

生成式人工智慧Lab03

1. 作業

請繳交執行畫面截圖,以及環境布置心得

1. 讓SeqGAN (程式填空)可以動(50%)
2. 除了讓SeqGAN、另外2種Models裡的GAN(MaliGAN、RankGAN)，請執行他們(50%)

2. 執行畫面

NOTE：修改程式碼有使用 GPT 輔助。

Seqgan執行畫面，epoch = 180。

```
epoch:180      time:18.6708345413208
2024-12-21 20:17:21.567496: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1159] Device interconnect StreamE
xecutor with strength 1 edge matrix:
2024-12-21 20:17:21.567727: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1165]
time elapsed of EmbeddingSimilarity: 12.248625755310059
time elapsed of nll-test: 10.030850887298584
epoch:180      EmbeddingSimilarity:-0.015304128935007934      nll-test:0.97139484
[0.47012597]
[0.530667]
[0.55885255]
[0.55391794]
[0.5121077]
[0.5248016]
[0.51710826]
[0.5413059]
[0.5404114]
```

image.png

Maligan執行畫面，epoch = 180。

```

2024-12-22 14:17:04.394247: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1159] Device interconnect StreamE
xecutor with strength 1 edge matrix:
2024-12-22 14:17:04.394628: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1165]
time elapsed of EmbeddingSimilarity: 12.06958794593811
time elapsed of nll-test: 10.8914954662323
epoch:176      EmbeddingSimilarity:-0.01855143350845974      nll-test:1.0433781
epoch:177      time:0.2627394199371338
epoch:178      time:0.24178695678710938
epoch:179      time:0.2385716438293457
epoch:180      time:0.2321476936340332
2024-12-22 14:29:12.028360: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1159] Device interconnect StreamE
xecutor with strength 1 edge matrix:
2024-12-22 14:29:12.028632: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1165]
time elapsed of EmbeddingSimilarity: 11.943524360656738
time elapsed of nll-test: 10.344350337982178
epoch:180      EmbeddingSimilarity:-0.02023996103157818      nll-test:1.0591961
PS C:\Users\HSU\Desktop\Texygen-master\Texygen-master>

```

image-1.png

Rankgan執行畫面，epoch = 80。

```

2024-12-22 17:04:41.174708: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1159] Device interconnect StreamE
xecutor with strength 1 edge matrix:
2024-12-22 17:04:41.174918: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1165]
time elapsed of EmbeddingSimilarity: 10.244377136230469
time elapsed of nll-test: 8.879165410995483
epoch:76      EmbeddingSimilarity:-0.015093619172534916      nll-test:1.0443232
epoch:77      time:16.50235414505005
epoch:78      time:16.346744537353516
epoch:79      time:15.052993774414062
epoch:80      time:16.882662534713745
2024-12-22 17:14:29.878857: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1159] Device interconnect StreamE
xecutor with strength 1 edge matrix:
2024-12-22 17:14:29.879076: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1165]
time elapsed of EmbeddingSimilarity: 10.293699979782104
time elapsed of nll-test: 9.30646300315857
epoch:80      EmbeddingSimilarity:-0.014893970062057654      nll-test:1.0608462

```

image-2.png