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1 ssh://root@103.254.67.181:10006/usr/bin/python -u /home/
sunfengzhen/pycharm/typhoon_predict/typhoon_train.py
2 /usr/local/lib/python2.7/dist-packages/folium/__init__.py:59:
UserWarning: This version of folium is the last to support Python
2. Transition to Python 3 to be able to receive updates and
fixes. Check out https://python3statement.org/ for more info.
3 UserWarning
4 *****loading data*****
5 *****mode: test *****
6 load testdata from dir : ../../../../data/sfz/data_typhoon/rgb/
test_process
7 indices is [0, 12, 24, 36, 48, 60]
8 there are 6 sequences
9
10 there are 72 files in frames_file_name
11 data.shape (72, 200, 200, 3)
12 there are 72 pictures in frames_np
13 *****mode: train *****
14 time 01 load data from dir : ../../../../data/sfz/data_typhoon/rgb/
train
15 num of png_file_list = 6480
16 time 02 load data from dir : ../../../../data/sfz/data_typhoon/rgb/
train
17 num of png_file_list = 6480
18 time 03 load data from dir : ../../../../data/sfz/data_typhoon/rgb/
train
19 num of png_file_list = 6480
20 time 04 load data from dir : ../../../../data/sfz/data_typhoon/rgb/
train
21 num of png_file_list = 6480
22 time 05 load data from dir : ../../../../data/sfz/data_typhoon/rgb/
train
23 num of png_file_list = 6480
24 time 06 load data from dir : ../../../../data/sfz/data_typhoon/rgb/
train
25 num of png_file_list = 6480
26 indices is [0, 12, 24, 36, 48, 60, 72, 84, 96, 108, 120, 132,

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26 144, 156, 168, 180, 192, 204, 216, 228, 240, 252, 264, 276, 288,
300, 312, 324, 336, 348, 360, 372, 384, 396, 408, 420, 432, 444,
456, 468, 480, 492, 504, 516, 528, 540, 552, 564, 576, 588, 600,
612, 624, 636, 648, 660, 672, 684, 696, 708, 720, 732, 744, 756,
768, 780, 792, 804, 816, 828, 840, 852, 864, 876, 888, 900, 912,
924, 936, 948, 960, 972, 984, 996, 1008, 1020, 1032, 1044, 1056,
1068, 1080, 1092, 1104, 1116, 1128, 1140, 1152, 1164, 1176, 1188
, 1200, 1212, 1224, 1236, 1248, 1260, 1272, 1284, 1296, 1308,
1320, 1332, 1344, 1356, 1368, 1380, 1392, 1404, 1416, 1428, 1440
, 1452, 1464, 1476, 1488, 1500, 1512, 1524, 1536, 1548, 1560,
1572, 1584, 1596, 1608, 1620, 1632, 1644, 1656, 1668, 1680, 1692
, 1704, 1716, 1728, 1740, 1752, 1764, 1776, 1788, 1800, 1812,
1824, 1836, 1848, 1860, 1872, 1884, 1896, 1908, 1920, 1932, 1944
, 1956, 1968, 1980, 1992, 2004, 2016, 2028, 2040, 2052, 2064,
2076, 2088, 2100, 2112, 2124, 2136, 2148, 2160, 2172, 2184, 2196
, 2208, 2220, 2232, 2244, 2256, 2268, 2280, 2292, 2304, 2316,
2328, 2340, 2352, 2364, 2376, 2388, 2400, 2412, 2424, 2436, 2448
, 2460, 2472, 2484, 2496, 2508, 2520, 2532, 2544, 2556, 2568,
2580, 2592, 2604, 2616, 2628, 2640, 2652, 2664, 2676, 2688, 2700
, 2712, 2724, 2736, 2748, 2760, 2772, 2784, 2796, 2808, 2820,
2832, 2844, 2856, 2868, 2880, 2892, 2904, 2916, 2928, 2940, 2952
, 2964, 2976, 2988, 3000, 3012, 3024, 3036, 3048, 3060, 3072,
3084, 3096, 3108, 3120, 3132, 3144, 3156, 3168, 3180, 3192, 3204
, 3216, 3228, 3240, 3252, 3264, 3276, 3288, 3300, 3312, 3324,
3336, 3348, 3360, 3372, 3384, 3396, 3408, 3420, 3432, 3444, 3456
, 3468, 3480, 3492, 3504, 3516, 3528, 3540, 3552, 3564, 3576,
3588, 3600, 3612, 3624, 3636, 3648, 3660, 3672, 3684, 3696, 3708
, 3720, 3732, 3744, 3756, 3768, 3780, 3792, 3804, 3816, 3828,
3840, 3852, 3864, 3876, 3888, 3900, 3912, 3924, 3936, 3948, 3960
, 3972, 3984, 3996, 4008, 4020, 4032, 4044, 4056, 4068, 4080,
4092, 4104, 4116, 4128, 4140, 4152, 4164, 4176, 4188, 4200, 4212
, 4224, 4236, 4248, 4260, 4272, 4284, 4296, 4308, 4320, 4332,
4344, 4356, 4368, 4380, 4392, 4404, 4416, 4428, 4440, 4452, 4464
, 4476, 4488, 4500, 4512, 4524, 4536, 4548, 4560, 4572, 4584,
4596, 4608, 4620, 4632, 4644, 4656, 4668, 4680, 4692, 4704, 4716
, 4728, 4740, 4752, 4764, 4776, 4788, 4800, 4812, 4824, 4836,
4848, 4860, 4872, 4884, 4896, 4908, 4920, 4932, 4944, 4956, 4968

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26 , 4980, 4992, 5004, 5016, 5028, 5040, 5052, 5064, 5076, 5088,
    5100, 5112, 5124, 5136, 5148, 5160, 5172, 5184, 5196, 5208, 5220
    , 5232, 5244, 5256, 5268, 5280, 5292, 5304, 5316, 5328, 5340,
    5352, 5364, 5376, 5388, 5400, 5412, 5424, 5436, 5448, 5460, 5472
    , 5484, 5496, 5508, 5520, 5532, 5544, 5556, 5568, 5580, 5592,
    5604, 5616, 5628, 5640, 5652, 5664, 5676, 5688, 5700, 5712, 5724
    , 5736, 5748, 5760, 5772, 5784, 5796, 5808, 5820, 5832, 5844,
    5856, 5868, 5880, 5892, 5904, 5916, 5928, 5940, 5952, 5964, 5976
    , 5988, 6000, 6012, 6024, 6036, 6048, 6060, 6072, 6084, 6096,
    6108, 6120, 6132, 6144, 6156, 6168, 6180, 6192, 6204, 6216, 6228
    , 6240, 6252, 6264, 6276, 6288, 6300, 6312, 6324]
27 there are 528 sequences
28
29 there are 6336 files in frames_file_name
30 data.shape (6336, 200, 200, 3)
31 there are 6336 pictures in frames_np
32 *****loading network and models*****
33 num_hidden : [128, 64, 64, 64]
34 2019-09-07 16:03:33.833888: I tensorflow/core/platform/
    cpu_feature_guard.cc:141] Your CPU supports instructions that
    this TensorFlow binary was not compiled to use: AVX2 FMA
35 2019-09-07 16:03:34.079710: I tensorflow/core/common_runtime/gpu/
    gpu_device.cc:1432] Found device 0 with properties:
36 name: GeForce GTX 1080 Ti major: 6 minor: 1 memoryClockRate(GHz
    ): 1.582
37 pciBusID: 0000:82:00.0
38 totalMemory: 10.92GiB freeMemory: 10.76GiB
39 2019-09-07 16:03:34.079762: I tensorflow/core/common_runtime/gpu/
    gpu_device.cc:1511] Adding visible gpu devices: 0
40 2019-09-07 16:03:34.438707: I tensorflow/core/common_runtime/gpu/
    gpu_device.cc:982] Device interconnect StreamExecutor with
    strength 1 edge matrix:
41 2019-09-07 16:03:34.438801: I tensorflow/core/common_runtime/gpu/
    gpu_device.cc:988] 0
42 2019-09-07 16:03:34.438816: I tensorflow/core/common_runtime/gpu/
    gpu_device.cc:1001] 0: N
43 2019-09-07 16:03:34.439236: I tensorflow/core/common_runtime/gpu/

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43 gpu_device.cc:1115] Created TensorFlow device (/job:localhost/
    replica:0/task:0/device:GPU:0 with 10409 MB memory) -> physical
    GPU (device: 0, name: GeForce GTX 1080 Ti, pci bus id: 0000:82:00
    .0, compute capability: 6.1)
44 ckpt.model_checkpoint_path train_output/checkpoints/
    typhoon_predrnn_pp/model.ckpt-50000
45 restore checkpoint from dir: train_output/checkpoints/
    typhoon_predrnn_pp
46 *****training*****
47 2019-09-07 16:04:20.469803: W tensorflow/core/common_runtime/
    bfc_allocator.cc:211] Allocator (GPU_0_bfc) ran out of memory
    trying to allocate 1.87GiB. The caller indicates that this is not
    a failure, but may mean that there could be performance gains if
    more memory were available.
48 2019-09-07 16:04:20.487243: W tensorflow/core/common_runtime/
    bfc_allocator.cc:211] Allocator (GPU_0_bfc) ran out of memory
    trying to allocate 1.82GiB. The caller indicates that this is not
    a failure, but may mean that there could be performance gains if
    more memory were available.
49 2019-09-07 16:04:20.612421: W tensorflow/core/common_runtime/
    bfc_allocator.cc:211] Allocator (GPU_0_bfc) ran out of memory
    trying to allocate 2.13GiB. The caller indicates that this is not
    a failure, but may mean that there could be performance gains if
    more memory were available.
50 2019-09-07 16:04:20.631226: W tensorflow/core/common_runtime/
    bfc_allocator.cc:211] Allocator (GPU_0_bfc) ran out of memory
    trying to allocate 2.08GiB. The caller indicates that this is not
    a failure, but may mean that there could be performance gains if
    more memory were available.
51 2019-09-07 16:04:20.654284: W tensorflow/core/common_runtime/
    bfc_allocator.cc:211] Allocator (GPU_0_bfc) ran out of memory
    trying to allocate 1.60GiB. The caller indicates that this is not
    a failure, but may mean that there could be performance gains if
    more memory were available.
52 2019-09-07 16:04:20.671238: W tensorflow/core/common_runtime/
    bfc_allocator.cc:211] Allocator (GPU_0_bfc) ran out of memory
    trying to allocate 1.56GiB. The caller indicates that this is not
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52 a failure, but may mean that there could be performance gains if
   more memory were available.
53 2019-09-07 16:04:20.691546: W tensorflow/core/common_runtime/
   bfc_allocator.cc:211] Allocator (GPU_0_bfc) ran out of memory
   trying to allocate 1.47GiB. The caller indicates that this is not
   a failure, but may mean that there could be performance gains if
   more memory were available.
54 itr: 100
55 training loss: 319.85233
56 itr: 200
57 training loss: 535.8313
58 itr: 300
59 training loss: 495.55957
60 itr: 400
61 training loss: 646.7308
62 itr: 500
63 training loss: 544.81177
64 itr: 600
65 training loss: 513.01886
66 itr: 700
67 training loss: 514.14764
68 itr: 800
69 training loss: 596.82666
70 itr: 900
71 training loss: 531.3949
72 itr: 1000
73 training loss: 513.9764
74 test...
75 mse per seq: 779.3378067016602
76 75.66039276123047
77 109.87516784667969
78 131.82431030273438
79 139.99636840820312
80 152.94642639160156
81 169.03514099121094
82 psnr per frame: 25.02918
83 27.20973
```

```
84 25.630444
85 24.857145
86 24.562563
87 24.177895
88 23.737309
89 fmae per frame: 1721.203
90 1269.1389
91 1562.1357
92 1745.8552
93 1820.0159
94 1908.2034
95 2021.8695
96 ssim per frame: 0.6156735
97 0.64423686
98 0.62075466
99 0.6083399
100 0.6139587
101 0.61144674
102 0.5953043
103 sharpness per frame: 52.791668
104 52.5
105 47.5
106 56.25
107 57.0
108 52.25
109 51.25
110 itr: 1100
111 training loss: 549.4967
112 itr: 1200
113 training loss: 401.95108
114 itr: 1300
115 training loss: 545.9696
116 itr: 1400
117 training loss: 571.7944
118 itr: 1500
119 training loss: 528.50854
120 itr: 1600
```

```
121 training loss: 462.0266
122 itr: 1700
123 training loss: 479.55453
124 itr: 1800
125 training loss: 488.15872
126 itr: 1900
127 training loss: 372.5019
128 itr: 2000
129 training loss: 527.8995
130 test...
131 mse per seq: 780.8802185058594
132 75.69731903076172
133 109.95304107666016
134 131.97415161132812
135 140.3842315673828
136 153.2267303466797
137 169.64474487304688
138 psnr per frame: 25.02053
139 27.207922
140 25.625843
141 24.851122
142 24.550262
143 24.168266
144 23.719774
145 fmae per frame: 1722.9188
146 1269.0686
147 1562.364
148 1747.0562
149 1822.9147
150 1910.0388
151 2026.0706
152 ssim per frame: 0.61455816
153 0.64365405
154 0.6197595
155 0.6070712
156 0.6128353
157 0.610505
```

```
158 0.5935237
159 sharpness per frame: 52.916668
160 54.5
161 51.25
162 55.0
163 58.5
164 46.5
165 51.75
166 itr: 2100
167 training loss: 476.02948
168 itr: 2200
169 training loss: 455.0644
170 itr: 2300
171 training loss: 512.4885
172 itr: 2400
173 training loss: 491.7247
174 itr: 2500
175 training loss: 526.25543
176 itr: 2600
177 training loss: 358.4304
178 itr: 2700
179 training loss: 524.7897
180 itr: 2800
181 training loss: 568.756
182 itr: 2900
183 training loss: 482.93323
184 itr: 3000
185 training loss: 516.4315
186 test...
187 mse per seq: 784.6051864624023
188 76.29686737060547
189 110.85861206054688
190 132.81578063964844
191 140.517333984375
192 153.87278747558594
193 170.24380493164062
194 psnr per frame: 24.999191
```



```
195 27.17558
196 25.590292
197 24.82521
198 24.546227
199 24.151335
200 23.7065
201 fmae per frame: 1728.2645
202 1274.8723
203 1569.4406
204 1753.7368
205 1825.5535
206 1915.3424
207 2030.6404
208 ssim per frame: 0.6122549
209 0.6418905
210 0.6176832
211 0.6044924
212 0.6110012
213 0.607944
214 0.59051806
215 sharpness per frame: 54.583332
216 52.75
217 51.0
218 57.5
219 59.75
220 51.0
221 55.5
222 itr: 3100
223 training loss: 567.56573
224 itr: 3200
225 training loss: 424.3129
226 itr: 3300
227 training loss: 513.5361
228 itr: 3400
229 training loss: 419.56107
230 itr: 3500
231 training loss: 556.23334
```

```
232 itr: 3600
233 training loss: 514.13293
234 itr: 3700
235 training loss: 459.3163
236 itr: 3800
237 training loss: 549.6206
238 itr: 3900
239 training loss: 459.43878
240 itr: 4000
241 training loss: 526.20795
242 test...
243 mse per seq: 787.1486892700195
244 76.12324523925781
245 110.76114654541016
246 133.06541442871094
247 141.3330535888672
248 154.63429260253906
249 171.23153686523438
250 psnr per frame: 24.99051
251 27.187777
252 25.596771
253 24.820015
254 24.524069
255 24.132505
256 23.68193
257 fmae per frame: 1730.2041
258 1272.964
259 1568.2229
260 1754.975
261 1829.5029
262 1919.2317
263 2036.3286
264 ssim per frame: 0.61191005
265 0.6419888
266 0.61743385
267 0.60444057
268 0.6103182
```

```
269 0.60718423
270 0.59009445
271 sharpness per frame: 55.083332
272 54.25
273 51.25
274 60.0
275 58.25
276 52.25
277 54.5
278 itr: 4100
279 training loss: 482.7332
280 itr: 4200
281 training loss: 514.5293
282 itr: 4300
283 training loss: 519.04376
284 itr: 4400
285 training loss: 510.31537
286 itr: 4500
287 training loss: 557.77814
288 itr: 4600
289 training loss: 577.98425
290 itr: 4700
291 training loss: 394.11353
292 itr: 4800
293 training loss: 477.44833
294 itr: 4900
295 training loss: 589.09406
296 itr: 5000
297 training loss: 432.8638
298 test...
299 mse per seq: 789.3710021972656
300 76.1190414428711
301 110.80498504638672
302 133.27774047851562
303 141.86318969726562
304 155.34678649902344
305 171.95925903320312
```

```
306 psnr per frame: 24.975885
307 27.179611
308 25.59034
309 24.81016
310 24.504684
311 24.108498
312 23.66203
313 fmae per frame: 1731.5747
314 1271.4613
315 1567.1685
316 1754.9792
317 1832.0076
318 1923.6992
319 2040.1321
320 ssim per frame: 0.61257416
321 0.6422708
322 0.61797255
323 0.6050106
324 0.61117667
325 0.6080074
326 0.5910071
327 sharpness per frame: 56.25
328 54.5
329 52.5
330 62.5
331 57.0
332 55.0
333 56.0
334 saved to train_output/checkpoints/typhoon_predrnn_pp
335 itr: 5100
336 training loss: 409.80173
337 itr: 5200
338 training loss: 472.2739
339 itr: 5300
340 training loss: 560.8575
341 itr: 5400
342 training loss: 420.83643
```

```
343 itr: 5500
344 training loss: 455.52606
345 itr: 5600
346 training loss: 521.9307
347 itr: 5700
348 training loss: 516.3694
349 itr: 5800
350 training loss: 434.10446
351 itr: 5900
352 training loss: 490.58728
353 itr: 6000
354 training loss: 474.21643
355 test...
356 mse per seq: 783.1311950683594
357 76.1141357421875
358 110.41386413574219
359 132.42605590820312
360 140.5540771484375
361 153.5843048095703
362 170.03875732421875
363 psnr per frame: 25.005419
364 27.181118
365 25.604712
366 24.835987
367 24.543709
368 24.15779
369 23.70921
370 fmae per frame: 1723.8468
371 1271.443
372 1563.2908
373 1748.2329
374 1822.0891
375 1911.6003
376 2026.4248
377 ssim per frame: 0.6126792
378 0.64213073
379 0.6185533
```

```
380 0.6053656
381 0.6113694
382 0.60843664
383 0.5902195
384 sharpness per frame: 56.083332
385 54.75
386 53.25
387 59.75
388 56.5
389 54.0
390 58.25
391 itr: 6100
392 training loss: 529.3747
393 itr: 6200
394 training loss: 520.0434
395 itr: 6300
396 training loss: 399.63678
397 itr: 6400
398 training loss: 495.33813
399 itr: 6500
400 training loss: 576.1087
401 itr: 6600
402 training loss: 478.7471
403 itr: 6700
404 training loss: 548.0902
405 itr: 6800
406 training loss: 389.89545
407 itr: 6900
408 training loss: 379.8199
409 itr: 7000
410 training loss: 503.56335
411 test...
412 mse per seq: 789.7840576171875
413 76.22296142578125
414 110.92314147949219
415 133.4173583984375
416 142.01527404785156
```

```
417 155.38046264648438
418 171.82485961914062
419 psnr per frame: 24.975306
420 27.177322
421 25.587372
422 24.807178
423 24.502384
424 24.110527
425 23.667057
426 fmae per frame: 1732.1442
427 1272.6388
428 1568.1094
429 1755.6636
430 1833.4395
431 1923.8557
432 2039.158
433 ssim per frame: 0.6115624
434 0.64175457
435 0.61717665
436 0.6044048
437 0.60996246
438 0.60681283
439 0.5892627
440 sharpness per frame: 54.541668
441 53.5
442 52.25
443 60.25
444 53.5
445 51.5
446 56.25
447 itr: 7100
448 training loss: 511.87933
449 itr: 7200
450 training loss: 521.3273
451 itr: 7300
452 training loss: 503.46133
453 itr: 7400
```

```
454 training loss: 506.9303
455 itr: 7500
456 training loss: 528.3396
457 itr: 7600
458 training loss: 497.23776
459 itr: 7700
460 training loss: 371.23755
461 itr: 7800
462 training loss: 570.847
463 itr: 7900
464 training loss: 652.42944
465 itr: 8000
466 training loss: 505.0212
467 test...
468 mse per seq: 783.5084533691406
469 76.38671112060547
470 110.6203384399414
471 132.73046875
472 140.60328674316406
473 153.5894775390625
474 169.5781707763672
475 psnr per frame: 25.003286
476 27.170307
477 25.59793
478 24.826054
479 24.543575
480 24.160225
481 23.721634
482 fmae per frame: 1726.1776
483 1275.1399
484 1566.3989
485 1751.7307
486 1824.5988
487 1912.7969
488 2026.4004
489 ssim per frame: 0.6105681
490 0.6405961
```



```
491 0.6170481
492 0.60287434
493 0.60922843
494 0.6060319
495 0.58762974
496 sharpness per frame: 56.291668
497 56.25
498 53.5
499 63.75
500 54.0
501 54.0
502 56.25
503 itr: 8100
504 training loss: 591.27094
505 itr: 8200
506 training loss: 519.8867
507 itr: 8300
508 training loss: 851.6472
509 itr: 8400
510 training loss: 335.18842
511 itr: 8500
512 training loss: 513.34375
513 itr: 8600
514 training loss: 629.64954
515 itr: 8700
516 training loss: 504.00046
517 itr: 8800
518 training loss: 472.7745
519 itr: 8900
520 training loss: 538.71454
521 itr: 9000
522 training loss: 409.08093
523 test...
524 mse per seq: 787.4608764648438
525 76.29805755615234
526 110.96562957763672
527 133.19964599609375
```

```
528 141.39859008789062
529 154.61961364746094
530 170.97933959960938
531 psnr per frame: 24.982904
532 27.168655
533 25.582798
534 24.812517
535 24.517511
536 24.129478
537 23.686462
538 fmae per frame: 1729.1886
539 1273.2725
540 1567.6831
541 1754.1284
542 1828.1846
543 1918.2493
544 2033.6144
545 ssim per frame: 0.61151433
546 0.64176315
547 0.617035
548 0.6039397
549 0.61019695
550 0.6068243
551 0.589327
552 sharpness per frame: 55.833332
553 57.0
554 52.5
555 60.0
556 53.5
557 52.25
558 59.75
559 saved to train_output/checkpoints/typhoon_predrnn_pp
560 itr: 9100
561 training loss: 385.02057
562 itr: 9200
563 training loss: 534.691
564 itr: 9300
```

```
565 training loss: 569.5498
566 itr: 9400
567 training loss: 521.2378
568 itr: 9500
569 training loss: 620.5048
570 itr: 9600
571 training loss: 449.82202
572 itr: 9700
573 training loss: 521.93335
574 itr: 9800
575 training loss: 491.06702
576 itr: 9900
577 training loss: 517.6193
578 itr: 10000
579 training loss: 577.3351
580 test...
581 mse per seq: 790.5541381835938
582 76.39936828613281
583 111.05488586425781
584 133.6074981689453
585 141.91033935546875
586 155.3960418701172
587 172.18600463867188
588 psnr per frame: 24.97246
589 27.17083
590 25.58506
591 24.803272
592 24.505297
593 24.11162
594 23.658697
595 fmae per frame: 1733.483
596 1274.4371
597 1569.3691
598 1757.6631
599 1832.9851
600 1924.7772
601 2041.6671
```

```
602 ssim per frame: 0.61028665
603 0.64062864
604 0.6167406
605 0.6031868
606 0.6088433
607 0.6050635
608 0.5872569
609 sharpness per frame: 57.041668
610 56.75
611 53.0
612 61.25
613 58.25
614 54.5
615 58.5
616 itr: 10100
617 training loss: 412.3036
618 itr: 10200
619 training loss: 542.19543
620 itr: 10300
621 training loss: 521.9575
622 itr: 10400
623 training loss: 522.545
624 itr: 10500
625 training loss: 556.44214
626 itr: 10600
627 training loss: 452.25397
628 itr: 10700
629 training loss: 574.0169
630 itr: 10800
631 training loss: 509.00717
632 itr: 10900
633 training loss: 471.44608
634 itr: 11000
635 training loss: 532.21625
636 test...
637 mse per seq: 791.6426849365234
638 76.61325073242188
```

```
639 111.23287963867188
640 133.8199462890625
641 142.29664611816406
642 155.6916961669922
643 171.98826599121094
644 psnr per frame: 24.957083
645 27.145407
646 25.56977
647 24.787024
648 24.486149
649 24.09672
650 23.657415
651 fmae per frame: 1732.4828
652 1274.9224
653 1568.2205
654 1756.0907
655 1832.938
656 1923.5393
657 2039.1852
658 ssim per frame: 0.6102653
659 0.6408593
660 0.6168148
661 0.6031755
662 0.6088468
663 0.6054812
664 0.58641404
665 sharpness per frame: 57.75
666 57.0
667 53.75
668 63.5
669 60.0
670 53.25
671 59.0
672 itr: 11100
673 training loss: 494.49326
674 itr: 11200
675 training loss: 616.0118
```

```
676 itr: 11300
677 training loss: 560.7286
678 itr: 11400
679 training loss: 562.29834
680 itr: 11500
681 training loss: 495.21945
682 itr: 11600
683 training loss: 578.50586
684 itr: 11700
685 training loss: 488.2102
686 itr: 11800
687 training loss: 464.64923
688 itr: 11900
689 training loss: 553.5357
690 itr: 12000
691 training loss: 474.71198
692 test...
693 mse per seq: 790.6155853271484
694 76.77242279052734
695 111.21781158447266
696 133.70159912109375
697 141.9577178955078
698 155.20314025878906
699 171.7628936767578
700 psnr per frame: 24.96666
701 27.144665
702 25.575535
703 24.796894
704 24.50221
705 24.114618
706 23.666042
707 fmae per frame: 1732.7788
708 1276.7574
709 1569.3342
710 1757.3379
711 1832.4366
712 1922.7737
```

```
713 2038.0336
714 ssim per frame: 0.6092487
715 0.6395582
716 0.61586064
717 0.6023639
718 0.60820633
719 0.60410225
720 0.5854012
721 sharpness per frame: 58.166668
722 56.25
723 52.75
724 63.5
725 59.0
726 56.75
727 60.75
728 itr: 12100
729 training loss: 521.62317
730 itr: 12200
731 training loss: 582.02673
732 itr: 12300
733 training loss: 409.863
734 itr: 12400
735 training loss: 464.42786
736 itr: 12500
737 training loss: 384.8345
738 itr: 12600
739 training loss: 530.437
740 itr: 12700
741 training loss: 609.194
742 itr: 12800
743 training loss: 553.7483
744 itr: 12900
745 training loss: 656.5859
746 itr: 13000
747 training loss: 522.88544
748 test...
749 mse per seq: 789.8031692504883
```

```
750 76.57870483398438
751 111.01871490478516
752 133.51170349121094
753 141.83999633789062
754 155.255126953125
755 171.5989227294922
756 psnr per frame: 24.973616
757 27.158665
758 25.583467
759 24.804995
760 24.508118
761 24.11482
762 23.671623
763 fmae per frame: 1731.9756
764 1275.1116
765 1568.8441
766 1756.5121
767 1831.8508
768 1922.4327
769 2037.102
770 ssim per frame: 0.60934335
771 0.63997114
772 0.6160241
773 0.6021639
774 0.60836625
775 0.6039457
776 0.5855887
777 sharpness per frame: 58.083332
778 55.5
779 54.5
780 63.5
781 58.0
782 57.75
783 59.25
784 itr: 13100
785 training loss: 400.2003
786 itr: 13200
```



```
787 training loss: 367.85895
788 itr: 13300
789 training loss: 488.0151
790 itr: 13400
791 training loss: 422.9903
792 itr: 13500
793 training loss: 520.62854
794 itr: 13600
795 training loss: 381.24033
796 itr: 13700
797 training loss: 514.37805
798 itr: 13800
799 training loss: 504.05652
800 itr: 13900
801 training loss: 568.3437
802 itr: 14000
803 training loss: 543.9264
804 test...
805 mse per seq: 783.6244583129883
806 76.52930450439453
807 110.6011962890625
808 132.79034423828125
809 140.46121215820312
810 153.65585327148438
811 169.5865478515625
812 psnr per frame: 25.004412
813 27.16391
814 25.6002
815 24.82933
816 24.550396
817 24.15963
818 23.723
819 fmae per frame: 1725.7242
820 1276.1555
821 1565.6902
822 1751.5746
823 1822.6537
```

```
824 1913.1095
825 2025.1619
826 ssim per frame: 0.61016047
827 0.63999337
828 0.6169018
829 0.6024791
830 0.60913986
831 0.6054569
832 0.5869918
833 sharpness per frame: 58.083332
834 55.0
835 53.75
836 63.25
837 59.5
838 54.75
839 62.25
840 itr: 14100
841 training loss: 489.1217
842 itr: 14200
843 training loss: 410.6042
844 itr: 14300
845 training loss: 623.2548
846 itr: 14400
847 training loss: 415.74677
848 itr: 14500
849 training loss: 494.39993
850 itr: 14600
851 training loss: 566.93915
852 itr: 14700
853 training loss: 499.4851
854 itr: 14800
855 training loss: 582.7361
856 itr: 14900
857 training loss: 505.90298
858 itr: 15000
859 training loss: 554.72266
860 test...
```

```
861 mse per seq: 792.1698913574219
862 76.68778991699219
863 111.26869201660156
864 134.00527954101562
865 142.3123779296875
866 155.74354553222656
867 172.15220642089844
868 psnr per frame: 24.959127
869 27.149643
870 25.572918
871 24.786959
872 24.49089
873 24.098164
874 23.656197
875 fmae per frame: 1733.982
876 1275.2811
877 1569.4708
878 1758.4458
879 1834.5577
880 1925.499
881 2040.6392
882 ssim per frame: 0.60923773
883 0.6397363
884 0.6160513
885 0.60213983
886 0.6080094
887 0.60411185
888 0.5853778
889 sharpness per frame: 57.583332
890 56.0
891 53.5
892 64.75
893 59.25
894 53.5
895 58.5
896 itr: 15100
897 training loss: 471.1196
```

```
898 itr: 15200
899 training loss: 497.88574
900 itr: 15300
901 training loss: 445.4769
902 itr: 15400
903 training loss: 535.6067
904 itr: 15500
905 training loss: 539.90894
906 itr: 15600
907 training loss: 512.5145
908 itr: 15700
909 training loss: 677.2299
910 itr: 15800
911 training loss: 693.08405
912 itr: 15900
913 training loss: 402.22296
914 itr: 16000
915 training loss: 512.577
916 test...
917 mse per seq: 791.5995559692383
918 76.90823364257812
919 111.4065933227539
920 133.82945251464844
921 142.22207641601562
922 155.6466827392578
923 171.58651733398438
924 psnr per frame: 24.95652
925 27.130257
926 25.56267
927 24.788948
928 24.491085
929 24.098042
930 23.668127
931 fmae per frame: 1732.2485
932 1276.8589
933 1568.0911
934 1756.0092
```

```
935 1832.8
936 1923.3672
937 2036.3654
938 ssim per frame: 0.6091245
939 0.63967323
940 0.61601907
941 0.6018015
942 0.60806084
943 0.6040989
944 0.5850932
945 sharpness per frame: 58.333332
946 58.75
947 54.25
948 63.75
949 55.25
950 58.5
951 59.5
952 itr: 16100
953 training loss: 507.1734
954 itr: 16200
955 training loss: 545.1625
956 itr: 16300
957 training loss: 398.73315
958 itr: 16400
959 training loss: 556.1802
960 itr: 16500
961 training loss: 492.30167
962 itr: 16600
963 training loss: 796.7709
964 itr: 16700
965 training loss: 576.2968
966 itr: 16800
967 training loss: 395.13495
968 itr: 16900
969 training loss: 459.40128
970 itr: 17000
971 training loss: 486.51636
```

```
972 test...
973 mse per seq: 790.9239883422852
974 76.85108947753906
975 111.31452178955078
976 133.67543029785156
977 142.01194763183594
978 155.39373779296875
979 171.67726135253906
980 psnr per frame: 24.962942
981 27.13737
982 25.570082
983 24.795921
984 24.498724
985 24.107908
986 23.667645
987 fmae per frame: 1733.251
988 1277.3745
989 1569.503
990 1757.3617
991 1833.0037
992 1923.6603
993 2038.6028
994 ssim per frame: 0.6083916
995 0.6394152
996 0.61550367
997 0.60137093
998 0.6070845
999 0.60274655
1000 0.5842287
1001 sharpness per frame: 57.625
1002 55.0
1003 53.25
1004 62.25
1005 57.75
1006 55.75
1007 61.75
1008 itr: 17100
```

```
1009 training loss: 501.0152
1010 itr: 17200
1011 training loss: 528.3588
1012 itr: 17300
1013 training loss: 342.93857
1014 itr: 17400
1015 training loss: 507.843
1016 itr: 17500
1017 training loss: 507.33344
1018 itr: 17600
1019 training loss: 607.723
1020 itr: 17700
1021 training loss: 503.73254
1022 itr: 17800
1023 training loss: 492.99072
1024 itr: 17900
1025 training loss: 607.1805
1026 itr: 18000
1027 training loss: 497.3366
1028 test...
1029 mse per seq: 792.1600646972656
1030 76.84980010986328
1031 111.36092376708984
1032 133.9349822998047
1033 142.26760864257812
1034 155.87510681152344
1035 171.87164306640625
1036 psnr per frame: 24.957754
1037 27.139545
1038 25.567616
1039 24.78787
1040 24.49235
1041 24.09473
1042 23.664415
1043 fmae per frame: 1733.3651
1044 1277.0411
1045 1569.2233
```

```
1046 1757.596
1047 1832.858
1048 1925.1135
1049 2038.358
1050 ssim per frame: 0.60860896
1051 0.63912976
1052 0.6157742
1053 0.60129774
1054 0.6069867
1055 0.60360175
1056 0.58486366
1057 sharpness per frame: 58.791668
1058 56.5
1059 53.5
1060 63.25
1061 60.5
1062 59.25
1063 59.75
1064 itr: 18100
1065 training loss: 461.2767
1066 itr: 18200
1067 training loss: 500.91766
1068 itr: 18300
1069 training loss: 550.9756
1070 itr: 18400
1071 training loss: 401.43152
1072 itr: 18500
1073 training loss: 518.8891
1074 itr: 18600
1075 training loss: 478.0479
1076 itr: 18700
1077 training loss: 484.92007
1078 itr: 18800
1079 training loss: 430.27692
1080 itr: 18900
1081 training loss: 370.5473
1082 itr: 19000
```



```
1083 training loss: 490.0107
1084 test...
1085 mse per seq: 791.6102294921875
1086 76.8153076171875
1087 111.3800048828125
1088 133.94187927246094
1089 142.0565948486328
1090 155.6930694580078
1091 171.72337341308594
1092 psnr per frame: 24.964891
1093 27.14883
1094 25.571945
1095 24.79238
1096 24.502333
1097 24.10259
1098 23.671268
1099 fmae per frame: 1733.9058
1100 1277.5782
1101 1571.3755
1102 1759.4095
1103 1833.2404
1104 1925.0789
1105 2036.752
1106 ssim per frame: 0.6080969
1107 0.638929
1108 0.61534727
1109 0.6011563
1110 0.60703814
1111 0.60222507
1112 0.58388567
1113 sharpness per frame: 58.875
1114 56.25
1115 55.5
1116 65.5
1117 56.25
1118 57.0
1119 62.75
```

```
1120 itr: 19100
1121 training loss: 526.74634
1122 itr: 19200
1123 training loss: 380.30255
1124 itr: 19300
1125 training loss: 545.3331
1126 itr: 19400
1127 training loss: 509.56024
1128 itr: 19500
1129 training loss: 478.6773
1130 itr: 19600
1131 training loss: 512.23505
1132 itr: 19700
1133 training loss: 437.0656
1134 itr: 19800
1135 training loss: 499.79102
1136 itr: 19900
1137 training loss: 491.51355
1138 itr: 20000
1139 training loss: 543.9459
1140 test...
1141 mse per seq: 793.8925704956055
1142 77.01026916503906
1143 111.45990753173828
1144 134.46583557128906
1145 142.33396911621094
1146 156.02215576171875
1147 172.60043334960938
1148 psnr per frame: 24.95421
1149 27.141432
1150 25.568851
1151 24.77645
1152 24.495428
1153 24.09444
1154 23.648666
1155 fmae per frame: 1736.9537
1156 1279.6873
```

```
1157 1572.6655
1158 1763.123
1159 1835.4019
1160 1927.7683
1161 2043.0773
1162 ssim per frame: 0.6068902
1163 0.6381466
1164 0.6141149
1165 0.5996178
1166 0.60608894
1167 0.60131836
1168 0.5820548
1169 sharpness per frame: 58.958332
1170 56.0
1171 54.0
1172 65.25
1173 58.0
1174 58.0
1175 62.5
1176 itr: 20100
1177 training loss: 470.72107
1178 itr: 20200
1179 training loss: 430.32428
1180 itr: 20300
1181 training loss: 458.8778
1182 itr: 20400
1183 training loss: 544.42096
1184 itr: 20500
1185 training loss: 499.0736
1186 itr: 20600
1187 training loss: 467.57257
1188 itr: 20700
1189 training loss: 411.604
1190 itr: 20800
1191 training loss: 642.8509
1192 itr: 20900
1193 training loss: 482.4544
```

```
1194 itr: 21000
1195 training loss: 499.84637
1196 test...
1197 mse per seq: 788.4428176879883
1198 76.76686096191406
1199 110.92935943603516
1200 133.2223663330078
1201 141.59979248046875
1202 155.12388610839844
1203 170.80055236816406
1204 psnr per frame: 24.977495
1205 27.14558
1206 25.586384
1207 24.812319
1208 24.512865
1209 24.115923
1210 23.69191
1211 fmae per frame: 1729.9991
1212 1276.5967
1213 1567.1648
1214 1754.309
1215 1829.0518
1216 1921.2048
1217 2031.6676
1218 ssim per frame: 0.608042
1219 0.63894504
1220 0.61520857
1221 0.6011884
1222 0.60652393
1223 0.60195494
1224 0.5844311
1225 sharpness per frame: 58.083332
1226 55.5
1227 55.75
1228 62.0
1229 56.75
1230 56.75
```

```
1231 61.75
1232 itr: 21100
1233 training loss: 447.9266
1234 itr: 21200
1235 training loss: 541.8604
1236 itr: 21300
1237 training loss: 539.83655
1238 itr: 21400
1239 training loss: 550.8985
1240 itr: 21500
1241 training loss: 561.4041
1242 itr: 21600
1243 training loss: 494.39545
1244 itr: 21700
1245 training loss: 536.6894
1246 itr: 21800
1247 training loss: 702.4502
1248 itr: 21900
1249 training loss: 531.5542
1250 itr: 22000
1251 training loss: 368.7849
1252 test...
1253 mse per seq: 789.5265808105469
1254 76.99439239501953
1255 111.2916488647461
1256 133.77774047851562
1257 141.56961059570312
1258 154.9680938720703
1259 170.9250946044922
1260 psnr per frame: 24.970964
1261 27.135128
1262 25.571667
1263 24.794926
1264 24.514194
1265 24.121437
1266 23.688433
1267 fmae per frame: 1731.2504
```

```
1268 1278.7137
1269 1569.755
1270 1757.7621
1271 1829.3047
1272 1919.8016
1273 2032.1647
1274 ssim per frame: 0.60744315
1275 0.63859034
1276 0.61496985
1277 0.60055107
1278 0.6063349
1279 0.60172075
1280 0.58249223
1281 sharpness per frame: 59.291668
1282 56.25
1283 56.0
1284 65.0
1285 56.75
1286 60.25
1287 61.5
1288 saved to train_output/checkpoints/typhoon_predrnn_pp
1289 itr: 22100
1290 training loss: 516.6425
1291 itr: 22200
1292 training loss: 614.2223
1293 itr: 22300
1294 training loss: 483.1924
1295 itr: 22400
1296 training loss: 382.93524
1297 itr: 22500
1298 training loss: 416.50812
1299 itr: 22600
1300 training loss: 506.62698
1301 itr: 22700
1302 training loss: 495.41248
1303 itr: 22800
1304 training loss: 530.2674
```

```
1305 itr: 22900
1306 training loss: 530.4706
1307 itr: 23000
1308 training loss: 554.60925
1309 test...
1310 mse per seq: 793.4720001220703
1311 77.1298599243164
1312 111.4638900756836
1313 134.2121124267578
1314 142.35977172851562
1315 156.07559204101562
1316 172.23077392578125
1317 psnr per frame: 24.951784
1318 27.12584
1319 25.564707
1320 24.781569
1321 24.491194
1322 24.090933
1323 23.65647
1324 fmae per frame: 1735.7578
1325 1279.7957
1326 1570.9858
1327 1760.2273
1328 1834.6597
1329 1927.9675
1330 2040.9106
1331 ssim per frame: 0.6074192
1332 0.6381914
1333 0.61484975
1334 0.6003489
1335 0.6065239
1336 0.60164034
1337 0.58296126
1338 sharpness per frame: 59.666668
1339 59.5
1340 54.5
1341 63.5
```

```
1342 57.5
1343 59.75
1344 63.25
1345 itr: 23100
1346 training loss: 462.92218
1347 itr: 23200
1348 training loss: 587.6624
1349 itr: 23300
1350 training loss: 504.50836
1351 itr: 23400
1352 training loss: 529.94727
1353 itr: 23500
1354 training loss: 427.17572
1355 itr: 23600
1356 training loss: 464.24243
1357 itr: 23700
1358 training loss: 468.0667
1359 itr: 23800
1360 training loss: 520.838
1361 itr: 23900
1362 training loss: 412.58817
1363 itr: 24000
1364 training loss: 500.7078
1365 test...
1366 mse per seq: 791.7321853637695
1367 77.24862670898438
1368 111.6585464477539
1369 134.14756774902344
1370 141.9266815185547
1371 155.28004455566406
1372 171.47071838378906
1373 psnr per frame: 24.959663
1374 27.120533
1375 25.558634
1376 24.784084
1377 24.505455
1378 24.11325
```



```
1379 23.676023
1380 fmae per frame: 1734.2628
1381 1280.906
1382 1572.7574
1383 1760.4019
1384 1832.7046
1385 1922.553
1386 2036.2537
1387 ssim per frame: 0.60691
1388 0.63756794
1389 0.6142288
1390 0.6001033
1391 0.6060101
1392 0.6017495
1393 0.5818005
1394 sharpness per frame: 59.666668
1395 57.25
1396 56.0
1397 62.75
1398 57.25
1399 60.5
1400 64.25
1401 itr: 24100
1402 training loss: 523.8441
1403 itr: 24200
1404 training loss: 348.59097
1405 itr: 24300
1406 training loss: 492.4722
1407 itr: 24400
1408 training loss: 521.7495
1409 itr: 24500
1410 training loss: 501.16473
1411 itr: 24600
1412 training loss: 529.0089
1413 itr: 24700
1414 training loss: 545.8071
1415 itr: 24800
```

```
1416 training loss: 497.1418
1417 itr: 24900
1418 training loss: 491.5656
1419 itr: 25000
1420 training loss: 553.99695
1421 test...
1422 mse per seq: 798.4296188354492
1423 77.50183868408203
1424 112.13427734375
1425 135.00001525878906
1426 143.20327758789062
1427 157.1202850341797
1428 173.4699249267578
1429 psnr per frame: 24.926249
1430 27.106293
1431 25.54012
1432 24.757229
1433 24.466026
1434 24.06216
1435 23.625666
1436 fmae per frame: 1741.9194
1437 1282.5496
1438 1575.5627
1439 1767.7286
1440 1841.7747
1441 1934.8782
1442 2049.0234
1443 ssim per frame: 0.60548055
1444 0.63670707
1445 0.61349916
1446 0.59872776
1447 0.6047055
1448 0.5992
1449 0.58004373
1450 sharpness per frame: 60.166668
1451 56.75
1452 57.5
```

```
1453 63.5
1454 56.75
1455 60.25
1456 66.25
1457 itr: 25100
1458 training loss: 500.3705
1459 itr: 25200
1460 training loss: 498.4003
1461 itr: 25300
1462 training loss: 437.78336
1463 itr: 25400
1464 training loss: 485.5652
1465 itr: 25500
1466 training loss: 522.99426
1467 itr: 25600
1468 training loss: 546.14417
1469 itr: 25700
1470 training loss: 566.71173
1471 itr: 25800
1472 training loss: 481.10934
1473 itr: 25900
1474 training loss: 563.2359
1475 itr: 26000
1476 training loss: 562.9593
1477 test...
1478 mse per seq: 790.0209655761719
1479 77.161865234375
1480 111.39802551269531
1481 133.71017456054688
1482 141.56214904785156
1483 155.01535034179688
1484 171.17340087890625
1485 psnr per frame: 24.972275
1486 27.131813
1487 25.572649
1488 24.802017
1489 24.518822
```

```
1490 24.122452
1491 23.685905
1492 fmae per frame: 1732.5142
1493 1280.2596
1494 1571.2864
1495 1758.2389
1496 1830.3861
1497 1921.9966
1498 2032.917
1499 ssim per frame: 0.6069488
1500 0.6371308
1501 0.6146004
1502 0.6003255
1503 0.60620105
1504 0.6012571
1505 0.58217806
1506 sharpness per frame: 60.708332
1507 57.5
1508 55.25
1509 64.25
1510 57.0
1511 61.75
1512 68.5
1513 itr: 26100
1514 training loss: 587.21356
1515 itr: 26200
1516 training loss: 395.5676
1517 itr: 26300
1518 training loss: 587.6425
1519 itr: 26400
1520 training loss: 557.97656
1521 itr: 26500
1522 training loss: 409.65253
1523 itr: 26600
1524 training loss: 505.4926
1525 itr: 26700
1526 training loss: 824.81946
```

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1527 itr: 26800
1528 training loss: 474.24857
1529 itr: 26900
1530 training loss: 428.072
1531 itr: 27000
1532 training loss: 519.30927
1533 test...
1534 mse per seq: 794.7058258056641
1535 77.39270782470703
1536 111.9376449584961
1537 134.49191284179688
1538 142.6564178466797
1539 156.1495361328125
1540 172.07760620117188
1541 psnr per frame: 24.945105
1542 27.114815
1543 25.548042
1544 24.773867
1545 24.482704
1546 24.08973
1547 23.66147
1548 fmae per frame: 1738.068
1549 1282.6864
1550 1574.9971
1551 1763.964
1552 1837.9617
1553 1928.9913
1554 2039.8073
1555 ssim per frame: 0.6054713
1556 0.6365759
1557 0.61283076
1558 0.5988583
1559 0.60459274
1560 0.5995617
1561 0.5804083
1562 sharpness per frame: 60.666668
1563 58.75
```

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1564 56.0
1565 65.0
1566 57.5
1567 62.5
1568 64.25
1569 itr: 27100
1570 training loss: 510.58923
1571 itr: 27200
1572 training loss: 491.1996
1573 itr: 27300
1574 training loss: 477.18506
1575 itr: 27400
1576 training loss: 460.49338
1577 itr: 27500
1578 training loss: 541.95605
1579 itr: 27600
1580 training loss: 540.2059
1581 itr: 27700
1582 training loss: 461.37146
1583 itr: 27800
1584 training loss: 509.7371
1585 itr: 27900
1586 training loss: 491.62094
1587 itr: 28000
1588 training loss: 495.0233
1589 test...
1590 mse per seq: 792.6045608520508
1591 77.5071792602539
1592 111.59144592285156
1593 133.93772888183594
1594 142.45498657226562
1595 155.7108917236328
1596 171.40232849121094
1597 psnr per frame: 24.949072
1598 27.096838
1599 25.555832
1600 24.785656

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```
1601 24.48451
1602 24.097454
1603 23.674126
1604 fmae per frame: 1732.3271
1605 1281.4883
1606 1568.99
1607 1755.6329
1608 1831.9119
1609 1922.9429
1610 2032.9958
1611 ssim per frame: 0.6072553
1612 0.6374819
1613 0.6150761
1614 0.600754
1615 0.6056786
1616 0.601393
1617 0.58314794
1618 sharpness per frame: 60.458332
1619 58.0
1620 57.75
1621 64.5
1622 59.0
1623 60.25
1624 63.25
1625 itr: 28100
1626 training loss: 492.57318
1627 itr: 28200
1628 training loss: 546.6529
1629 itr: 28300
1630 training loss: 477.73785
1631 itr: 28400
1632 training loss: 495.3048
1633 itr: 28500
1634 training loss: 493.92633
1635 itr: 28600
1636 training loss: 814.8068
1637 itr: 28700
```

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1638 training loss: 526.72614
1639 itr: 28800
1640 training loss: 535.8446
1641 itr: 28900
1642 training loss: 350.16925
1643 itr: 29000
1644 training loss: 539.7722
1645 test...
1646 mse per seq: 793.4917526245117
1647 77.39549255371094
1648 111.60021209716797
1649 134.29481506347656
1650 141.9204559326172
1651 156.0449676513672
1652 172.23580932617188
1653 psnr per frame: 24.955427
1654 27.121006
1655 25.564432
1656 24.783691
1657 24.508463
1658 24.094591
1659 23.66038
1660 fmae per frame: 1735.4935
1661 1282.1483
1662 1572.177
1663 1761.3054
1664 1831.5315
1665 1926.5365
1666 2039.2622
1667 ssim per frame: 0.6059595
1668 0.63695514
1669 0.61392325
1670 0.5989694
1671 0.6054409
1672 0.59955776
1673 0.58091074
1674 sharpness per frame: 60.333332
```



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1675 58.5
1676 56.75
1677 63.5
1678 56.75
1679 61.75
1680 64.75
1681 itr: 29100
1682 training loss: 452.32443
1683 itr: 29200
1684 training loss: 552.7433
1685 itr: 29300
1686 training loss: 514.7389
1687 itr: 29400
1688 training loss: 508.1555
1689 itr: 29500
1690 training loss: 486.30762
1691 itr: 29600
1692 training loss: 369.58868
1693 itr: 29700
1694 training loss: 489.57022
1695 itr: 29800
1696 training loss: 554.1677
1697 itr: 29900
1698 training loss: 632.63824
1699 itr: 30000
1700 training loss: 532.8738
1701 test...
1702 mse per seq: 795.2426147460938
1703 77.39794921875
1704 111.84486389160156
1705 134.79551696777344
1706 142.73838806152344
1707 156.40322875976562
1708 172.0626678466797
1709 psnr per frame: 24.94224
1710 27.114262
1711 25.551714
```

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1712 24.764132
1713 24.48011
1714 24.082228
1715 23.661003
1716 fmae per frame: 1737.9469
1717 1282.3694
1718 1573.638
1719 1764.888
1720 1836.8545
1721 1930.1687
1722 2039.7626
1723 ssim per frame: 0.60543114
1724 0.63697064
1725 0.6132689
1726 0.5987572
1727 0.60422105
1728 0.59891474
1729 0.58045423
1730 sharpness per frame: 60.666668
1731 57.75
1732 56.5
1733 60.25
1734 58.0
1735 66.75
1736 64.75
1737 itr: 30100
1738 training loss: 539.2811
1739 itr: 30200
1740 training loss: 277.77686
1741 itr: 30300
1742 training loss: 526.87
1743 itr: 30400
1744 training loss: 505.88947
1745 itr: 30500
1746 training loss: 488.29626
1747 itr: 30600
1748 training loss: 446.62
```

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1749 itr: 30700
1750 training loss: 276.9676
1751 itr: 30800
1752 training loss: 466.11365
1753 itr: 30900
1754 training loss: 517.87195
1755 itr: 31000
1756 training loss: 506.908
1757 test...
1758 mse per seq: 791.3702163696289
1759 77.36553955078125
1760 111.48387908935547
1761 133.94296264648438
1762 141.83456420898438
1763 155.45120239257812
1764 171.2920684814453
1765 psnr per frame: 24.961548
1766 27.115957
1767 25.564816
1768 24.79206
1769 24.50782
1770 24.108467
1771 23.680176
1772 fmae per frame: 1733.327
1773 1281.8748
1774 1570.6184
1775 1758.7654
1776 1830.5916
1777 1922.9924
1778 2035.1194
1779 ssim per frame: 0.6064446
1780 0.63700813
1781 0.6142896
1782 0.59960574
1783 0.60568285
1784 0.6007611
1785 0.5813199
```

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1786 sharpness per frame: 60.791668
1787 57.75
1788 56.75
1789 65.5
1790 56.25
1791 64.75
1792 63.75
1793 itr: 31100
1794 training loss: 509.89987
1795 itr: 31200
1796 training loss: 520.09125
1797 itr: 31300
1798 training loss: 473.73868
1799 itr: 31400
1800 training loss: 469.65994
1801 itr: 31500
1802 training loss: 512.3976
1803 itr: 31600
1804 training loss: 411.9621
1805 itr: 31700
1806 training loss: 418.9936
1807 itr: 31800
1808 training loss: 567.3792
1809 itr: 31900
1810 training loss: 485.52612
1811 itr: 32000
1812 training loss: 350.69943
1813 test...
1814 mse per seq: 793.8998870849609
1815 77.37083435058594
1816 111.56510925292969
1817 134.30384826660156
1818 142.17039489746094
1819 156.18397521972656
1820 172.30572509765625
1821 psnr per frame: 24.95114
1822 27.1182
```

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1823 25.562592
1824 24.781452
1825 24.498837
1826 24.089663
1827 23.65608
1828 fmae per frame: 1735.9141
1829 1282.2137
1830 1571.5002
1831 1761.5737
1832 1833.4512
1833 1927.5874
1834 2039.158
1835 ssim per frame: 0.6057771
1836 0.6368624
1837 0.6137144
1838 0.59906584
1839 0.60497767
1840 0.59946185
1841 0.58058083
1842 sharpness per frame: 60.583332
1843 59.0
1844 56.0
1845 60.5
1846 58.75
1847 62.75
1848 66.5
1849 saved to train_output/checkpoints/typhoon_predrnn_pp
1850 itr: 32100
1851 training loss: 274.5971
1852 itr: 32200
1853 training loss: 434.8402
1854 itr: 32300
1855 training loss: 468.56445
1856 itr: 32400
1857 training loss: 498.78494
1858 itr: 32500
1859 training loss: 362.3716
```

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1860 itr: 32600
1861 training loss: 563.3275
1862 itr: 32700
1863 training loss: 467.04346
1864 itr: 32800
1865 training loss: 556.16614
1866 itr: 32900
1867 training loss: 411.0395
1868 itr: 33000
1869 training loss: 507.60602
1870 test...
1871 mse per seq: 795.2247314453125
1872 77.72216796875
1873 111.81292724609375
1874 134.27813720703125
1875 142.49624633789062
1876 156.70359802246094
1877 172.21165466308594
1878 psnr per frame: 24.934883
1879 27.085194
1880 25.546774
1881 24.773504
1882 24.482449
1883 24.068419
1884 23.652956
1885 fmae per frame: 1735.6085
1886 1283.7095
1887 1571.0527
1888 1759.0958
1889 1832.2671
1890 1929.1757
1891 2038.3502
1892 ssim per frame: 0.60556555
1893 0.63653755
1894 0.6137294
1895 0.59860337
1896 0.6047491
```

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1897 0.5990083
1898 0.58076555
1899 sharpness per frame: 61.583332
1900 61.0
1901 57.25
1902 59.5
1903 56.5
1904 68.75
1905 66.5
1906 itr: 33100
1907 training loss: 502.10986
1908 itr: 33200
1909 training loss: 544.68463
1910 itr: 33300
1911 training loss: 462.39047
1912 itr: 33400
1913 training loss: 395.6916
1914 itr: 33500
1915 training loss: 370.25928
1916 itr: 33600
1917 training loss: 275.18332
1918 itr: 33700
1919 training loss: 534.01917
1920 itr: 33800
1921 training loss: 460.33862
1922 itr: 33900
1923 training loss: 318.41684
1924 itr: 34000
1925 training loss: 396.2342
1926 test...
1927 mse per seq: 800.421012878418
1928 77.71814727783203
1929 112.28082275390625
1930 135.05409240722656
1931 143.86526489257812
1932 157.77499389648438
1933 173.72769165039062
```

1934	psnr per frame: 24.909933
1935	27.086086
1936	25.529194
1937	24.748743
1938	24.44231
1939	24.038282
1940	23.61497
1941	fmae per frame: 1742.3252
1942	1283.6426
1943	1574.6113
1944	1764.9209
1945	1842.8569
1946	1938.331
1947	2049.5884
1948	ssim per frame: 0.60536027
1949	0.6368797
1950	0.6137674
1951	0.59890544
1952	0.60442054
1953	0.5985545
1954	0.57963425
1955	sharpness per frame: 63.375
1956	58.75
1957	56.5
1958	61.5
1959	59.0
1960	70.75
1961	73.75
1962	itr: 34100
1963	training loss: 512.40625
1964	itr: 34200
1965	training loss: 573.12537
1966	itr: 34300
1967	training loss: 383.30298
1968	itr: 34400
1969	training loss: 686.42596
1970	itr: 34500


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1971 training loss: 494.61066
1972 itr: 34600
1973 training loss: 400.32532
1974 itr: 34700
1975 training loss: 484.50342
1976 itr: 34800
1977 training loss: 536.72736
1978 itr: 34900
1979 training loss: 405.51575
1980 itr: 35000
1981 training loss: 348.09702
1982 test...
1983 mse per seq: 796.8493804931641
1984 77.53645324707031
1985 111.99465942382812
1986 134.66610717773438
1987 142.93222045898438
1988 156.87503051757812
1989 172.84490966796875
1990 psnr per frame: 24.934874
1991 27.106522
1992 25.546303
1993 24.768768
1994 24.476124
1995 24.069767
1996 23.641754
1997 fmae per frame: 1739.1686
1998 1282.7295
1999 1574.5488
2000 1763.8746
2001 1837.7148
2002 1932.2737
2003 2043.8701
2004 ssim per frame: 0.6048229
2005 0.63657814
2006 0.61305845
2007 0.59804213
```

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2008 0.6037688
2009 0.598808
2010 0.5786816
2011 sharpness per frame: 60.541668
2012 61.5
2013 58.0
2014 56.75
2015 56.75
2016 66.5
2017 63.75
2018 saved to train_output/checkpoints/typhoon_predrnn_pp
2019 itr: 35100
2020 training loss: 409.47278
2021 itr: 35200
2022 training loss: 561.2051
2023 itr: 35300
2024 training loss: 436.59177
2025 itr: 35400
2026 training loss: 496.5196
2027 itr: 35500
2028 training loss: 438.58838
2029 itr: 35600
2030 training loss: 466.45657
2031 itr: 35700
2032 training loss: 442.07745
2033 itr: 35800
2034 training loss: 514.98035
2035 itr: 35900
2036 training loss: 397.9178
2037 itr: 36000
2038 training loss: 374.13678
2039 test...
2040 mse per seq: 801.7258682250977
2041 77.75210571289062
2042 112.36164093017578
2043 135.4111328125
2044 144.05975341796875

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2045 158.20693969726562
2046 173.93429565429688
2047 psnr per frame: 24.906809
2048 27.087742
2049 25.529617
2050 24.742016
2051 24.438677
2052 24.02986
2053 23.612938
2054 fmae per frame: 1743.4326
2055 1283.6106
2056 1575.9458
2057 1766.6824
2058 1844.2181
2059 1939.8455
2060 2050.2925
2061 ssim per frame: 0.60384345
2062 0.6360459
2063 0.6126051
2064 0.5977495
2065 0.6025742
2066 0.59631556
2067 0.57777035
2068 sharpness per frame: 63.083332
2069 60.75
2070 61.0
2071 59.25
2072 60.25
2073 69.25
2074 68.0
2075 itr: 36100
2076 training loss: 482.249
2077 itr: 36200
2078 training loss: 494.0399
2079 itr: 36300
2080 training loss: 545.34467
2081 itr: 36400
```

```
2082 training loss: 541.9922
2083 itr: 36500
2084 training loss: 477.01184
2085 itr: 36600
2086 training loss: 499.41275
2087 itr: 36700
2088 training loss: 549.5433
2089 itr: 36800
2090 training loss: 375.2829
2091 itr: 36900
2092 training loss: 541.6321
2093 itr: 37000
2094 training loss: 500.20245
2095 test...
2096 mse per seq: 796.2044982910156
2097 77.586181640625
2098 111.82142639160156
2099 134.25331115722656
2100 142.84829711914062
2101 156.91458129882812
2102 172.78070068359375
2103 psnr per frame: 24.936728
2104 27.101206
2105 25.550959
2106 24.78069
2107 24.476833
2108 24.067646
2109 23.643036
2110 fmae per frame: 1736.5355
2111 1282.2241
2112 1571.4908
2113 1759.538
2114 1835.0532
2115 1930.0817
2116 2040.8252
2117 ssim per frame: 0.60525495
2118 0.63633263
```

```
2119 0.6132124
2120 0.5991592
2121 0.6042746
2122 0.5983818
2123 0.5801692
2124 sharpness per frame: 62.416668
2125 58.25
2126 58.75
2127 60.5
2128 59.0
2129 71.5
2130 66.5
2131 itr: 37100
2132 training loss: 416.87283
2133 itr: 37200
2134 training loss: 483.35056
2135 itr: 37300
2136 training loss: 522.8264
2137 itr: 37400
2138 training loss: 575.0053
2139 itr: 37500
2140 training loss: 556.6648
2141 itr: 37600
2142 training loss: 387.2574
2143 itr: 37700
2144 training loss: 359.69397
2145 itr: 37800
2146 training loss: 376.8075
2147 itr: 37900
2148 training loss: 532.8222
2149 itr: 38000
2150 training loss: 520.2679
2151 test...
2152 mse per seq: 798.4041290283203
2153 77.8603515625
2154 112.30912780761719
2155 135.19131469726562
```

```
2156 143.19532775878906
2157 157.2488555908203
2158 172.59915161132812
2159 psnr per frame: 24.924036
2160 27.088968
2161 25.53351
2162 24.75127
2163 24.465572
2164 24.057709
2165 23.647184
2166 fmae per frame: 1739.9723
2167 1285.313
2168 1575.8988
2169 1766.1805
2170 1838.402
2171 1933.0618
2172 2040.9775
2173 ssim per frame: 0.60406864
2174 0.63566273
2175 0.6123788
2176 0.59741765
2177 0.60313094
2178 0.59713453
2179 0.57868695
2180 sharpness per frame: 63.083332
2181 62.25
2182 60.5
2183 62.75
2184 58.0
2185 70.0
2186 65.0
2187 itr: 38100
2188 training loss: 472.72906
2189 itr: 38200
2190 training loss: 513.8737
2191 itr: 38300
2192 training loss: 373.97333
```

```
2193 itr: 38400
2194 training loss: 576.955
2195 itr: 38500
2196 training loss: 499.31888
2197 itr: 38600
2198 training loss: 503.68372
2199 itr: 38700
2200 training loss: 388.03375
2201 itr: 38800
2202 training loss: 518.03906
2203 itr: 38900
2204 training loss: 540.26276
2205 itr: 39000
2206 training loss: 461.80972
2207 test...
2208 mse per seq: 798.0232162475586
2209 77.92012023925781
2210 112.19402313232422
2211 134.95347595214844
2212 143.27748107910156
2213 157.22711181640625
2214 172.4510040283203
2215 psnr per frame: 24.920816
2216 27.07753
2217 25.533043
2218 24.752745
2219 24.458244
2220 24.054508
2221 23.64883
2222 fmae per frame: 1737.9185
2223 1284.6943
2224 1572.9021
2225 1762.374
2226 1836.581
2227 1931.7927
2228 2039.166
2229 ssim per frame: 0.60466105
```

```
2230 0.63573486
2231 0.61332756
2232 0.59826285
2233 0.6034733
2234 0.5974737
2235 0.579694
2236 sharpness per frame: 62.333332
2237 61.75
2238 59.75
2239 62.0
2240 58.5
2241 67.75
2242 64.25
2243 itr: 39100
2244 training loss: 552.9893
2245 itr: 39200
2246 training loss: 516.97107
2247 itr: 39300
2248 training loss: 505.2718
2249 itr: 39400
2250 training loss: 430.54932
2251 itr: 39500
2252 training loss: 475.6776
2253 itr: 39600
2254 training loss: 510.28888
2255 itr: 39700
2256 training loss: 390.04138
2257 itr: 39800
2258 training loss: 474.85254
2259 itr: 39900
2260 training loss: 488.73392
2261 itr: 40000
2262 training loss: 501.8865
2263 test...
2264 mse per seq: 796.3706817626953
2265 77.58734130859375
2266 111.90777587890625
```



```
2267 134.5198974609375
2268 142.69216918945312
2269 157.19903564453125
2270 172.46446228027344
2271 psnr per frame: 24.934668
2272 27.100101
2273 25.547577
2274 24.771006
2275 24.47975
2276 24.058464
2277 23.651093
2278 fmae per frame: 1737.1185
2279 1282.047
2280 1571.9432
2281 1761.5714
2282 1834.4413
2283 1932.637
2284 2040.0712
2285 ssim per frame: 0.6043793
2286 0.63620543
2287 0.6130665
2288 0.5982951
2289 0.6035719
2290 0.59660476
2291 0.578532
2292 sharpness per frame: 62.25
2293 60.75
2294 61.75
2295 62.25
2296 55.25
2297 68.0
2298 65.5
2299 itr: 40100
2300 training loss: 521.85095
2301 itr: 40200
2302 training loss: 450.08664
2303 itr: 40300
```

```
2304 training loss: 487.7391
2305 itr: 40400
2306 training loss: 499.82095
2307 itr: 40500
2308 training loss: 473.98102
2309 itr: 40600
2310 training loss: 431.65747
2311 itr: 40700
2312 training loss: 596.17816
2313 itr: 40800
2314 training loss: 473.52365
2315 itr: 40900
2316 training loss: 384.16403
2317 itr: 41000
2318 training loss: 427.18033
2319 test...
2320 mse per seq: 800.6238861083984
2321 77.92267608642578
2322 112.1455307006836
2323 135.04446411132812
2324 143.57225036621094
2325 158.1414031982422
2326 173.7975616455078
2327 psnr per frame: 24.913307
2328 27.083588
2329 25.539057
2330 24.754269
2331 24.453415
2332 24.032518
2333 23.617002
2334 fmae per frame: 1742.1434
2335 1285.1998
2336 1574.6344
2337 1765.4518
2338 1841.1099
2339 1939.3787
2340 2047.0862
```

```
2341 ssim per frame: 0.60366607
2342 0.63527024
2343 0.6127292
2344 0.59770226
2345 0.60224426
2346 0.59643257
2347 0.5776175
2348 sharpness per frame: 62.458332
2349 60.75
2350 59.0
2351 61.0
2352 58.0
2353 67.25
2354 68.75
2355 itr: 41100
2356 training loss: 262.02362
2357 itr: 41200
2358 training loss: 490.65143
2359 itr: 41300
2360 training loss: 549.4933
2361 itr: 41400
2362 training loss: 502.78403
2363 itr: 41500
2364 training loss: 518.7157
2365 itr: 41600
2366 training loss: 455.3342
2367 itr: 41700
2368 training loss: 552.2749
2369 itr: 41800
2370 training loss: 541.9353
2371 itr: 41900
2372 training loss: 509.71497
2373 itr: 42000
2374 training loss: 485.50983
2375 test...
2376 mse per seq: 800.907356262207
2377 77.79732513427734
```

```
2378 112.38395690917969
2379 135.4457244873047
2380 143.60226440429688
2381 158.0145721435547
2382 173.66351318359375
2383 psnr per frame: 24.91204
2384 27.089035
2385 25.52808
2386 24.742117
2387 24.454376
2388 24.03784
2389 23.62079
2390 fmae per frame: 1742.8325
2391 1284.1746
2392 1576.1321
2393 1768.3928
2394 1841.5273
2395 1938.592
2396 2048.177
2397 ssim per frame: 0.6033345
2398 0.63560545
2399 0.6123994
2400 0.5970463
2401 0.60251796
2402 0.5956281
2403 0.57680976
2404 sharpness per frame: 63.791668
2405 62.0
2406 60.75
2407 59.25
2408 58.75
2409 72.5
2410 69.5
2411 itr: 42100
2412 training loss: 479.76144
2413 itr: 42200
2414 training loss: 515.57104
```

```
2415 itr: 42300
2416 training loss: 495.54834
2417 itr: 42400
2418 training loss: 554.85266
2419 itr: 42500
2420 training loss: 295.1585
2421 itr: 42600
2422 training loss: 836.2396
2423 itr: 42700
2424 training loss: 501.61725
2425 itr: 42800
2426 training loss: 475.38608
2427 itr: 42900
2428 training loss: 396.40158
2429 itr: 43000
2430 training loss: 479.04907
2431 test...
2432 mse per seq: 796.5778961181641
2433 77.9365234375
2434 112.14022827148438
2435 134.9102020263672
2436 142.61439514160156
2437 156.64138793945312
2438 172.3351593017578
2439 psnr per frame: 24.935827
2440 27.089432
2441 25.541946
2442 24.762402
2443 24.486767
2444 24.077885
2445 23.656532
2446 fmae per frame: 1738.6471
2447 1285.8271
2448 1575.8121
2449 1765.775
2450 1835.0361
2451 1930.6802
```

```
2452 2038.7518
2453 ssim per frame: 0.60263914
2454 0.6346492
2455 0.6113884
2456 0.5961476
2457 0.60199445
2458 0.5955416
2459 0.57611316
2460 sharpness per frame: 62.791668
2461 63.0
2462 59.0
2463 58.5
2464 58.5
2465 70.75
2466 67.0
2467 itr: 43100
2468 training loss: 485.56827
2469 itr: 43200
2470 training loss: 521.8591
2471 itr: 43300
2472 training loss: 544.1216
2473 itr: 43400
2474 training loss: 481.98615
2475 itr: 43500
2476 training loss: 287.615
2477 itr: 43600
2478 training loss: 460.42792
2479 itr: 43700
2480 training loss: 501.3339
2481 itr: 43800
2482 training loss: 417.74606
2483 itr: 43900
2484 training loss: 405.82153
2485 itr: 44000
2486 training loss: 527.9893
2487 test...
2488 mse per seq: 796.1739654541016
```

```
2489 77.85900115966797
2490 111.99816131591797
2491 134.50299072265625
2492 142.59507751464844
2493 156.6546173095703
2494 172.56411743164062
2495 psnr per frame: 24.93471
2496 27.086975
2497 25.544912
2498 24.772518
2499 24.483587
2500 24.073051
2501 23.647211
2502 fmae per frame: 1736.6992
2503 1283.9352
2504 1572.8602
2505 1760.9833
2506 1833.4692
2507 1928.7286
2508 2040.2184
2509 ssim per frame: 0.6040351
2510 0.63549393
2511 0.6126591
2512 0.59768695
2513 0.60295653
2514 0.59738696
2515 0.57802707
2516 sharpness per frame: 62.875
2517 61.25
2518 60.25
2519 60.25
2520 57.5
2521 71.75
2522 66.25
2523 itr: 44100
2524 training loss: 566.4892
2525 itr: 44200
```

```
2526 training loss: 548.1777
2527 itr: 44300
2528 training loss: 468.9513
2529 itr: 44400
2530 training loss: 365.18503
2531 itr: 44500
2532 training loss: 498.82092
2533 itr: 44600
2534 training loss: 431.00787
2535 itr: 44700
2536 training loss: 349.54425
2537 itr: 44800
2538 training loss: 380.13144
2539 itr: 44900
2540 training loss: 526.17017
2541 itr: 45000
2542 training loss: 532.633
2543 test...
2544 mse per seq: 799.6296920776367
2545 77.78616333007812
2546 111.98653411865234
2547 134.97813415527344
2548 143.56048583984375
2549 157.61099243164062
2550 173.70738220214844
2551 psnr per frame: 24.923532
2552 27.098248
2553 25.549156
2554 24.761797
2555 24.458656
2556 24.051292
2557 23.622044
2558 fmae per frame: 1741.6323
2559 1284.9187
2560 1574.1354
2561 1766.2273
2562 1842.003
```



```
2563 1936.428
2564 2046.0823
2565 ssim per frame: 0.60323215
2566 0.63477683
2567 0.61192244
2568 0.59758055
2569 0.6021322
2570 0.5962163
2571 0.5767646
2572 sharpness per frame: 62.708332
2573 63.5
2574 60.75
2575 58.75
2576 55.25
2577 69.75
2578 68.25
2579 itr: 45100
2580 training loss: 510.47406
2581 itr: 45200
2582 training loss: 526.5864
2583 itr: 45300
2584 training loss: 335.43356
2585 itr: 45400
2586 training loss: 487.42227
2587 itr: 45500
2588 training loss: 483.78058
2589 itr: 45600
2590 training loss: 310.50717
2591 itr: 45700
2592 training loss: 519.74524
2593 itr: 45800
2594 training loss: 329.17767
2595 itr: 45900
2596 training loss: 408.9945
2597 itr: 46000
2598 training loss: 507.55084
2599 test...
```

```
2600 mse per seq: 799.5398025512695
2601 77.98863983154297
2602 112.21209716796875
2603 134.96742248535156
2604 143.11685180664062
2605 157.70175170898438
2606 173.55303955078125
2607 psnr per frame: 24.91862
2608 27.080622
2609 25.536264
2610 24.757008
2611 24.468182
2612 24.045952
2613 23.6237
2614 fmae per frame: 1741.4459
2615 1286.634
2616 1575.1743
2617 1765.5825
2618 1838.195
2619 1936.581
2620 2046.5103
2621 ssim per frame: 0.60307807
2622 0.6346594
2623 0.6120851
2624 0.59707963
2625 0.6024042
2626 0.59561384
2627 0.5766265
2628 sharpness per frame: 63.625
2629 63.75
2630 62.75
2631 59.5
2632 58.0
2633 70.25
2634 67.5
2635 itr: 46100
2636 training loss: 510.21863
```

```
2637 itr: 46200
2638 training loss: 428.62112
2639 itr: 46300
2640 training loss: 525.9714
2641 itr: 46400
2642 training loss: 426.79755
2643 itr: 46500
2644 training loss: 479.05283
2645 itr: 46600
2646 training loss: 536.37524
2647 itr: 46700
2648 training loss: 484.1054
2649 itr: 46800
2650 training loss: 542.5338
2651 itr: 46900
2652 training loss: 482.78784
2653 itr: 47000
2654 training loss: 490.70032
2655 test...
2656 mse per seq: 803.8342361450195
2657 78.24632263183594
2658 112.76905059814453
2659 135.66439819335938
2660 143.99136352539062
2661 158.6547088623047
2662 174.50839233398438
2663 psnr per frame: 24.897667
2664 27.066113
2665 25.51762
2666 24.736256
2667 24.44343
2668 24.020294
2669 23.602293
2670 fmae per frame: 1745.4083
2671 1287.8162
2672 1578.8544
2673 1769.1968
```

```
2674 1841.9648
2675 1941.3892
2676 2053.2297
2677 ssim per frame: 0.60208666
2678 0.6343623
2679 0.6112197
2680 0.596293
2681 0.60129905
2682 0.5937459
2683 0.5756002
2684 sharpness per frame: 62.833332
2685 63.75
2686 60.0
2687 59.25
2688 56.25
2689 73.25
2690 64.5
2691 itr: 47100
2692 training loss: 524.7404
2693 itr: 47200
2694 training loss: 500.0579
2695 itr: 47300
2696 training loss: 467.9137
2697 itr: 47400
2698 training loss: 582.1778
2699 itr: 47500
2700 training loss: 491.75424
2701 itr: 47600
2702 training loss: 467.49472
2703 itr: 47700
2704 training loss: 368.61603
2705 itr: 47800
2706 training loss: 503.57907
2707 itr: 47900
2708 training loss: 492.7504
2709 itr: 48000
2710 training loss: 473.13
```

```
2711 test...
2712 mse per seq: 797.9512252807617
2713 77.97615051269531
2714 111.97991180419922
2715 134.80215454101562
2716 142.6219024658203
2717 157.1453399658203
2718 173.42576599121094
2719 psnr per frame: 24.93052
2720 27.086863
2721 25.548836
2722 24.76742
2723 24.486313
2724 24.064123
2725 23.629564
2726 fmae per frame: 1739.877
2727 1286.3479
2728 1574.1849
2729 1764.9489
2730 1835.1489
2731 1932.8009
2732 2045.8298
2733 ssim per frame: 0.602755
2734 0.63455075
2735 0.61213267
2736 0.59690714
2737 0.60186
2738 0.5949402
2739 0.57613945
2740 sharpness per frame: 62.375
2741 63.5
2742 60.0
2743 60.5
2744 55.0
2745 69.75
2746 65.5
2747 itr: 48100
```

```
2748 training loss: 493.70404
2749 itr: 48200
2750 training loss: 499.86984
2751 itr: 48300
2752 training loss: 505.10004
2753 itr: 48400
2754 training loss: 227.56067
2755 itr: 48500
2756 training loss: 572.78815
2757 itr: 48600
2758 training loss: 457.38
2759 itr: 48700
2760 training loss: 366.06815
2761 itr: 48800
2762 training loss: 513.6219
2763 itr: 48900
2764 training loss: 476.38733
2765 itr: 49000
2766 training loss: 385.30096
2767 test...
2768 mse per seq: 800.7155685424805
2769 78.05304718017578
2770 112.35356140136719
2771 135.05519104003906
2772 143.01409912109375
2773 158.00454711914062
2774 174.23512268066406
2775 psnr per frame: 24.915192
2776 27.080542
2777 25.532043
2778 24.757776
2779 24.473087
2780 24.038517
2781 23.609192
2782 fmae per frame: 1741.6913
2783 1286.4082
2784 1575.8058
```

```
2785 1765.9424
2786 1836.2819
2787 1936.4825
2788 2049.2268
2789 ssim per frame: 0.6023362
2790 0.63435394
2791 0.61172146
2792 0.5962038
2793 0.60135496
2794 0.59519136
2795 0.57519174
2796 sharpness per frame: 62.958332
2797 62.25
2798 60.25
2799 57.75
2800 59.25
2801 71.5
2802 66.75
2803 itr: 49100
2804 training loss: 370.90833
2805 itr: 49200
2806 training loss: 460.80392
2807 itr: 49300
2808 training loss: 468.92032
2809 itr: 49400
2810 training loss: 462.58615
2811 itr: 49500
2812 training loss: 392.36804
2813 itr: 49600
2814 training loss: 464.53668
2815 itr: 49700
2816 training loss: 504.86084
2817 itr: 49800
2818 training loss: 518.0708
2819 itr: 49900
2820 training loss: 449.73114
2821 itr: 50000
```

```
2822 training loss: 512.0157
2823 test...
2824 mse per seq: 801.7934646606445
2825 78.1922378540039
2826 112.7972412109375
2827 135.43524169921875
2828 143.50950622558594
2829 158.07354736328125
2830 173.7856903076172
2831 psnr per frame: 24.905731
2832 27.069374
2833 25.515306
2834 24.742048
2835 24.455828
2836 24.034554
2837 23.617287
2838 fmae per frame: 1742.6842
2839 1287.542
2840 1579.1423
2841 1767.7224
2842 1839.0249
2843 1937.6475
2844 2045.0259
2845 ssim per frame: 0.6022141
2846 0.63424045
2847 0.6111366
2848 0.5959304
2849 0.6016419
2850 0.59425277
2851 0.57608247
2852 sharpness per frame: 64.875
2853 64.25
2854 64.75
2855 61.5
2856 60.75
2857 70.75
2858 67.25
```



```
2859 itr: 50100
2860 training loss: 391.13577
2861 itr: 50200
2862 training loss: 538.4487
2863 itr: 50300
2864 training loss: 523.8171
2865 itr: 50400
2866 training loss: 460.09906
2867 itr: 50500
2868 training loss: 325.9261
2869 itr: 50600
2870 training loss: 488.0444
2871 itr: 50700
2872 training loss: 514.7142
2873 itr: 50800
2874 training loss: 529.39496
2875 itr: 50900
2876 training loss: 389.36572
2877 itr: 51000
2878 training loss: 404.09454
2879 test...
2880 mse per seq: 805.5397186279297
2881 78.64335632324219
2882 113.28341674804688
2883 135.94119262695312
2884 144.26248168945312
2885 158.9196014404297
2886 174.4896697998047
2887 psnr per frame: 24.879654
2888 27.034462
2889 25.489687
2890 24.720274
2891 24.429367
2892 24.008255
2893 23.595871
2894 fmae per frame: 1746.3218
2895 1289.894
```

```
2896 1580.3367
2897 1769.3594
2898 1844.1879
2899 1943.3625
2900 2050.79
2901 ssim per frame: 0.6016692
2902 0.63344777
2903 0.61060065
2904 0.59569776
2905 0.60086113
2906 0.59379286
2907 0.575615
2908 sharpness per frame: 66.041664
2909 65.5
2910 64.0
2911 59.5
2912 63.0
2913 78.75
2914 65.5
2915 itr: 51100
2916 training loss: 274.78082
2917 itr: 51200
2918 training loss: 525.4226
2919 itr: 51300
2920 training loss: 532.7853
2921 itr: 51400
2922 training loss: 466.59616
2923 itr: 51500
2924 training loss: 513.8923
2925 itr: 51600
2926 training loss: 538.3088
2927 itr: 51700
2928 training loss: 480.19226
2929 itr: 51800
2930 training loss: 455.1065
2931 itr: 51900
2932 training loss: 520.3291
```

```
2933 itr: 52000
2934 training loss: 497.4544
2935 test...
2936 mse per seq: 807.0249786376953
2937 78.52592468261719
2938 113.23321533203125
2939 136.102783203125
2940 144.67532348632812
2941 159.23675537109375
2942 175.2509765625
2943 psnr per frame: 24.876715
2944 27.04426
2945 25.495567
2946 24.71878
2947 24.419106
2948 24.001957
2949 23.580614
2950 fmae per frame: 1747.4199
2951 1289.6907
2952 1580.9036
2953 1770.8864
2954 1845.5508
2955 1943.4622
2956 2054.0269
2957 ssim per frame: 0.6013964
2958 0.63364625
2959 0.61084473
2960 0.59558177
2961 0.6000916
2962 0.59345347
2963 0.57476056
2964 sharpness per frame: 65.5
2965 65.5
2966 64.25
2967 62.0
2968 57.5
2969 72.5
```

```
2970 71.25
2971 itr: 52100
2972 training loss: 485.49323
2973 itr: 52200
2974 training loss: 492.07166
2975 itr: 52300
2976 training loss: 550.5392
2977 itr: 52400
2978 training loss: 512.96094
2979 itr: 52500
2980 training loss: 463.344
2981 itr: 52600
2982 training loss: 393.72214
2983 itr: 52700
2984 training loss: 453.54898
2985 itr: 52800
2986 training loss: 560.59705
2987 itr: 52900
2988 training loss: 468.9028
2989 itr: 53000
2990 training loss: 639.5153
2991 test...
2992 mse per seq: 796.4364547729492
2993 78.0829849243164
2994 112.36976623535156
2995 134.77442932128906
2996 142.3952178955078
2997 156.53515625
2998 172.27890014648438
2999 psnr per frame: 24.930742
3000 27.07373
3001 25.528875
3002 24.761242
3003 24.488245
3004 24.077816
3005 23.654552
3006 fmae per frame: 1737.1797
```

```
3007 1286.645
3008 1575.7129
3009 1763.3937
3010 1832.8552
3011 1927.6082
3012 2036.8632
3013 ssim per frame: 0.6022967
3014 0.634405
3015 0.61103946
3016 0.59621614
3017 0.6012528
3018 0.59480506
3019 0.5760617
3020 sharpness per frame: 65.041664
3021 64.5
3022 64.0
3023 59.0
3024 59.0
3025 73.75
3026 70.0
3027 itr: 53100
3028 training loss: 516.09033
3029 itr: 53200
3030 training loss: 498.78632
3031 itr: 53300
3032 training loss: 395.81134
3033 itr: 53400
3034 training loss: 420.99384
3035 itr: 53500
3036 training loss: 476.62936
3037 itr: 53600
3038 training loss: 490.12173
3039 itr: 53700
3040 training loss: 511.52237
3041 itr: 53800
3042 training loss: 438.44617
3043 itr: 53900
```

```
3044 training loss: 490.22443
3045 itr: 54000
3046 training loss: 504.57367
3047 test...
3048 mse per seq: 801.7300033569336
3049 78.35816192626953
3050 112.64103698730469
3051 135.30767822265625
3052 143.53146362304688
3053 157.994384765625
3054 173.89727783203125
3055 psnr per frame: 24.905748
3056 27.058973
3057 25.519508
3058 24.7467
3059 24.455416
3060 24.038574
3061 23.615322
3062 fmae per frame: 1741.5775
3063 1288.0427
3064 1576.6238
3065 1765.2952
3066 1837.5017
3067 1935.0825
3068 2046.9177
3069 ssim per frame: 0.6016586
3070 0.63371134
3071 0.61139023
3072 0.59616625
3073 0.6009816
3074 0.59348375
3075 0.57421845
3076 sharpness per frame: 63.708332
3077 63.0
3078 63.0
3079 63.0
3080 57.5
```

```
3081 74.25
3082 61.5
3083 itr: 54100
3084 training loss: 481.69833
3085 itr: 54200
3086 training loss: 487.15936
3087 itr: 54300
3088 training loss: 398.64786
3089 itr: 54400
3090 training loss: 488.5155
3091 itr: 54500
3092 training loss: 359.9861
3093 itr: 54600
3094 training loss: 376.8357
3095 itr: 54700
3096 training loss: 547.1493
3097 itr: 54800
3098 training loss: 531.3865
3099 itr: 54900
3100 training loss: 539.05585
3101 itr: 55000
3102 training loss: 470.24402
3103 test...
3104 mse per seq: 799.0344772338867
3105 78.18267059326172
3106 112.63613891601562
3107 135.05934143066406
3108 142.88331604003906
3109 157.29922485351562
3110 172.97378540039062
3111 psnr per frame: 24.91601
3112 27.06596
3113 25.516798
3114 24.749725
3115 24.472273
3116 24.054922
3117 23.63639
```

```
3118 fmae per frame: 1739.8031
3119 1287.0674
3120 1577.5935
3121 1765.4878
3122 1835.0764
3123 1931.9763
3124 2041.6174
3125 ssim per frame: 0.6025903
3126 0.63467
3127 0.6118392
3128 0.5964901
3129 0.6018177
3130 0.59472257
3131 0.5760025
3132 sharpness per frame: 63.916668
3133 64.25
3134 61.0
3135 56.5
3136 60.0
3137 73.5
3138 68.25
3139 itr: 55100
3140 training loss: 468.88025
3141 itr: 55200
3142 training loss: 489.41235
3143 itr: 55300
3144 training loss: 362.365
3145 itr: 55400
3146 training loss: 516.97577
3147 itr: 55500
3148 training loss: 540.3285
3149 itr: 55600
3150 training loss: 506.9512
3151 itr: 55700
3152 training loss: 441.58337
3153 itr: 55800
3154 training loss: 523.95337
```



```
3155 itr: 55900
3156 training loss: 820.9183
3157 itr: 56000
3158 training loss: 504.5814
3159 test...
3160 mse per seq: 801.9532623291016
3161 78.39905548095703
3162 112.4972915649414
3163 135.11801147460938
3164 143.25938415527344
3165 158.02243041992188
3166 174.65708923339844
3167 psnr per frame: 24.903215
3168 27.053867
3169 25.52266
3170 24.748852
3171 24.461985
3172 24.036251
3173 23.595688
3174 fmae per frame: 1741.8457
3175 1288.2664
3176 1575.7842
3177 1764.726
3178 1836.6548
3179 1935.8745
3180 2049.7688
3181 ssim per frame: 0.60107476
3182 0.63350075
3183 0.6107271
3184 0.5953683
3185 0.6002633
3186 0.5931457
3187 0.5734433
3188 sharpness per frame: 64.625
3189 64.0
3190 62.75
3191 58.75
```

```
3192 58.25
3193 77.75
3194 66.25
3195 itr: 56100
3196 training loss: 521.19006
3197 itr: 56200
3198 training loss: 465.3199
3199 itr: 56300
3200 training loss: 454.79694
3201 itr: 56400
3202 training loss: 539.759
3203 itr: 56500
3204 training loss: 419.99493
3205 itr: 56600
3206 training loss: 267.72205
3207 itr: 56700
3208 training loss: 530.348
3209 itr: 56800
3210 training loss: 461.66458
3211 itr: 56900
3212 training loss: 457.21408
3213 itr: 57000
3214 training loss: 509.97406
3215 test...
3216 mse per seq: 804.6391754150391
3217 78.61829376220703
3218 113.0085220336914
3219 135.60751342773438
3220 143.85292053222656
3221 158.7637176513672
3222 174.7882080078125
3223 psnr per frame: 24.889093
3224 27.045433
3225 25.504688
3226 24.733606
3227 24.443525
3228 24.01537
```

```
3229 23.591934
3230 fmae per frame: 1745.2831
3231 1290.5616
3232 1579.9583
3233 1768.7399
3234 1840.6337
3235 1940.0532
3236 2051.751
3237 ssim per frame: 0.6006953
3238 0.63334256
3239 0.6102027
3240 0.5949552
3241 0.6002092
3242 0.5923599
3243 0.5731023
3244 sharpness per frame: 65.833336
3245 65.5
3246 63.25
3247 63.5
3248 58.5
3249 72.75
3250 71.5
3251 itr: 57100
3252 training loss: 350.22168
3253 itr: 57200
3254 training loss: 372.28415
3255 itr: 57300
3256 training loss: 597.8661
3257 itr: 57400
3258 training loss: 469.49014
3259 itr: 57500
3260 training loss: 401.02243
3261 itr: 57600
3262 training loss: 480.25427
3263 itr: 57700
3264 training loss: 453.37497
3265 itr: 57800
```

```
3266 training loss: 491.03076
3267 itr: 57900
3268 training loss: 503.58444
3269 itr: 58000
3270 training loss: 502.276
3271 test...
3272 mse per seq: 808.0139007568359
3273 78.54337310791016
3274 113.41919708251953
3275 136.5235595703125
3276 144.5208740234375
3277 159.65151977539062
3278 175.35537719726562
3279 psnr per frame: 24.876184
3280 27.053339
3281 25.492123
3282 24.70966
3283 24.427036
3284 23.995031
3285 23.579918
3286 fmae per frame: 1749.4684
3287 1289.8762
3288 1582.7804
3289 1775.0585
3290 1845.5055
3291 1946.4775
3292 2057.1128
3293 ssim per frame: 0.600511
3294 0.6329772
3295 0.60981375
3296 0.59421444
3297 0.5998636
3298 0.5921414
3299 0.57405573
3300 sharpness per frame: 64.375
3301 64.25
3302 62.75
```

```
3303 60.5
3304 60.0
3305 77.0
3306 61.75
3307 itr: 58100
3308 training loss: 434.34988
3309 itr: 58200
3310 training loss: 488.48032
3311 itr: 58300
3312 training loss: 764.07715
3313 itr: 58400
3314 training loss: 524.9911
3315 itr: 58500
3316 training loss: 858.5957
3317 itr: 58600
3318 training loss: 489.72644
3319 itr: 58700
3320 training loss: 440.9257
3321 itr: 58800
3322 training loss: 399.404
3323 itr: 58900
3324 training loss: 498.5635
3325 itr: 59000
3326 training loss: 502.85046
3327 test...
3328 mse per seq: 803.7328643798828
3329 78.6171875
3330 113.08323669433594
3331 135.64292907714844
3332 144.0697479248047
3333 158.564453125
3334 173.75531005859375
3335 psnr per frame: 24.891577
3336 27.041313
3337 25.501461
3338 24.732376
3339 24.435959
```

```
3340 24.020756
3341 23.617601
3342 fmae per frame: 1743.9935
3343 1290.1724
3344 1579.9584
3345 1767.9633
3346 1842.0623
3347 1939.4973
3348 2044.3075
3349 ssim per frame: 0.6009404
3350 0.63334846
3351 0.61030596
3352 0.5952305
3353 0.6000173
3354 0.5921584
3355 0.5745815
3356 sharpness per frame: 65.5
3357 65.0
3358 63.75
3359 65.75
3360 58.75
3361 75.5
3362 64.25
3363 itr: 59100
3364 training loss: 260.45493
3365 itr: 59200
3366 training loss: 475.88632
3367 itr: 59300
3368 training loss: 477.65213
3369 itr: 59400
3370 training loss: 498.13705
3371 itr: 59500
3372 training loss: 522.71796
3373 itr: 59600
3374 training loss: 418.85074
3375 itr: 59700
3376 training loss: 561.4453
```

```
3377 itr: 59800
3378 training loss: 375.46545
3379 itr: 59900
3380 training loss: 829.44244
3381 itr: 60000
3382 training loss: 403.53632
3383 test...
3384 mse per seq: 804.0425109863281
3385 78.55010986328125
3386 113.12799072265625
3387 135.67527770996094
3388 143.81053161621094
3389 158.8050537109375
3390 174.07354736328125
3391 psnr per frame: 24.893011
3392 27.049915
3393 25.500793
3394 24.733606
3395 24.445473
3396 24.016615
3397 23.611662
3398 fmae per frame: 1745.1686
3399 1289.9333
3400 1580.8186
3401 1769.331
3402 1840.7838
3403 1941.883
3404 2048.2622
3405 ssim per frame: 0.59986013
3406 0.6329394
3407 0.6095397
3408 0.5949362
3409 0.5991486
3410 0.5902046
3411 0.5723927
3412 sharpness per frame: 65.708336
3413 67.5
```

```
3414 62.25
3415 63.5
3416 57.5
3417 77.0
3418 66.5
3419 itr: 60100
3420 training loss: 499.71176
3421 itr: 60200
3422 training loss: 544.637
3423 itr: 60300
3424 training loss: 526.09406
3425 itr: 60400
3426 training loss: 502.92007
3427 itr: 60500
3428 training loss: 455.7149
3429 itr: 60600
3430 training loss: 485.27066
3431 itr: 60700
3432 training loss: 445.4669
3433 itr: 60800
3434 training loss: 393.60263
3435 itr: 60900
3436 training loss: 456.94995
3437 itr: 61000
3438 training loss: 459.77164
3439 test...
3440 mse per seq: 811.0860061645508
3441 78.79621124267578
3442 113.65684509277344
3443 136.9710693359375
3444 145.07310485839844
3445 160.06161499023438
3446 176.52716064453125
3447 psnr per frame: 24.86085
3448 27.041256
3449 25.482956
3450 24.694843
```



```
3451 24.410717
3452 23.983265
3453 23.552061
3454 fmae per frame: 1753.0497
3455 1292.8643
3456 1586.0028
3457 1778.8289
3458 1849.3812
3459 1948.852
3460 2062.3682
3461 ssim per frame: 0.59892195
3462 0.63209987
3463 0.60841584
3464 0.59305394
3465 0.5983646
3466 0.59098846
3467 0.5706088
3468 sharpness per frame: 65.458336
3469 67.5
3470 63.25
3471 57.0
3472 58.5
3473 77.75
3474 68.75
3475 itr: 61100
3476 training loss: 385.42313
3477 itr: 61200
3478 training loss: 496.1048
3479 itr: 61300
3480 training loss: 487.79462
3481 itr: 61400
3482 training loss: 395.28912
3483 itr: 61500
3484 training loss: 424.6792
3485 itr: 61600
3486 training loss: 483.36566
3487 itr: 61700
```

```
3488 training loss: 515.0839
3489 itr: 61800
3490 training loss: 519.45526
3491 itr: 61900
3492 training loss: 483.13354
3493 itr: 62000
3494 training loss: 494.3284
3495 test...
3496 mse per seq: 800.6702270507812
3497 78.45549011230469
3498 112.86968994140625
3499 135.25892639160156
3500 143.25645446777344
3501 157.59405517578125
3502 173.23561096191406
3503 psnr per frame: 24.910242
3504 27.056791
3505 25.512205
3506 24.747906
3507 24.46469
3508 24.04897
3509 23.630882
3510 fmae per frame: 1740.9323
3511 1288.7201
3512 1578.3652
3513 1766.8635
3514 1836.584
3515 1933.1499
3516 2041.9098
3517 ssim per frame: 0.60023856
3518 0.6328485
3519 0.6097797
3520 0.59491205
3521 0.5991238
3522 0.59145397
3523 0.5733132
3524 sharpness per frame: 64.708336
```

```
3525 65.75
3526 65.25
3527 61.0
3528 55.25
3529 73.5
3530 67.5
3531 itr: 62100
3532 training loss: 455.71838
3533 itr: 62200
3534 training loss: 528.37897
3535 itr: 62300
3536 training loss: 507.04813
3537 itr: 62400
3538 training loss: 491.29913
3539 itr: 62500
3540 training loss: 362.50903
3541 itr: 62600
3542 training loss: 482.77942
3543 itr: 62700
3544 training loss: 536.94
3545 itr: 62800
3546 training loss: 494.77777
3547 itr: 62900
3548 training loss: 470.84232
3549 itr: 63000
3550 training loss: 459.04236
3551 test...
3552 mse per seq: 804.5187225341797
3553 78.6386489868164
3554 113.11450958251953
3555 135.84893798828125
3556 143.593994140625
3557 158.52554321289062
3558 174.79708862304688
3559 psnr per frame: 24.886972
3560 27.04065
3561 25.498398
```

```
3562 24.723732
3563 24.449392
3564 24.021076
3565 23.588587
3566 fmae per frame: 1744.5717
3567 1290.1036
3568 1579.637
3569 1769.7151
3570 1838.0499
3571 1939.4359
3572 2050.4885
3573 ssim per frame: 0.59990984
3574 0.63290983
3575 0.60968864
3576 0.59361964
3577 0.5998067
3578 0.5913907
3579 0.57204354
3580 sharpness per frame: 65.166664
3581 65.75
3582 63.75
3583 62.5
3584 56.5
3585 76.5
3586 66.0
3587 itr: 63100
3588 training loss: 508.03918
3589 itr: 63200
3590 training loss: 465.7648
3591 itr: 63300
3592 training loss: 350.30048
3593 itr: 63400
3594 training loss: 520.7924
3595 itr: 63500
3596 training loss: 498.434
3597 itr: 63600
3598 training loss: 364.78867
```

```
3599 itr: 63700
3600 training loss: 503.05396
3601 itr: 63800
3602 training loss: 510.4781
3603 itr: 63900
3604 training loss: 602.4108
3605 itr: 64000
3606 training loss: 509.98483
3607 test...
3608 mse per seq: 804.8649749755859
3609 78.7734603881836
3610 113.0124282836914
3611 135.3869171142578
3612 143.88528442382812
3613 158.80538940429688
3614 175.00149536132812
3615 psnr per frame: 24.879768
3616 27.022064
3617 25.497036
3618 24.733479
3619 24.437746
3620 24.007795
3621 23.58049
3622 fmae per frame: 1743.4698
3623 1290.1531
3624 1577.214
3625 1764.5333
3626 1838.9592
3627 1938.801
3628 2051.1592
3629 ssim per frame: 0.6010373
3630 0.63356644
3631 0.61037666
3632 0.5957671
3633 0.60043365
3634 0.5924592
3635 0.5736208
```

```
3636 sharpness per frame: 65.208336
3637 65.0
3638 63.75
3639 61.0
3640 59.5
3641 74.25
3642 67.75
3643 itr: 64100
3644 training loss: 406.3302
3645 itr: 64200
3646 training loss: 522.8631
3647 itr: 64300
3648 training loss: 485.95853
3649 itr: 64400
3650 training loss: 383.76105
3651 itr: 64500
3652 training loss: 352.56644
3653 itr: 64600
3654 training loss: 426.05905
3655 itr: 64700
3656 training loss: 449.83563
3657 itr: 64800
3658 training loss: 499.4204
3659 itr: 64900
3660 training loss: 472.56693
3661 itr: 65000
3662 training loss: 497.5575
3663 test...
3664 mse per seq: 804.6191101074219
3665 78.72581481933594
3666 113.11383056640625
3667 136.0034942626953
3668 143.836181640625
3669 158.64955139160156
3670 174.2902374267578
3671 psnr per frame: 24.889246
3672 27.040749
```

```
3673 25.501652
3674 24.723171
3675 24.445425
3676 24.020449
3677 23.604027
3678 fmae per frame: 1744.7653
3679 1290.6848
3680 1580.3077
3681 1770.7092
3682 1839.848
3683 1940.021
3684 2047.0205
3685 ssim per frame: 0.60027397
3686 0.63286257
3687 0.6095241
3688 0.5947618
3689 0.59928656
3690 0.5917153
3691 0.5734934
3692 sharpness per frame: 65.375
3693 65.75
3694 64.0
3695 60.5
3696 59.25
3697 78.75
3698 64.0
3699 itr: 65100
3700 training loss: 431.01584
3701 itr: 65200
3702 training loss: 408.8974
3703 itr: 65300
3704 training loss: 340.9402
3705 itr: 65400
3706 training loss: 376.21115
3707 itr: 65500
3708 training loss: 474.1361
3709 ^CTraceback (most recent call last):
```

```
3710 File "/home/sunfengzhen/pycharm/typhoon_predict/typhoon_train
.py", line 348, in <module>
3711     train(model, train_input_handle, test_input_handle, epochs
, display, test_every) # model elesun
3712 File "/home/sunfengzhen/pycharm/typhoon_predict/typhoon_train
.py", line 231, in train
3713     cost = model.train(ims, lr, mask_true) #elesun not train
only test
3714 File "/home/sunfengzhen/pycharm/typhoon_predict/typhoon_train
.py", line 147, in train
3715     loss, _ = self.sess.run((self.loss_train, self.train_op),
feed_dict)
3716 File "/usr/local/lib/python2.7/dist-packages/tensorflow/
python/client/session.py", line 929, in run
3717     run_metadata_ptr)
3718 File "/usr/local/lib/python2.7/dist-packages/tensorflow/
python/client/session.py", line 1152, in _run
3719     feed_dict_tensor, options, run_metadata)
3720 File "/usr/local/lib/python2.7/dist-packages/tensorflow/
python/client/session.py", line 1328, in _do_run
3721     run_metadata)
3722 File "/usr/local/lib/python2.7/dist-packages/tensorflow/
python/client/session.py", line 1334, in _do_call
3723     return fn(*args)
3724 File "/usr/local/lib/python2.7/dist-packages/tensorflow/
python/client/session.py", line 1319, in _run_fn
3725     options, feed_dict, fetch_list, target_list, run_metadata)
3726 File "/usr/local/lib/python2.7/dist-packages/tensorflow/
python/client/session.py", line 1407, in _call_tf_sessionrun
3727     run_metadata)
3728 KeyboardInterrupt
3729
3730 Process finished with exit code 1
3731
```