

```
1 ssh://root@10.20.6.200:8022/root/
miniconda3/envs/tf2/bin/python3.7 -u /
xhp/summary/src/seq2seq_tf2/train.py
2 2021-03-02 16:38:27.789505: I tensorflow
/stream_executor/platform/default/
dso_loader.cc:48] Successfully opened
dynamic library libcudart.so.10.1
3 Building prefix dict from the default
dictionary ...
4 2021-03-02 16:38:29,752 : DEBUG :
Building prefix dict from the default
dictionary ...
5 Loading model from cache /tmp/jieba.
cache
6 2021-03-02 16:38:29,752 : DEBUG :
Loading model from cache /tmp/jieba.
cache
7 Loading model cost 0.872 seconds.
8 2021-03-02 16:38:30,624 : DEBUG :
Loading model cost 0.872 seconds.
9 Prefix dict has been built successfully.
10 2021-03-02 16:38:30,624 : DEBUG : Prefix
dict has been built successfully.
11 2021-03-02 16:38:30.701263: I tensorflow
/stream_executor/platform/default/
dso_loader.cc:48] Successfully opened
dynamic library libcuda.so.1
12 2021-03-02 16:38:30.740140: I tensorflow
/core/common_runtime/gpu/gpu_device.cc:
1716] Found device 0 with properties:
13 pciBusID: 0000:82:00.0 name: TITAN Xp
computeCapability: 6.1
14 coreClock: 1.582GHz coreCount: 30
deviceMemorySize: 11.91GiB
deviceMemoryBandwidth: 510.07GiB/s
```

```
15 2021-03-02 16:38:30.740195: I tensorflow
  /stream_executor/platform/default/
  dso_loader.cc:48] Successfully opened
  dynamic library libcudart.so.10.1
16 2021-03-02 16:38:30.743227: I tensorflow
  /stream_executor/platform/default/
  dso_loader.cc:48] Successfully opened
  dynamic library libcublas.so.10
17 2021-03-02 16:38:30.745171: I tensorflow
  /stream_executor/platform/default/
  dso_loader.cc:48] Successfully opened
  dynamic library libcufft.so.10
18 2021-03-02 16:38:30.745562: I tensorflow
  /stream_executor/platform/default/
  dso_loader.cc:48] Successfully opened
  dynamic library libcurand.so.10
19 2021-03-02 16:38:30.747689: I tensorflow
  /stream_executor/platform/default/
  dso_loader.cc:48] Successfully opened
  dynamic library libcusolver.so.10
20 2021-03-02 16:38:30.748753: I tensorflow
  /stream_executor/platform/default/
  dso_loader.cc:48] Successfully opened
  dynamic library libcusparse.so.10
21 2021-03-02 16:38:30.753321: I tensorflow
  /stream_executor/platform/default/
  dso_loader.cc:48] Successfully opened
  dynamic library libcudnn.so.7
22 2021-03-02 16:38:30.755073: I tensorflow
  /core/common_runtime/gpu/gpu_device.cc:
  1858] Adding visible gpu devices: 0
23 2021-03-02 16:38:30.755696: I tensorflow
  /core/platform/cpu_feature_guard.cc:142
  ] This TensorFlow binary is optimized
  with oneAPI Deep Neural Network Library
```

- 23 (OneDNN) to use the following CPU instructions in performance-critical operations: AVX2 FMA
- 24 To enable them in other operations, rebuild TensorFlow with the appropriate compiler flags.
- 25 2021-03-02 16:38:30.767500: I tensorflow /core/platform/profile_utils/cpu_utils.cc:104] CPU Frequency: 2099860000 Hz
- 26 2021-03-02 16:38:30.770033: I tensorflow /compiler/xla/service/service.cc:168] XLA service 0x5602c7c773e0 initialized for platform Host (this does not guarantee that XLA will be used).
Devices:
- 27 2021-03-02 16:38:30.770087: I tensorflow /compiler/xla/service/service.cc:176] StreamExecutor device (0): Host, Default Version
- 28 2021-03-02 16:38:31.061088: I tensorflow /compiler/xla/service/service.cc:168] XLA service 0x5602c7c33900 initialized for platform CUDA (this does not guarantee that XLA will be used).
Devices:
- 29 2021-03-02 16:38:31.061165: I tensorflow /compiler/xla/service/service.cc:176] StreamExecutor device (0): TITAN Xp, Compute Capability 6.1
- 30 2021-03-02 16:38:31.063150: I tensorflow /core/common_runtime/gpu/gpu_device.cc:1716] Found device 0 with properties:
- 31 pciBusID: 0000:82:00.0 name: TITAN Xp computeCapability: 6.1
- 32 coreClock: 1.582GHz coreCount: 30

```
32 deviceMemorySize: 11.91GiB
    deviceMemoryBandwidth: 510.07GiB/s
33 2021-03-02 16:38:31.063228: I tensorflow
    /stream_executor/platform/default/
    dso_loader.cc:48] Successfully opened
    dynamic library libcudart.so.10.1
34 2021-03-02 16:38:31.063303: I tensorflow
    /stream_executor/platform/default/
    dso_loader.cc:48] Successfully opened
    dynamic library libcublas.so.10
35 2021-03-02 16:38:31.063358: I tensorflow
    /stream_executor/platform/default/
    dso_loader.cc:48] Successfully opened
    dynamic library libcufft.so.10
36 2021-03-02 16:38:31.063411: I tensorflow
    /stream_executor/platform/default/
    dso_loader.cc:48] Successfully opened
    dynamic library libcurand.so.10
37 2021-03-02 16:38:31.063463: I tensorflow
    /stream_executor/platform/default/
    dso_loader.cc:48] Successfully opened
    dynamic library libcusolver.so.10
38 2021-03-02 16:38:31.063515: I tensorflow
    /stream_executor/platform/default/
    dso_loader.cc:48] Successfully opened
    dynamic library libcusparse.so.10
39 2021-03-02 16:38:31.063568: I tensorflow
    /stream_executor/platform/default/
    dso_loader.cc:48] Successfully opened
    dynamic library libcudnn.so.7
40 2021-03-02 16:38:31.072201: I tensorflow
    /core/common_runtime/gpu/gpu_device.cc:
    1858] Adding visible gpu devices: 0
41 2021-03-02 16:38:31.072272: I tensorflow
    /stream_executor/platform/default/
```

```
41 dso_loader.cc:48] Successfully opened
dynamic library libcudart.so.10.1
42 2021-03-02 16:38:31.781346: I tensorflow
\core\common_runtime\gpu\gpu_device.cc:
1257] Device interconnect StreamExecutor
with strength 1 edge matrix:
43 2021-03-02 16:38:31.781431: I tensorflow
\core\common_runtime\gpu\gpu_device.cc:
1263]          0
44 2021-03-02 16:38:31.781444: I tensorflow
\core\common_runtime\gpu\gpu_device.cc:
1276] 0:    N
45 2021-03-02 16:38:31.783168: I tensorflow
\core\common_runtime\gpu\gpu_device.cc:
1402] Created TensorFlow device (/job:
localhost/replica:0/task:0/device:GPU:0
with 6144 MB memory) -> physical GPU (
device: 0, name: TITAN Xp, pci bus id:
0000:82:00.0, compute capability: 6.1)
46 1 Physical GPUs, 1 Logical GPUs
47 Building the model ...
48 2021-03-02 16:38:32.989091: I tensorflow
\stream_executor\platform\default\
dso_loader.cc:48] Successfully opened
dynamic library libcudnn.so.7
49 2021-03-02 16:38:33.816302: I tensorflow
\stream_executor\platform\default\
dso_loader.cc:48] Successfully opened
dynamic library libcublas.so.10
50 Epoch 1 Batch 50 Loss 3.2008
51 Epoch 1 Batch 100 Loss 3.0583
52 Epoch 1 Batch 150 Loss 3.0490
53 Epoch 1 Batch 200 Loss 3.0730
54 Epoch 1 Batch 250 Loss 3.0170
55 Epoch 1 Batch 300 Loss 2.8523
```

56	Epoch	1	Batch	350	Loss	2.8271
57	Epoch	1	Batch	400	Loss	2.8646
58	Epoch	1	Batch	450	Loss	2.9733
59	Epoch	1	Batch	500	Loss	2.9282
60	Epoch	1	Batch	550	Loss	2.9698
61	Epoch	1	Batch	600	Loss	2.9538
62	Epoch	1	Batch	650	Loss	2.9229
63	Epoch	1	Batch	700	Loss	2.8422
64	Epoch	1	Batch	750	Loss	2.8329
65	Epoch	1	Batch	800	Loss	2.7860
66	Epoch	1	Batch	850	Loss	2.7887
67	Epoch	1	Batch	900	Loss	2.8057
68	Epoch	1	Batch	950	Loss	2.7645
69	Epoch	1	Batch	1000	Loss	2.6233
70	Epoch	1	Batch	1050	Loss	2.4821
71	Epoch	1	Batch	1100	Loss	2.4646
72	Epoch	1	Batch	1150	Loss	2.5027
73	Epoch	1	Batch	1200	Loss	2.2969
74	Epoch	1	Batch	1250	Loss	2.2402
75	Epoch	1	Batch	1300	Loss	2.2185
76	Epoch	1	Batch	1350	Loss	2.1665
77	Epoch	1	Batch	1400	Loss	2.1425
78	Epoch	1	Batch	1450	Loss	2.1435
79	Epoch	1	Batch	1500	Loss	2.1035
80	Epoch	1	Batch	1550	Loss	2.0774
81	Epoch	1	Batch	1600	Loss	2.0280
82	Epoch	1	Batch	1650	Loss	2.0455
83	Epoch	1	Batch	1700	Loss	1.9852
84	Epoch	1	Batch	1750	Loss	1.9544
85	Epoch	1	Batch	1800	Loss	2.0024
86	Epoch	1	Batch	1850	Loss	1.9441
87	Epoch	1	Batch	1900	Loss	1.9520
88	Epoch	1	Batch	1950	Loss	2.0305
89	Epoch	1	Batch	2000	Loss	1.9475
90	Epoch	1	Batch	2050	Loss	1.9186

91	Epoch	1	Batch	2100	Loss	1.9994
92	Epoch	1	Batch	2150	Loss	1.9462
93	Epoch	1	Batch	2200	Loss	1.9477
94	Epoch	1	Batch	2250	Loss	1.9616
95	Epoch	1	Batch	2300	Loss	1.8713
96	Epoch	1	Batch	2350	Loss	1.8662
97	Epoch	1	Batch	2400	Loss	1.8987
98	Epoch	1	Batch	2450	Loss	1.8818
99	Epoch	1	Batch	2500	Loss	1.9086
100	Epoch	1	Batch	2550	Loss	1.9022
101	Epoch	1	Loss	2.3847		
102	Time taken for 1 epoch	1370.				
				9342956542969	sec	
103						
104	Epoch	2	Batch	50	Loss	1.8126
105	Epoch	2	Batch	100	Loss	1.7906
106	Epoch	2	Batch	150	Loss	1.8163
107	Epoch	2	Batch	200	Loss	1.8026
108	Epoch	2	Batch	250	Loss	1.8115
109	Epoch	2	Batch	300	Loss	1.7877
110	Epoch	2	Batch	350	Loss	1.7932
111	Epoch	2	Batch	400	Loss	1.8276
112	Epoch	2	Batch	450	Loss	1.8216
113	Epoch	2	Batch	500	Loss	1.8029
114	Epoch	2	Batch	550	Loss	1.7655
115	Epoch	2	Batch	600	Loss	1.7891
116	Epoch	2	Batch	650	Loss	1.7761
117	Epoch	2	Batch	700	Loss	1.7544
118	Epoch	2	Batch	750	Loss	1.7799
119	Epoch	2	Batch	800	Loss	1.7937
120	Epoch	2	Batch	850	Loss	1.8133
121	Epoch	2	Batch	900	Loss	1.7034
122	Epoch	2	Batch	950	Loss	1.8235
123	Epoch	2	Batch	1000	Loss	1.8248
124	Epoch	2	Batch	1050	Loss	1.7895

125	Epoch	2	Batch	1100	Loss	1.7630	
126	Epoch	2	Batch	1150	Loss	1.7938	
127	Epoch	2	Batch	1200	Loss	1.7719	
128	Epoch	2	Batch	1250	Loss	1.7713	
129	Epoch	2	Batch	1300	Loss	1.7584	
130	Epoch	2	Batch	1350	Loss	1.7490	
131	Epoch	2	Batch	1400	Loss	1.7994	
132	Epoch	2	Batch	1450	Loss	1.8172	
133	Epoch	2	Batch	1500	Loss	1.8074	
134	Epoch	2	Batch	1550	Loss	1.7937	
135	Epoch	2	Batch	1600	Loss	1.7952	
136	Epoch	2	Batch	1650	Loss	1.7644	
137	Epoch	2	Batch	1700	Loss	1.7761	
138	Epoch	2	Batch	1750	Loss	1.7579	
139	Epoch	2	Batch	1800	Loss	1.7725	
140	Epoch	2	Batch	1850	Loss	1.7652	
141	Epoch	2	Batch	1900	Loss	1.7658	
142	Epoch	2	Batch	1950	Loss	1.7391	
143	Epoch	2	Batch	2000	Loss	1.7390	
144	Epoch	2	Batch	2050	Loss	1.7258	
145	Epoch	2	Batch	2100	Loss	1.7831	
146	Epoch	2	Batch	2150	Loss	1.6977	
147	Epoch	2	Batch	2200	Loss	1.7839	
148	Epoch	2	Batch	2250	Loss	1.7452	
149	Epoch	2	Batch	2300	Loss	1.7930	
150	Epoch	2	Batch	2350	Loss	1.7530	
151	Epoch	2	Batch	2400	Loss	1.7646	
152	Epoch	2	Batch	2450	Loss	1.7368	
153	Epoch	2	Batch	2500	Loss	1.7604	
154	Epoch	2	Batch	2550	Loss	1.7669	
155	Saving	checkpoint	for	epoch	2	at	/xhp/summary/data/checkpoints/training_checkpoints_pgn_cov_backed/ckpt-1
156	Epoch	2	Loss	1.7776			

157	Time taken for 1 epoch	1362.70068693161
	sec	
158		
159	Epoch 3 Batch 50 Loss	1.5843
160	Epoch 3 Batch 100 Loss	1.6454
161	Epoch 3 Batch 150 Loss	1.6200
162	Epoch 3 Batch 200 Loss	1.6443
163	Epoch 3 Batch 250 Loss	1.6116
164	Epoch 3 Batch 300 Loss	1.6712
165	Epoch 3 Batch 350 Loss	1.6482
166	Epoch 3 Batch 400 Loss	1.6561
167	Epoch 3 Batch 450 Loss	1.6738
168	Epoch 3 Batch 500 Loss	1.6844
169	Epoch 3 Batch 550 Loss	1.6720
170	Epoch 3 Batch 600 Loss	1.6370
171	Epoch 3 Batch 650 Loss	1.6498
172	Epoch 3 Batch 700 Loss	1.6444
173	Epoch 3 Batch 750 Loss	1.6323
174	Epoch 3 Batch 800 Loss	1.6391
175	Epoch 3 Batch 850 Loss	1.6327
176	Epoch 3 Batch 900 Loss	1.6972
177	Epoch 3 Batch 950 Loss	1.6672
178	Epoch 3 Batch 1000 Loss	1.6804
179	Epoch 3 Batch 1050 Loss	1.6506
180	Epoch 3 Batch 1100 Loss	1.6777
181	Epoch 3 Batch 1150 Loss	1.6829
182	Epoch 3 Batch 1200 Loss	1.6775
183	Epoch 3 Batch 1250 Loss	1.6721
184	Epoch 3 Batch 1300 Loss	1.6385
185	Epoch 3 Batch 1350 Loss	1.7076
186	Epoch 3 Batch 1400 Loss	1.6240
187	Epoch 3 Batch 1450 Loss	1.6889
188	Epoch 3 Batch 1500 Loss	1.6300
189	Epoch 3 Batch 1550 Loss	1.6661
190	Epoch 3 Batch 1600 Loss	1.6556

191	Epoch	3	Batch	1650	Loss	1.6654
192	Epoch	3	Batch	1700	Loss	1.6712
193	Epoch	3	Batch	1750	Loss	1.6738
194	Epoch	3	Batch	1800	Loss	1.6348
195	Epoch	3	Batch	1850	Loss	1.6307
196	Epoch	3	Batch	1900	Loss	1.6736
197	Epoch	3	Batch	1950	Loss	1.6615
198	Epoch	3	Batch	2000	Loss	1.6356
199	Epoch	3	Batch	2050	Loss	1.6537
200	Epoch	3	Batch	2100	Loss	1.6287
201	Epoch	3	Batch	2150	Loss	1.6797
202	Epoch	3	Batch	2200	Loss	1.6666
203	Epoch	3	Batch	2250	Loss	1.6640
204	Epoch	3	Batch	2300	Loss	1.6636
205	Epoch	3	Batch	2350	Loss	1.6341
206	Epoch	3	Batch	2400	Loss	1.6354
207	Epoch	3	Batch	2450	Loss	1.6814
208	Epoch	3	Batch	2500	Loss	1.6631
209	Epoch	3	Batch	2550	Loss	1.6694
210	Epoch	3	Loss	1.6560		
211	Time taken for 1 epoch	1396.				
		4879930019379	sec			
212						
213	Epoch	4	Batch	50	Loss	1.5003
214	Epoch	4	Batch	100	Loss	1.5527
215	Epoch	4	Batch	150	Loss	1.5501
216	Epoch	4	Batch	200	Loss	1.4759
217	Epoch	4	Batch	250	Loss	1.5522
218	Epoch	4	Batch	300	Loss	1.5609
219	Epoch	4	Batch	350	Loss	1.5442
220	Epoch	4	Batch	400	Loss	1.5681
221	Epoch	4	Batch	450	Loss	1.5700
222	Epoch	4	Batch	500	Loss	1.5521
223	Epoch	4	Batch	550	Loss	1.5673
224	Epoch	4	Batch	600	Loss	1.5852

225	Epoch	4	Batch	650	Loss	1.5985
226	Epoch	4	Batch	700	Loss	1.5871
227	Epoch	4	Batch	750	Loss	1.5556
228	Epoch	4	Batch	800	Loss	1.5850
229	Epoch	4	Batch	850	Loss	1.5748
230	Epoch	4	Batch	900	Loss	1.5987
231	Epoch	4	Batch	950	Loss	1.5761
232	Epoch	4	Batch	1000	Loss	1.6242
233	Epoch	4	Batch	1050	Loss	1.5660
234	Epoch	4	Batch	1100	Loss	1.6092
235	Epoch	4	Batch	1150	Loss	1.6284
236	Epoch	4	Batch	1200	Loss	1.5777
237	Epoch	4	Batch	1250	Loss	1.6079
238	Epoch	4	Batch	1300	Loss	1.5433
239	Epoch	4	Batch	1350	Loss	1.6057
240	Epoch	4	Batch	1400	Loss	1.6257
241	Epoch	4	Batch	1450	Loss	1.5812
242	Epoch	4	Batch	1500	Loss	1.5978
243	Epoch	4	Batch	1550	Loss	1.5646
244	Epoch	4	Batch	1600	Loss	1.6091
245	Epoch	4	Batch	1650	Loss	1.6079
246	Epoch	4	Batch	1700	Loss	1.6015
247	Epoch	4	Batch	1750	Loss	1.6322
248	Epoch	4	Batch	1800	Loss	1.5701
249	Epoch	4	Batch	1850	Loss	1.6217
250	Epoch	4	Batch	1900	Loss	1.6088
251	Epoch	4	Batch	1950	Loss	1.5943
252	Epoch	4	Batch	2000	Loss	1.5941
253	Epoch	4	Batch	2050	Loss	1.5786
254	Epoch	4	Batch	2100	Loss	1.6673
255	Epoch	4	Batch	2150	Loss	1.6252
256	Epoch	4	Batch	2200	Loss	1.6459
257	Epoch	4	Batch	2250	Loss	1.5706
258	Epoch	4	Batch	2300	Loss	1.6052
259	Epoch	4	Batch	2350	Loss	1.6232

```
260 Epoch 4 Batch 2400 Loss 1.6336
261 Epoch 4 Batch 2450 Loss 1.6422
262 Epoch 4 Batch 2500 Loss 1.6006
263 Epoch 4 Batch 2550 Loss 1.5998
264 Saving checkpoint for epoch 4 at /xhp/
    summary/data/checkpoints/
    training_checkpoints_pgn_cov_backed/
    ckpt-2
265 Epoch 4 Loss 1.5898
266 Time taken for 1 epoch 1438.
    1253283023834 sec
267
268 Epoch 5 Batch 50 Loss 1.4736
269 Epoch 5 Batch 100 Loss 1.4783
270 Epoch 5 Batch 150 Loss 1.5053
271 Epoch 5 Batch 200 Loss 1.4915
272 Epoch 5 Batch 250 Loss 1.5112
273 Epoch 5 Batch 300 Loss 1.4969
274 Epoch 5 Batch 350 Loss 1.5538
275 Epoch 5 Batch 400 Loss 1.5049
276 Epoch 5 Batch 450 Loss 1.5297
277 Epoch 5 Batch 500 Loss 1.5102
278 Epoch 5 Batch 550 Loss 1.5113
279 Epoch 5 Batch 600 Loss 1.5143
280 Epoch 5 Batch 650 Loss 1.5123
281 Epoch 5 Batch 700 Loss 1.5404
282 Epoch 5 Batch 750 Loss 1.5154
283 Epoch 5 Batch 800 Loss 1.5041
284 Epoch 5 Batch 850 Loss 1.5332
285 Epoch 5 Batch 900 Loss 1.5644
286 Epoch 5 Batch 950 Loss 1.5315
287 Epoch 5 Batch 1000 Loss 1.5013
288 Epoch 5 Batch 1050 Loss 1.5797
289 Epoch 5 Batch 1100 Loss 1.5805
290 Epoch 5 Batch 1150 Loss 1.5671
```

291	Epoch	5	Batch	1200	Loss	1.5592
292	Epoch	5	Batch	1250	Loss	1.5476
293	Epoch	5	Batch	1300	Loss	1.5919
294	Epoch	5	Batch	1350	Loss	1.5562
295	Epoch	5	Batch	1400	Loss	1.5449
296	Epoch	5	Batch	1450	Loss	1.5807
297	Epoch	5	Batch	1500	Loss	1.5600
298	Epoch	5	Batch	1550	Loss	1.5677
299	Epoch	5	Batch	1600	Loss	1.5883
300	Epoch	5	Batch	1650	Loss	1.6132
301	Epoch	5	Batch	1700	Loss	1.5734
302	Epoch	5	Batch	1750	Loss	1.5598
303	Epoch	5	Batch	1800	Loss	1.5932
304	Epoch	5	Batch	1850	Loss	1.5421
305	Epoch	5	Batch	1900	Loss	1.5445
306	Epoch	5	Batch	1950	Loss	1.5449
307	Epoch	5	Batch	2000	Loss	1.6186
308	Epoch	5	Batch	2050	Loss	1.5553
309	Epoch	5	Batch	2100	Loss	1.5148
310	Epoch	5	Batch	2150	Loss	1.5697
311	Epoch	5	Batch	2200	Loss	1.6039
312	Epoch	5	Batch	2250	Loss	1.5705
313	Epoch	5	Batch	2300	Loss	1.5493
314	Epoch	5	Batch	2350	Loss	1.5920
315	Epoch	5	Batch	2400	Loss	1.5212
316	Epoch	5	Batch	2450	Loss	1.5506
317	Epoch	5	Batch	2500	Loss	1.5729
318	Epoch	5	Batch	2550	Loss	1.5803
319	Epoch	5	Loss	1.5477		
320	Time taken for 1 epoch	1399.				
				7355663776398	sec	
321						
322	Epoch	6	Batch	50	Loss	1.4860
323	Epoch	6	Batch	100	Loss	1.4588
324	Epoch	6	Batch	150	Loss	1.4904

325	Epoch	6	Batch	200	Loss	1.4846
326	Epoch	6	Batch	250	Loss	1.4452
327	Epoch	6	Batch	300	Loss	1.4721
328	Epoch	6	Batch	350	Loss	1.5303
329	Epoch	6	Batch	400	Loss	1.4873
330	Epoch	6	Batch	450	Loss	1.4659
331	Epoch	6	Batch	500	Loss	1.5247
332	Epoch	6	Batch	550	Loss	1.4844
333	Epoch	6	Batch	600	Loss	1.4779
334	Epoch	6	Batch	650	Loss	1.4799
335	Epoch	6	Batch	700	Loss	1.4653
336	Epoch	6	Batch	750	Loss	1.5303
337	Epoch	6	Batch	800	Loss	1.5356
338	Epoch	6	Batch	850	Loss	1.5648
339	Epoch	6	Batch	900	Loss	1.4946
340	Epoch	6	Batch	950	Loss	1.4672
341	Epoch	6	Batch	1000	Loss	1.4797
342	Epoch	6	Batch	1050	Loss	1.5211
343	Epoch	6	Batch	1100	Loss	1.4939
344	Epoch	6	Batch	1150	Loss	1.5011
345	Epoch	6	Batch	1200	Loss	1.5436
346	Epoch	6	Batch	1250	Loss	1.5599
347	Epoch	6	Batch	1300	Loss	1.5174
348	Epoch	6	Batch	1350	Loss	1.5467
349	Epoch	6	Batch	1400	Loss	1.5299
350	Epoch	6	Batch	1450	Loss	1.5482
351	Epoch	6	Batch	1500	Loss	1.5440
352	Epoch	6	Batch	1550	Loss	1.5207
353	Epoch	6	Batch	1600	Loss	1.5194
354	Epoch	6	Batch	1650	Loss	1.5580
355	Epoch	6	Batch	1700	Loss	1.5185
356	Epoch	6	Batch	1750	Loss	1.4942
357	Epoch	6	Batch	1800	Loss	1.5402
358	Epoch	6	Batch	1850	Loss	1.5453
359	Epoch	6	Batch	1900	Loss	1.5523

```
360 Epoch 6 Batch 1950 Loss 1.5308
361 Epoch 6 Batch 2000 Loss 1.5247
362 Epoch 6 Batch 2050 Loss 1.5592
363 Epoch 6 Batch 2100 Loss 1.5236
364 Epoch 6 Batch 2150 Loss 1.5942
365 Epoch 6 Batch 2200 Loss 1.5294
366 Epoch 6 Batch 2250 Loss 1.5371
367 Epoch 6 Batch 2300 Loss 1.5905
368 Epoch 6 Batch 2350 Loss 1.5374
369 Epoch 6 Batch 2400 Loss 1.5261
370 Epoch 6 Batch 2450 Loss 1.5686
371 Epoch 6 Batch 2500 Loss 1.5513
372 Epoch 6 Batch 2550 Loss 1.5581
373 Saving checkpoint for epoch 6 at /xhp/
summary/data/checkpoints/
training_checkpoints_pgn_cov_backed/
ckpt-3
374 Epoch 6 Loss 1.5209
375 Time taken for 1 epoch 1455.
9417870044708 sec
376
377 Epoch 7 Batch 50 Loss 1.4638
378 Epoch 7 Batch 100 Loss 1.4416
379 Epoch 7 Batch 150 Loss 1.4426
380 Epoch 7 Batch 200 Loss 1.4370
381 Epoch 7 Batch 250 Loss 1.4343
382 Epoch 7 Batch 300 Loss 1.4271
383 Epoch 7 Batch 350 Loss 1.4811
384 Epoch 7 Batch 400 Loss 1.5096
385 Epoch 7 Batch 450 Loss 1.4854
386 Epoch 7 Batch 500 Loss 1.4700
387 Epoch 7 Batch 550 Loss 1.4408
388 Epoch 7 Batch 600 Loss 1.4751
389 Epoch 7 Batch 650 Loss 1.4831
390 Epoch 7 Batch 700 Loss 1.4733
```

391	Epoch	7	Batch	750	Loss	1.4939
392	Epoch	7	Batch	800	Loss	1.4872
393	Epoch	7	Batch	850	Loss	1.4777
394	Epoch	7	Batch	900	Loss	1.4610
395	Epoch	7	Batch	950	Loss	1.4731
396	Epoch	7	Batch	1000	Loss	1.4869
397	Epoch	7	Batch	1050	Loss	1.4960
398	Epoch	7	Batch	1100	Loss	1.5131
399	Epoch	7	Batch	1150	Loss	1.4866
400	Epoch	7	Batch	1200	Loss	1.5183
401	Epoch	7	Batch	1250	Loss	1.4868
402	Epoch	7	Batch	1300	Loss	1.5157
403	Epoch	7	Batch	1350	Loss	1.5471
404	Epoch	7	Batch	1400	Loss	1.5157
405	Epoch	7	Batch	1450	Loss	1.5296
406	Epoch	7	Batch	1500	Loss	1.5179
407	Epoch	7	Batch	1550	Loss	1.5085
408	Epoch	7	Batch	1600	Loss	1.5431
409	Epoch	7	Batch	1650	Loss	1.5423
410	Epoch	7	Batch	1700	Loss	1.4763
411	Epoch	7	Batch	1750	Loss	1.5122
412	Epoch	7	Batch	1800	Loss	1.5750
413	Epoch	7	Batch	1850	Loss	1.4794
414	Epoch	7	Batch	1900	Loss	1.4796
415	Epoch	7	Batch	1950	Loss	1.5555
416	Epoch	7	Batch	2000	Loss	1.5168
417	Epoch	7	Batch	2050	Loss	1.5174
418	Epoch	7	Batch	2100	Loss	1.5017
419	Epoch	7	Batch	2150	Loss	1.5474
420	Epoch	7	Batch	2200	Loss	1.5379
421	Epoch	7	Batch	2250	Loss	1.5621
422	Epoch	7	Batch	2300	Loss	1.5300
423	Epoch	7	Batch	2350	Loss	1.5109
424	Epoch	7	Batch	2400	Loss	1.5592
425	Epoch	7	Batch	2450	Loss	1.5256

```
426 Epoch 7 Batch 2500 Loss 1.4929
427 Epoch 7 Batch 2550 Loss 1.5507
428 Epoch 7 Loss 1.5001
429 Time taken for 1 epoch 1341.
    0339567661285 sec
430
431 Epoch 8 Batch 50 Loss 1.4099
432 Epoch 8 Batch 100 Loss 1.4346
433 Epoch 8 Batch 150 Loss 1.4099
434 Epoch 8 Batch 200 Loss 1.4179
435 Epoch 8 Batch 250 Loss 1.4737
436 Epoch 8 Batch 300 Loss 1.4384
437 Epoch 8 Batch 350 Loss 1.4304
438 Epoch 8 Batch 400 Loss 1.4933
439 Epoch 8 Batch 450 Loss 1.4370
440 Epoch 8 Batch 500 Loss 1.4805
441 Epoch 8 Batch 550 Loss 1.4516
442 Epoch 8 Batch 600 Loss 1.4740
443 Epoch 8 Batch 650 Loss 1.4145
444 Epoch 8 Batch 700 Loss 1.5261
445 Epoch 8 Batch 750 Loss 1.4648
446 Epoch 8 Batch 800 Loss 1.4928
447 Epoch 8 Batch 850 Loss 1.4464
448 Epoch 8 Batch 900 Loss 1.4789
449 Epoch 8 Batch 950 Loss 1.4549
450 Epoch 8 Batch 1000 Loss 1.4830
451 Epoch 8 Batch 1050 Loss 1.4753
452 Epoch 8 Batch 1100 Loss 1.4933
453 Epoch 8 Batch 1150 Loss 1.5059
454 Epoch 8 Batch 1200 Loss 1.5080
455 Epoch 8 Batch 1250 Loss 1.5260
456 Epoch 8 Batch 1300 Loss 1.5169
457 Epoch 8 Batch 1350 Loss 1.4366
458 Epoch 8 Batch 1400 Loss 1.4762
459 Epoch 8 Batch 1450 Loss 1.5054
```

```
460 Epoch 8 Batch 1500 Loss 1.4690
461 Epoch 8 Batch 1550 Loss 1.5096
462 Epoch 8 Batch 1600 Loss 1.4979
463 Epoch 8 Batch 1650 Loss 1.4941
464 Epoch 8 Batch 1700 Loss 1.5365
465 Epoch 8 Batch 1750 Loss 1.4748
466 Epoch 8 Batch 1800 Loss 1.5425
467 Epoch 8 Batch 1850 Loss 1.5393
468 Epoch 8 Batch 1900 Loss 1.5339
469 Epoch 8 Batch 1950 Loss 1.4813
470 Epoch 8 Batch 2000 Loss 1.4722
471 Epoch 8 Batch 2050 Loss 1.4750
472 Epoch 8 Batch 2100 Loss 1.5356
473 Epoch 8 Batch 2150 Loss 1.4919
474 Epoch 8 Batch 2200 Loss 1.4974
475 Epoch 8 Batch 2250 Loss 1.5139
476 Epoch 8 Batch 2300 Loss 1.4873
477 Epoch 8 Batch 2350 Loss 1.4588
478 Epoch 8 Batch 2400 Loss 1.5550
479 Epoch 8 Batch 2450 Loss 1.5255
480 Epoch 8 Batch 2500 Loss 1.5019
481 Epoch 8 Batch 2550 Loss 1.5273
482 Saving checkpoint for epoch 8 at /xhp/
summary/data/checkpoints/
training_checkpoints_pgn_cov_backed/
ckpt-4
483 Epoch 8 Loss 1.4844
484 Time taken for 1 epoch 1335.
398240327835 sec
485
486 Epoch 9 Batch 50 Loss 1.4182
487 Epoch 9 Batch 100 Loss 1.3980
488 Epoch 9 Batch 150 Loss 1.4396
489 Epoch 9 Batch 200 Loss 1.4742
490 Epoch 9 Batch 250 Loss 1.3999
```

491	Epoch	9	Batch	300	Loss	1.3997
492	Epoch	9	Batch	350	Loss	1.4562
493	Epoch	9	Batch	400	Loss	1.4172
494	Epoch	9	Batch	450	Loss	1.4757
495	Epoch	9	Batch	500	Loss	1.4614
496	Epoch	9	Batch	550	Loss	1.4566
497	Epoch	9	Batch	600	Loss	1.4995
498	Epoch	9	Batch	650	Loss	1.4526
499	Epoch	9	Batch	700	Loss	1.4628
500	Epoch	9	Batch	750	Loss	1.4103
501	Epoch	9	Batch	800	Loss	1.4434
502	Epoch	9	Batch	850	Loss	1.4158
503	Epoch	9	Batch	900	Loss	1.4528
504	Epoch	9	Batch	950	Loss	1.4406
505	Epoch	9	Batch	1000	Loss	1.4787
506	Epoch	9	Batch	1050	Loss	1.4934
507	Epoch	9	Batch	1100	Loss	1.5184
508	Epoch	9	Batch	1150	Loss	1.5137
509	Epoch	9	Batch	1200	Loss	1.5058
510	Epoch	9	Batch	1250	Loss	1.4976
511	Epoch	9	Batch	1300	Loss	1.4565
512	Epoch	9	Batch	1350	Loss	1.5122
513	Epoch	9	Batch	1400	Loss	1.4841
514	Epoch	9	Batch	1450	Loss	1.5040
515	Epoch	9	Batch	1500	Loss	1.4672
516	Epoch	9	Batch	1550	Loss	1.4612
517	Epoch	9	Batch	1600	Loss	1.5156
518	Epoch	9	Batch	1650	Loss	1.5052
519	Epoch	9	Batch	1700	Loss	1.5193
520	Epoch	9	Batch	1750	Loss	1.4589
521	Epoch	9	Batch	1800	Loss	1.4640
522	Epoch	9	Batch	1850	Loss	1.4574
523	Epoch	9	Batch	1900	Loss	1.5105
524	Epoch	9	Batch	1950	Loss	1.4598
525	Epoch	9	Batch	2000	Loss	1.4724

526	Epoch	9	Batch	2050	Loss	1.4177
527	Epoch	9	Batch	2100	Loss	1.4744
528	Epoch	9	Batch	2150	Loss	1.4884
529	Epoch	9	Batch	2200	Loss	1.5176
530	Epoch	9	Batch	2250	Loss	1.4596
531	Epoch	9	Batch	2300	Loss	1.5335
532	Epoch	9	Batch	2350	Loss	1.5094
533	Epoch	9	Batch	2400	Loss	1.4787
534	Epoch	9	Batch	2450	Loss	1.5297
535	Epoch	9	Batch	2500	Loss	1.4657
536	Epoch	9	Batch	2550	Loss	1.5274
537	Epoch	9	Loss	1.4725		
538	Time taken for 1 epoch	1324.				
		0674250125885	sec			
539						
540	Epoch	10	Batch	50	Loss	1.3838
541	Epoch	10	Batch	100	Loss	1.4263
542	Epoch	10	Batch	150	Loss	1.4132
543	Epoch	10	Batch	200	Loss	1.3894
544	Epoch	10	Batch	250	Loss	1.3907
545	Epoch	10	Batch	300	Loss	1.4593
546	Epoch	10	Batch	350	Loss	1.4092
547	Epoch	10	Batch	400	Loss	1.4373
548	Epoch	10	Batch	450	Loss	1.3999
549	Epoch	10	Batch	500	Loss	1.4230
550	Epoch	10	Batch	550	Loss	1.4253
551	Epoch	10	Batch	600	Loss	1.4536
552	Epoch	10	Batch	650	Loss	1.4670
553	Epoch	10	Batch	700	Loss	1.4206
554	Epoch	10	Batch	750	Loss	1.4642
555	Epoch	10	Batch	800	Loss	1.4812
556	Epoch	10	Batch	850	Loss	1.4241
557	Epoch	10	Batch	900	Loss	1.4692
558	Epoch	10	Batch	950	Loss	1.4631
559	Epoch	10	Batch	1000	Loss	1.4580

560	Epoch	10	Batch	1050	Loss	1.4311
561	Epoch	10	Batch	1100	Loss	1.4439
562	Epoch	10	Batch	1150	Loss	1.4473
563	Epoch	10	Batch	1200	Loss	1.4796
564	Epoch	10	Batch	1250	Loss	1.4801
565	Epoch	10	Batch	1300	Loss	1.4280
566	Epoch	10	Batch	1350	Loss	1.4797
567	Epoch	10	Batch	1400	Loss	1.4666
568	Epoch	10	Batch	1450	Loss	1.4977
569	Epoch	10	Batch	1500	Loss	1.4770
570	Epoch	10	Batch	1550	Loss	1.5111
571	Epoch	10	Batch	1600	Loss	1.5230
572	Epoch	10	Batch	1650	Loss	1.4265
573	Epoch	10	Batch	1700	Loss	1.4679
574	Epoch	10	Batch	1750	Loss	1.4999
575	Epoch	10	Batch	1800	Loss	1.4980
576	Epoch	10	Batch	1850	Loss	1.5353
577	Epoch	10	Batch	1900	Loss	1.4628
578	Epoch	10	Batch	1950	Loss	1.4475
579	Epoch	10	Batch	2000	Loss	1.4998
580	Epoch	10	Batch	2050	Loss	1.5075
581	Epoch	10	Batch	2100	Loss	1.4589
582	Epoch	10	Batch	2150	Loss	1.5021
583	Epoch	10	Batch	2200	Loss	1.4981
584	Epoch	10	Batch	2250	Loss	1.4925
585	Epoch	10	Batch	2300	Loss	1.4691
586	Epoch	10	Batch	2350	Loss	1.4551
587	Epoch	10	Batch	2400	Loss	1.4715
588	Epoch	10	Batch	2450	Loss	1.5142
589	Epoch	10	Batch	2500	Loss	1.5191
590	Epoch	10	Batch	2550	Loss	1.4942
591	Saving checkpoint for epoch 10 at /xhp/summary/data/checkpoints/training_checkpoints_pgn_cov_backed/ckpt-5					

```
592 Epoch 10 Loss 1.4628
593 Time taken for 1 epoch 1344.
      1679229736328 sec
594
595
596 Process finished with exit code 0
597
```