ~/clustering/traject
[trajcl.py:195 train()] -> [Training] ep-batch=11-100, loss=0.978, @=45.166, gpu=(22853, 24564), ram=5068
Epoch time: 47.201172828674316
[trajcl.py:203 train()] -> [Training] ep=11: avg_loss=0.963, @=47.202/751.020, gpu=(22853, 24564), ram=5068
[trajcl.py:195 train()] -> [Training] ep-batch=12-100, loss=0.876, @=64.561, gpu=(22853, 24564), ram=5069
Epoch time: 66.62738013267517
[trajcl.py:203 train()] -> [Training] ep=12: avg_loss=0.893, @=66.628/817.708, gpu=(22853, 24564), ram=5069
[trajcl.py:195 train()] -> [Training] ep-batch=13-100, loss=0.895, @=62.518, gpu=(22853, 24564), ram=5069
Epoch time: 64.52781510353088
[trajcl.py:203 train()] -> [Training] ep=13: avg_loss=0.855, @=64.529/882.297, gpu=(22853, 24564), ram=5069
[trajcl.py:195 train()] -> [Training] ep-batch=14-100, loss=0.740, @=64.736, gpu=(22853, 24564), ram=5068
Epoch time: 66.59988403320312
[trajcl.py:203 train()] -> [Training] ep=14: avg_loss=0.801, @=66.601/948.952, gpu=(22853, 24564), ram=5068
[trajcl.py:195 train()] -> [Training] ep-batch=15-100, loss=0.788, @=66.605, gpu=(22853, 24564), ram=5070
Epoch time: 68.63757228851318
[trajcl.py:203 train()] -> [Training] ep=15: avg_loss=0.728, @=68.639/1017.645, gpu=(22853, 24564), ram=5071
[trajcl.py:195 train()] -> [Training] ep-batch=16-100, loss=0.764, @=66.349, gpu=(22853, 24564), ram=5081
Epoch time: 68.35329508781433
[trajcl.py:203 train()] -> [Training] ep=16: avg_loss=0.691, @=68.354/1086.056, gpu=(22853, 24564), ram=5081
[trajcl.py:195 train()] -> [Training] ep-batch=17-100, loss=0.655, @=67.567, gpu=(22853, 24564), ram=5068
Epoch time: 69.26299309730053
[trajcl.py:203 train()] -> [Training] ep=17: avg_loss=0.663, @=69.264/1155.374, gpu=(22853, 24564), ram=5068
[trajcl.py:195 train()] -> [Training] ep-batch=18-100, loss=0.698, @=64.057, gpu=(22853, 24564), ram=5096
Epoch time: 66.1298713684082
[trajcl.py:203 train()] -> [Training] ep=18: avg_loss=0.634, @=66.131/1221.562, gpu=(22853, 24564), ram=5097
[trajcl.py:195 train()] -> [Training] ep-batch=19-100, loss=0.567, @=64.057, gpu=(22853, 24564), ram=5071
Epoch time: 65.84896016120911
[trajcl.py:203 train()] -> [Training] ep=19: avg_loss=0.610, @=65.850/1287.466, gpu=(22853, 24564), ram=5071
[trajcl.py:195 train()] -> [Training] ep-batch=20-100, loss=0.555, @=65.146, gpu=(22853, 24564), ram=5070
Epoch time: 67.17860221862793
[trajcl.py:203 train()] -> [Training] ep=20: avg_loss=0.592, @=67.179/1354.699, gpu=(22853, 24564), ram=5071
[trajcl.py:195 train()] -> [Training] ep-batch=21-100, loss=0.655, @=61.517, gpu=(22853, 24564), ram=5069
Epoch time: 63.56134724617004
[trajcl.py:203 train()] -> [Training] ep=21: avg_loss=0.560, @=63.562/1418.315, gpu=(22853, 24564), ram=5070
[trajcl.py:195 train()] -> [Training] ep-batch=22-100, loss=0.626, @=35.024, gpu=(24453, 24564), ram=5040
Epoch time: 36.02840280532837
[trajcl.py:203 train()] -> [Training] ep=22: avg_loss=0.548, @=36.029/1454.398, gpu=(24453, 24564), ram=5040
[trajcl.py:195 train()] -> [Training] ep-batch=23-100, loss=0.609, @=32.974, gpu=(21062, 24564), ram=5069
Epoch time: 34.958064794540405
[trajcl.py:203 train()] -> [Training] ep=23: avg_loss=0.538, @=34.959/1489.412, gpu=(21062, 24564), ram=5069
[trajcl.py:195 train()] -> [Training] ep-batch=24-100, loss=0.608, @=33.497, gpu=(14196, 24564), ram=5068
Epoch time: 34.50780725479126
[trajcl.py:203 train()] -> [Training] ep=24: avg_loss=0.524, @=34.510/1523.982, gpu=(14196, 24564), ram=5067
[trajcl.py:195 train()] -> [Training] ep-batch=25-100, loss=0.549, @=37.953, gpu=(21043, 24564), ram=5071
Epoch time: 40.04390788078308
[trajcl.py:203 train()] -> [Training] ep=25: avg_loss=0.510, @=40.045/1564.085, gpu=(21043, 24564), ram=5071
[trajcl.py:195 train()] -> [Training] ep-batch=26-100, loss=0.548, @=63.872, gpu=(22539, 24564), ram=5064
Epoch time: 65.76817893981934
[trajcl.py:203 train()] -> [Training] ep=26: avg_loss=0.512, @=65.769/1629.905, gpu=(22539, 24564), ram=5064
[trajcl.py:195 train()] -> [Training] ep-batch=27-100, loss=0.485, @=62.102, gpu=(20069, 24564), ram=5068
Epoch time: 63.92058539390564


czh@zju2: ~/clustering/traject
czh@zju2: ~/clustering/trajec
czh@zju2: ~/clustering/traject
[trajcl.py:195 train()] -> [Training] ep-batch=27-100, loss=0.485, @=62.102, gpu=(20069, 24564), ram=5068
Epoch time: 63.92058539390564
[trajcl.py:203 train()] -> [Training] ep=27: avg_loss=0.504, @=63.921/1693.826, gpu=(20069, 24564), ram=5068
[trajcl.py:195 train()] -> [Training] ep-batch=28-100, loss=0.487, @=63.257, gpu=(22345, 24564), ram=5067
Epoch time: 65.29390764236645
[trajcl.py:203 train()] -> [Training] ep=28: avg_loss=0.485, @=65.295/1759.174, gpu=(22345, 24564), ram=5067
[trajcl.py:195 train()] -> [Training] ep-batch=29-100, loss=0.625, @=64.534, gpu=(22345, 24564), ram=5066
Epoch time: 66.40948295593262
[trajcl.py:203 train()] -> [Training] ep=29: avg_loss=0.497, @=66.410/1825.639, gpu=(22345, 24564), ram=5066
[trajcl.py:195 train()] -> [Training] ep-batch=30-100, loss=0.480, @=67.510, gpu=(22347, 24564), ram=5065
Epoch time: 69.33820080757141
[trajcl.py:203 train()] -> [Training] ep=30: avg_loss=0.485, @=69.339/1894.978, gpu=(22347, 24564), ram=5065
[trajcl.py:195 train()] -> [Training] ep-batch=31-100, loss=0.540, @=64.830, gpu=(22347, 24564), ram=5067
Epoch time: 66.84447479248047
[trajcl.py:203 train()] -> [Training] ep=31: avg_loss=0.482, @=66.845/1961.824, gpu=(22347, 24564), ram=5067
[trajcl.py:195 train()] -> [Training] ep-batch=32-100, loss=0.491, @=63.192, gpu=(22347, 24564), ram=5066
Epoch time: 65.08960127830505
[trajcl.py:203 train()] -> [Training] ep=32: avg_loss=0.476, @=65.090/2026.968, gpu=(22347, 24564), ram=5066
[trajcl.py:195 train()] -> [Training] ep-batch=33-100, loss=0.494, @=64.369, gpu=(22347, 24564), ram=5065
Epoch time: 66.42205595970154
[trajcl.py:203 train()] -> [Training] ep=33: avg_loss=0.474, @=66.423/2093.446, gpu=(22347, 24564), ram=5066
[trajcl.py:195 train()] -> [Training] ep-batch=34-100, loss=0.533, @=63.165, gpu=(22347, 24564), ram=5066
Epoch time: 65.24126434326172
[trajcl.py:203 train()] -> [Training] ep=34: avg_loss=0.481, @=65.242/2158.742, gpu=(22347, 24564), ram=5067
[trajcl.py:195 train()] -> [Training] ep-batch=35-100, loss=0.627, @=62.898, gpu=(22347, 24564), ram=5065
Epoch time: 64.91512441635132
[trajcl.py:203 train()] -> [Training] ep=35: avg_loss=0.486, @=64.916/2223.658, gpu=(22347, 24564), ram=5066
[trajcl.py:195 train()] -> [Training] ep-batch=36-100, loss=0.432, @=54.160, gpu=(22347, 24564), ram=5066
Epoch time: 55.144330978393555
[trajcl.py:203 train()] -> [Training] ep=36: avg_loss=0.484, @=55.145/2278.803, gpu=(22347, 24564), ram=5066
[trajcl.py:195 train()] -> [Training] ep-batch=37-100, loss=0.499, @=33.372, gpu=(15500, 24564), ram=5069
Epoch time: 34.36921167373657
[trajcl.py:203 train()] -> [Training] ep=37: avg_loss=0.475, @=34.370/2313.173, gpu=(15500, 24564), ram=5069
[trajcl.py:195 train()] -> [Training] ep-batch=38-100, loss=0.470, @=48.598, gpu=(23843, 24564), ram=5039
Epoch time: 50.55513405799866
[trajcl.py:203 train()] -> [Training] ep=38: avg_loss=0.483, @=50.556/2363.729, gpu=(23843, 24564), ram=5039
[trajcl.py:219 train()] -> [Training] END! @=2363.7297377586365, best_epoch=33, best_loss_train=0.473625
(neuprotein) czh@zju2:~/clustering/trajectory/code/python/TrajCL-master$ dataset=geolife
(neuprotein) czh@zju2:~/clustering/trajectory/code/python/TrajCL-master$ dist_type=frechet
(neuprotein) czh@zju2:~/clustering/trajectory/code/python/TrajCL-master$ seed=666
(neuprotein) czh@zju2:~/clustering/trajectory/code/python/TrajCL-master$ python train_trajsimi.py --dataset ${dataset} --trajsimi_measure_fn_name ${dist_type} --seed ${
seed}
[train_trajsimi.py:58 <module>()] -> python train_trajsimi.py --dataset geolife --trajsimi_measure_fn_name frechet --seed 666
[train_trajsimi.py:59 <module>()] -> ================================
[train_trajsimi.py:60 <module>()] -> debug = True
dumpfile_uniqueid =
seed = 666
device = cuda:0
root_dir = /home/czh/clustering/trajectory/code/python/TrajCL-master
checkpoint_dir = /home/czh/clustering/trajectory/code/python/TrajCL-master/exp/snapshots


czh@zju2: ~/clustering/traject
czh@zju2: ~/clustering/trajec
czh@zju2: ~/clustering/traject
device = cuda:0
root_dir = /home/czh/clustering/trajectory/code/python/TrajCL-master
checkpoint_dir = /home/czh/clustering/trajectory/code/python/TrajCL-master/exp/snapshots
dataset = geolife
dataset_prefix = 0_geolife
dataset_file = /home/czh/clustering/trajectory/code/python/TrajCL-master/data/0_geolife
dataset_cell_file = /home/czh/clustering/trajectory/code/python/TrajCL-master/data/0_geolife_cell100_cellspace.pkl
dataset_embs_file = /home/czh/clustering/trajectory/code/python/TrajCL-master/data/0_geolife_cell100_embdim256_embs.pkl
min_lon = 116.200047
min_lat = 39.851057
max_lon = 116.499288
max_lat = 40.0699999
max_traj_len = 200
min_traj_len = 20
cell_size = 100.0
cellspace_buffer = 500.0
trajcl_batch_size = 128
cell_embedding_dim = 256
seq_embedding_dim = 256
moco_proj_dim = 128
moco_nqueue = 2048
moco_temperature = 0.05
trajcl_training_epochs = 100
trajcl_training_bad_patience = 5
trajcl_training_lr = 0.001
trajcl_training_lr_degrade_gamma = 0.5
trajcl_training_lr_degrade_step = 5
trajcl_aug1 = mask
trajcl_aug2 = subset
trajcl_local_mask_sidelen = 1100.0
trans_attention_head = 4
trans_attention_dropout = 0.1
trans_attention_layer = 2
trans_pos_encoder_dropout = 0.1
trans_hidden_dim = 2048
traj_simp_dist = 100
traj_shift_dist = 200
traj_mask_ratio = 0.3
traj_add_ratio = 0.3
traj_subset_ratio = 0.7
test_expl_lcss_edr_epsilon = 0.25
trajsimi_encoder_name = TrajCL
trajsimi_encoder_mode = finetune_all
trajsimi_measure_fn_name = frechet
trajsimi_batch_size = 128
trajsimi_epoch = 30
trajsimi_training_bad_patience = 10
trajsimi_learning_rate = 0.0001
trajsimi_learning_weight_decay = 0.0001
trajsimi_finetune_lr_rescale = 0.5


czh@zju2: ~/clustering/traject
czh@zju2: ~/clustering/trajec
czh@zju2: ~/clustering/traject
trajsimi_learning_weight_decay = 0.0001
trajsimi_finetune_lr_rescale = 0.5
final_embedding_path = /mnt/data_hdd1/czh/TrajCL/data/0_geolife_666_frechet
[train_trajsimi.py:61 <module>()] -> ================================
final_embedding_path: /mnt/data_hdd1/czh/TrajCL/data/0_geolife_666_frechet
[data_loader.py:44 read_trajsimi_traj_dataset()] -> [Load trajsimi traj dataset] START.
[data_loader.py:68 read_trajsimi_traj_dataset()] -> trajsimi traj dataset sizes. traj: #total=10000 (trains/evals/tests=3000/1000/13386)
[data_loader.py:74 read_trajsimi_simi_dataset()] -> [Load trajsimi simi dataset] START.
[data_loader.py:88 read_trajsimi_simi_dataset()] -> [trajsimi simi dataset loaded] @=0.08080148696899414, trains/evals/tests=3000/1/1
[trajsimi.py:53 train()] -> train_trajsimi start.@=1712641682.959
Total Trainable Parameter Num 1: 131584
Total Trainable Parameter Num 2: 2631309
[trajsimi.py:114 train()] -> training. ep-batch=0-200, train_loss=0.1099, @=0.526, gpu=(18867, 24564), ram=3830
[trajsimi.py:114 train()] -> training. ep-batch=0-400, train_loss=0.0750, @=0.257, gpu=(18867, 24564), ram=3830
Epoch time: 259.1498444080353
[trajsimi.py:122 train()] -> training. i_ep=0, loss=1.5807, @=259.150
[trajsimi.py:114 train()] -> training. ep-batch=1-200, train_loss=0.0309, @=0.302, gpu=(18867, 24564), ram=3831
[trajsimi.py:114 train()] -> training. ep-batch=1-400, train_loss=0.0365, @=0.304, gpu=(18867, 24564), ram=3831
Epoch time: 259.78840136528015
[trajsimi.py:122 train()] -> training. i_ep=1, loss=0.0393, @=259.790
[trajsimi.py:114 train()] -> training. ep-batch=2-200, train_loss=0.0266, @=0.530, gpu=(18867, 24564), ram=3830
[trajsimi.py:114 train()] -> training. ep-batch=2-400, train_loss=0.0180, @=0.174, gpu=(18867, 24564), ram=3830
Epoch time: 221.7061252593994
[trajsimi.py:122 train()] -> training. i_ep=2, loss=0.0259, @=221.707
[trajsimi.py:114 train()] -> training. ep-batch=3-200, train_loss=0.0205, @=0.263, gpu=(12020, 24564), ram=3830
[trajsimi.py:114 train()] -> training. ep-batch=3-400, train_loss=0.0225, @=0.190, gpu=(12020, 24564), ram=3830
Epoch time: 139.61875581741333
[trajsimi.py:122 train()] -> training. i_ep=3, loss=0.0204, @=139.619
[trajsimi.py:114 train()] -> training. ep-batch=4-200, train_loss=0.0158, @=0.211, gpu=(12020, 24564), ram=3831
[trajsimi.py:114 train()] -> training. ep-batch=4-400, train_loss=0.0153, @=0.248, gpu=(12020, 24564), ram=3831
Epoch time: 137.66594576835632
[trajsimi.py:122 train()] -> training. i_ep=4, loss=0.0170, @=137.667
[trajsimi.py:114 train()] -> training. ep-batch=5-200, train_loss=0.0162, @=0.190, gpu=(12020, 24564), ram=3831
[trajsimi.py:114 train()] -> training. ep-batch=5-400, train_loss=0.0138, @=0.176, gpu=(12020, 24564), ram=3831
Epoch time: 137.26361393928528
[trajsimi.py:122 train()] -> training. i_ep=5, loss=0.0146, @=137.265
[trajsimi.py:114 train()] -> training. ep-batch=6-200, train_loss=0.0142, @=0.201, gpu=(12020, 24564), ram=3832
[trajsimi.py:114 train()] -> training. ep-batch=6-400, train_loss=0.0132, @=0.214, gpu=(12020, 24564), ram=3832
Epoch time: 137.40099120140076
[trajsimi.py:122 train()] -> training. i_ep=6, loss=0.0127, @=137.402
[trajsimi.py:114 train()] -> training. ep-batch=7-200, train_loss=0.0109, @=0.211, gpu=(12020, 24564), ram=3832
[trajsimi.py:114 train()] -> training. ep-batch=7-400, train_loss=0.0103, @=0.175, gpu=(12020, 24564), ram=3832
Epoch time: 137.0387303829193
[trajsimi.py:122 train()] -> training. i_ep=7, loss=0.0112, @=137.040
[trajsimi.py:114 train()] -> training. ep-batch=8-200, train_loss=0.0084, @=0.154, gpu=(12020, 24564), ram=3832
[trajsimi.py:114 train()] -> training. ep-batch=8-400, train_loss=0.0106, @=0.265, gpu=(12020, 24564), ram=3832
Epoch time: 138.99682474136353
[trajsimi.py:122 train()] -> training. i_ep=8, loss=0.0099, @=138.998
[trajsimi.py:114 train()] -> training. ep-batch=9-200, train_loss=0.0091, @=0.322, gpu=(24111, 24564), ram=3831
[trajsimi.py:114 train()] -> training. ep-batch=9-400, train_loss=0.0091, @=0.376, gpu=(24111, 24564), ram=3831


czh@zju2: ~/clustering/traject
czh@zju2: ~/clustering/trajec
czh@zju2: ~/clustering/traject
[trajsimi.py:114 train()] -> training. ep-batch=8-400, train_loss=0.0106, @=0.265, gpu=(12020, 24564), ram=3832
Epoch time: 138.99682474136353
[trajsimi.py:122 train()] -> training. i_ep=8, loss=0.0099, @=138.998
[trajsimi.py:114 train()] -> training. ep-batch=9-200, train_loss=0.0091, @=0.322, gpu=(24111, 24564), ram=3831
[trajsimi.py:114 train()] -> training. ep-batch=9-400, train_loss=0.0091, @=0.376, gpu=(24111, 24564), ram=3831
Epoch time: 271.76549243927
[trajsimi.py:122 train()] -> training. i_ep=9, loss=0.0088, @=271.766
[trajsimi.py:114 train()] -> training. ep-batch=10-200, train_loss=0.0087, @=0.331, gpu=(24111, 24564), ram=3831
[trajsimi.py:114 train()] -> training. ep-batch=10-400, train_loss=0.0074, @=0.300, gpu=(24111, 24564), ram=3831
Epoch time: 292.44197273254395
[trajsimi.py:122 train()] -> training. i_ep=10, loss=0.0079, @=292.443
[trajsimi.py:114 train()] -> training. ep-batch=11-200, train_loss=0.0061, @=0.274, gpu=(24111, 24564), ram=3831
[trajsimi.py:114 train()] -> training. ep-batch=11-400, train_loss=0.0071, @=0.548, gpu=(24111, 24564), ram=3831
Epoch time: 295.5500588417053
[trajsimi.py:122 train()] -> training. i_ep=11, loss=0.0075, @=295.551
[trajsimi.py:114 train()] -> training. ep-batch=12-200, train_loss=0.0067, @=0.317, gpu=(24111, 24564), ram=3831
[trajsimi.py:114 train()] -> training. ep-batch=12-400, train_loss=0.0081, @=0.387, gpu=(24111, 24564), ram=3831
Epoch time: 288.7502942085266
[trajsimi.py:122 train()] -> training. i_ep=12, loss=0.0068, @=288.752
[trajsimi.py:114 train()] -> training. ep-batch=13-200, train_loss=0.0067, @=0.323, gpu=(24111, 24564), ram=3831
[trajsimi.py:114 train()] -> training. ep-batch=13-400, train_loss=0.0075, @=0.144, gpu=(12020, 24564), ram=3831
Epoch time: 227.0887541770935
[trajsimi.py:122 train()] -> training. i_ep=13, loss=0.0064, @=227.089
[trajsimi.py:114 train()] -> training. ep-batch=14-200, train_loss=0.0052, @=0.153, gpu=(24111, 24564), ram=3834
[trajsimi.py:114 train()] -> training. ep-batch=14-400, train_loss=0.0052, @=0.331, gpu=(24111, 24564), ram=3834
Epoch time: 291.45326948165894
[trajsimi.py:122 train()] -> training. i_ep=14, loss=0.0059, @=291.454
[trajsimi.py:114 train()] -> training. ep-batch=15-200, train_loss=0.0052, @=0.338, gpu=(24111, 24564), ram=3834
[trajsimi.py:114 train()] -> training. ep-batch=15-400, train_loss=0.0053, @=0.362, gpu=(24111, 24564), ram=3834
Epoch time: 288.4842824935913
[trajsimi.py:122 train()] -> training. i_ep=15, loss=0.0055, @=288.485
[trajsimi.py:114 train()] -> training. ep-batch=16-200, train_loss=0.0047, @=0.351, gpu=(24111, 24564), ram=3834
[trajsimi.py:114 train()] -> training. ep-batch=16-400, train_loss=0.0050, @=0.355, gpu=(24111, 24564), ram=3834
Epoch time: 291.2172601222992
[trajsimi.py:122 train()] -> training. i_ep=16, loss=0.0050, @=291.219
[trajsimi.py:114 train()] -> training. ep-batch=17-200, train_loss=0.0037, @=0.413, gpu=(24111, 24564), ram=3834
[trajsimi.py:114 train()] -> training. ep-batch=17-400, train_loss=0.0035, @=0.341, gpu=(24111, 24564), ram=3834
Epoch time: 288.49313259124756
[trajsimi.py:122 train()] -> training. i_ep=17, loss=0.0046, @=288.494
[trajsimi.py:114 train()] -> training. ep-batch=18-200, train_loss=0.0042, @=0.153, gpu=(12020, 24564), ram=3834
[trajsimi.py:114 train()] -> training. ep-batch=18-400, train_loss=0.0048, @=0.215, gpu=(12020, 24564), ram=3834
Epoch time: 151.57155299186707
[trajsimi.py:122 train()] -> training. i_ep=18, loss=0.0042, @=151.572
[trajsimi.py:114 train()] -> training. ep-batch=19-200, train_loss=0.0033, @=0.136, gpu=(12020, 24564), ram=3834
[trajsimi.py:114 train()] -> training. ep-batch=19-400, train_loss=0.0031, @=0.165, gpu=(12020, 24564), ram=3834
Epoch time: 139.58549904823303
[trajsimi.py:122 train()] -> training. i_ep=19, loss=0.0038, @=139.586
[trajsimi.py:114 train()] -> training. ep-batch=20-200, train_loss=0.0036, @=0.264, gpu=(12020, 24564), ram=3835
[trajsimi.py:114 train()] -> training. ep-batch=20-400, train_loss=0.0037, @=0.177, gpu=(12020, 24564), ram=3835
Epoch time: 141.61407113075256


czh@zju2: ~/clustering/traject
czh@zju2: ~/clustering/trajec
czh@zju2: ~/clustering/traject
[trajsimi.py:114 train()] -> training. ep-batch=20-400, train_loss=0.0037, @=0.177, gpu=(12020, 24564), ram=3835
Epoch time: 141.61407113075256
[trajsimi.py:122 train()] -> training. i_ep=20, loss=0.0035, @=141.615
[trajsimi.py:114 train()] -> training. ep-batch=21-200, train_loss=0.0032, @=0.141, gpu=(12020, 24564), ram=3835
[trajsimi.py:114 train()] -> training. ep-batch=21-400, train_loss=0.0029, @=0.176, gpu=(12020, 24564), ram=3835
Epoch time: 141.11655521392822
[trajsimi.py:122 train()] -> training. i_ep=21, loss=0.0033, @=141.117
[trajsimi.py:114 train()] -> training. ep-batch=22-200, train_loss=0.0028, @=0.251, gpu=(12020, 24564), ram=3834
[trajsimi.py:114 train()] -> training. ep-batch=22-400, train_loss=0.0032, @=0.213, gpu=(12020, 24564), ram=3834
Epoch time: 140.98694705963135
[trajsimi.py:122 train()] -> training. i_ep=22, loss=0.0032, @=140.988
[trajsimi.py:114 train()] -> training. ep-batch=23-200, train_loss=0.0029, @=0.149, gpu=(12020, 24564), ram=3835
[trajsimi.py:114 train()] -> training. ep-batch=23-400, train_loss=0.0026, @=0.251, gpu=(12020, 24564), ram=3835
Epoch time: 142.36448693275452
[trajsimi.py:122 train()] -> training. i_ep=23, loss=0.0029, @=142.366
[trajsimi.py:114 train()] -> training. ep-batch=24-200, train_loss=0.0029, @=0.216, gpu=(12020, 24564), ram=3835
[trajsimi.py:114 train()] -> training. ep-batch=24-400, train_loss=0.0025, @=0.155, gpu=(12020, 24564), ram=3835
Epoch time: 141.37471079826355
[trajsimi.py:122 train()] -> training. i_ep=24, loss=0.0028, @=141.375
[trajsimi.py:114 train()] -> training. ep-batch=25-200, train_loss=0.0029, @=0.267, gpu=(12020, 24564), ram=3836
[trajsimi.py:114 train()] -> training. ep-batch=25-400, train_loss=0.0019, @=0.156, gpu=(12020, 24564), ram=3836
Epoch time: 142.28110647201538
[trajsimi.py:122 train()] -> training. i_ep=25, loss=0.0027, @=142.282
[trajsimi.py:114 train()] -> training. ep-batch=26-200, train_loss=0.0025, @=0.173, gpu=(12020, 24564), ram=3836
[trajsimi.py:114 train()] -> training. ep-batch=26-400, train_loss=0.0026, @=0.175, gpu=(12020, 24564), ram=3836
Epoch time: 142.17491936683655
[trajsimi.py:122 train()] -> training. i_ep=26, loss=0.0025, @=142.176
[trajsimi.py:114 train()] -> training. ep-batch=27-200, train_loss=0.0031, @=0.211, gpu=(12020, 24564), ram=3835
[trajsimi.py:114 train()] -> training. ep-batch=27-400, train_loss=0.0024, @=0.182, gpu=(12020, 24564), ram=3835
Epoch time: 141.45209884643555
[trajsimi.py:122 train()] -> training. i_ep=27, loss=0.0024, @=141.453
[trajsimi.py:114 train()] -> training. ep-batch=28-200, train_loss=0.0023, @=0.159, gpu=(12020, 24564), ram=3835
[trajsimi.py:114 train()] -> training. ep-batch=28-400, train_loss=0.0022, @=0.177, gpu=(12020, 24564), ram=3835
Epoch time: 141.04163026809692
[trajsimi.py:122 train()] -> training. i_ep=28, loss=0.0022, @=141.042
[trajsimi.py:114 train()] -> training. ep-batch=29-200, train_loss=0.0021, @=0.135, gpu=(12020, 24564), ram=3835
[trajsimi.py:114 train()] -> training. ep-batch=29-400, train_loss=0.0021, @=0.149, gpu=(12020, 24564), ram=3835
Epoch time: 141.86593747138977
[trajsimi.py:122 train()] -> training. i_ep=29, loss=0.0021, @=141.867
/home/czh/clustering/trajectory/code/python/TrajCL-master/task/trajsimi.py:189: UserWarning: The use of `x.T` on tensors of dimension other than 2 to reverse their shape is deprecated and it will throw an error in a future release. Consider `x.mT` to transpose batches of matrices or `x.permute(*torch.arange(x.ndim - 1, -1, -1))` to reverse the dimensions of a tensor. (Triggered internally at ../aten/src/ATen/native/TensorShape.cpp:3277.)
datasets_simi = (datasets_simi + datasets_simi.T) / max_distance
0 (128, 256)
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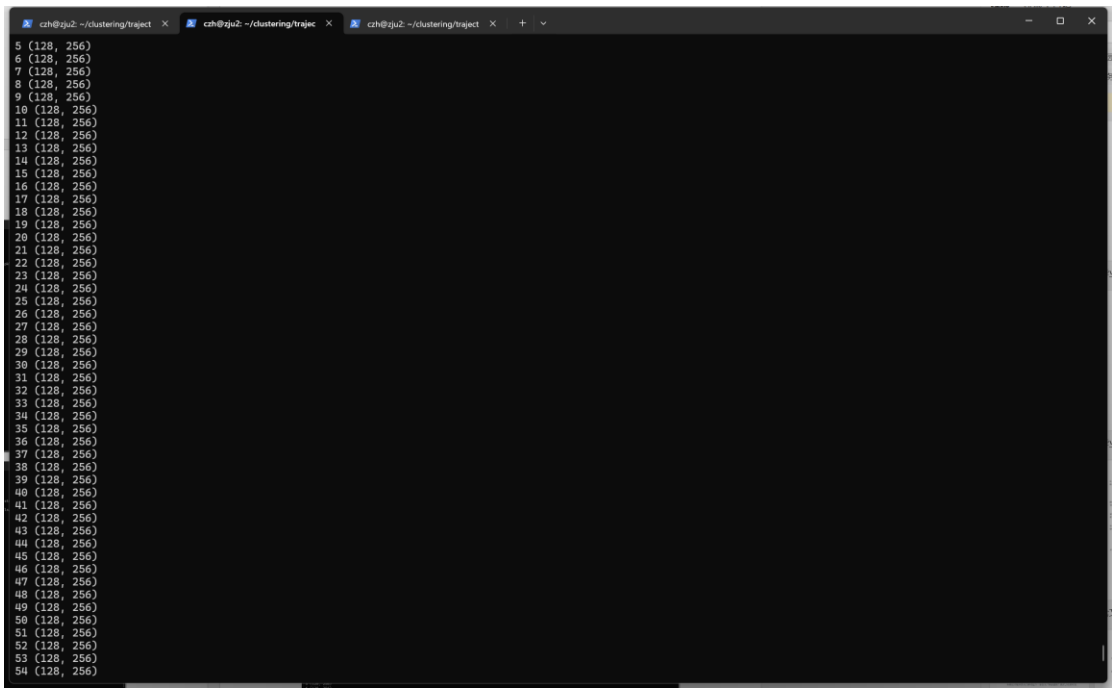
3 (128, 256)
4 (128, 256)
5 (128, 256)
6 (128, 256)


czh@zju2: ~/clustering/traject
czh@zju2: ~/clustering/trajec
czh@zju2: ~/clustering/traject
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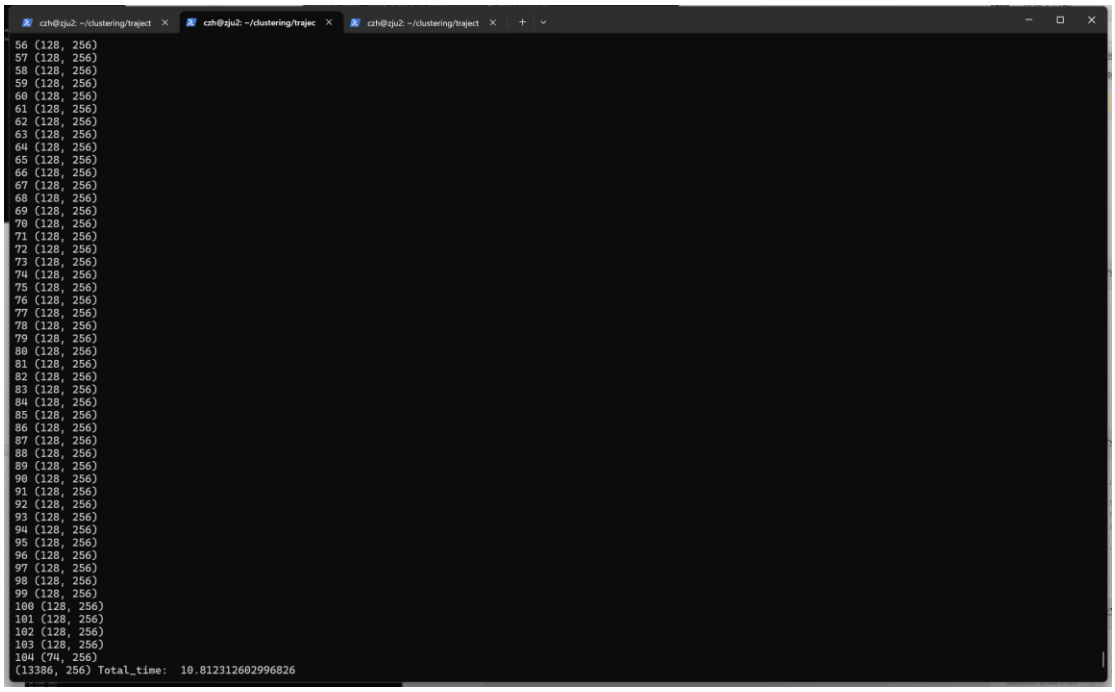
czh@zju2: ~/clustering/traject
czh@zju2: ~/clustering/trajec
czh@zju2: ~/clustering/traject
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102 (128, 256)
103 (128, 256)
104 (74, 256)
(13386, 256) Total_time: 10.812312602996826

```
(neuprotein) czh@zju2:~/clustering/trajectory/code/python/evaluate_metric$ python test_baseline.py
/mnt/data_hdd1/czh/TrajCL/data/0_geolife_666_frechet
------------------------------------------------------------
          Baseline Method:  trajcl
Test distance matrix shape:  (1000, 9386)
     Distance matrix shape:  (1000, 9386)
------------------------------------------------------------
********************************************************************************
------------------------------This is RESULT test_all-------------------------------
Test on 1000 trajectory sequences
Test Range: 0-999. Base Range: 0-9385.
Test          1       5      10      50     100
   1    0.2480  0.1012  0.0610  0.0172  0.0092
   5    0.4920  0.3378  0.2428  0.0793  0.0444
  10    0.6120  0.4804  0.3938  0.1506  0.0864
  50    0.8550  0.8086  0.7618  0.5487  0.3710
 100    0.9330  0.8974  0.8735  0.7504  0.6122
********************************************************************************
Baseline-Method:  trajcl ; Dataset:  0_geolife ; Distance:  frechet
Metric:    1-1    , Mean: 24.8000, Variance: 0.0000
Metric:    5-5    , Mean: 33.7800, Variance: 0.0000
Metric:   10-10   , Mean: 39.3800, Variance: 0.0000
Metric:   50-50   , Mean: 54.8680, Variance: 0.0000
Metric:  100-100  , Mean: 61.2210, Variance: 0.0000
Metric:   50-10   , Mean: 76.1800, Variance: 0.0000
(neuprotein) czh@zju2:~/clustering/trajectory/code/python/evaluate_metric$
```