

Exercise 2: VAEs and GANs (10 pts)

A

Epoch #10



Epoch #20



Epoch #30

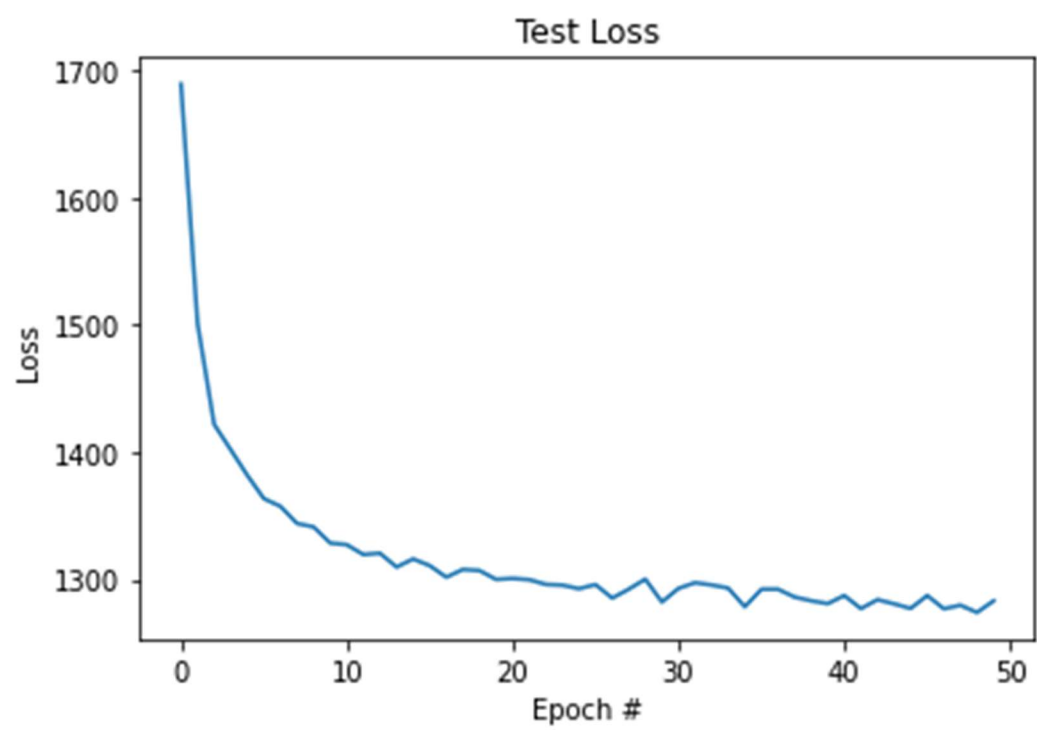
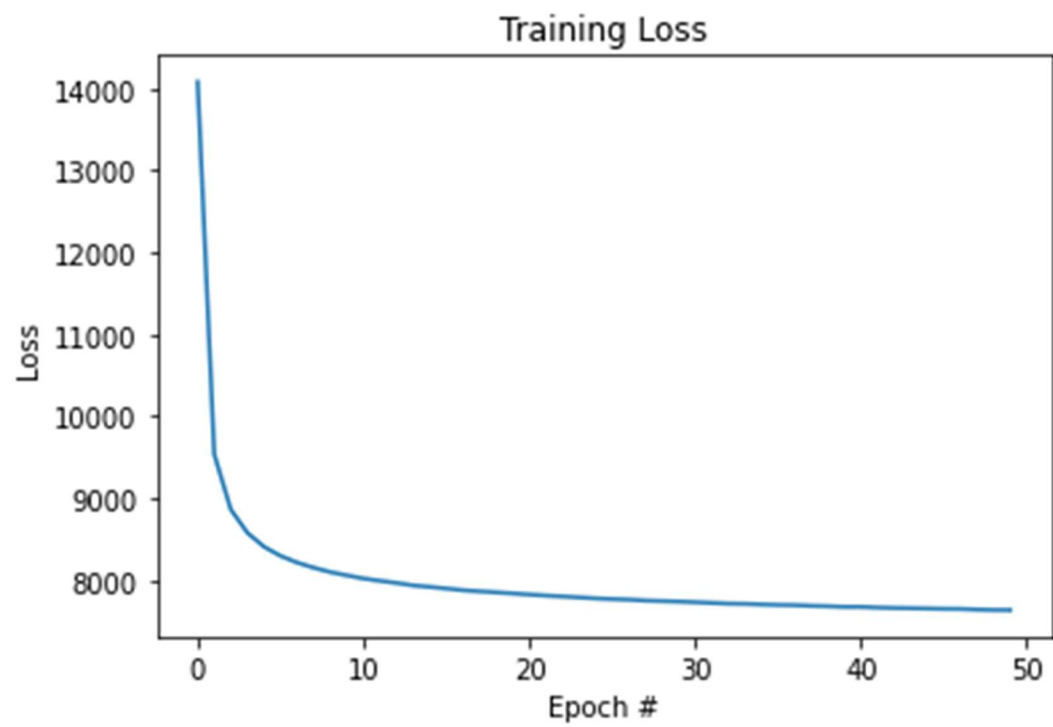
2	5	3	8	5	8	9	8
1	2	0	4	2	0	7	4
2	8	6	9	7	8	7	3
0	5	4	0	2	6	1	0
9	4	9	9	9	4	3	2
9	9	0	5	0	0	1	6
0	6	9	9	1	4	0	6
7	5	4	4	8	3	8	2

Epoch #40

2	6	0	3	6	8	0	3
3	0	1	0	1	8	3	5
9	7	3	7	4	1	0	9
9	8	6	4	0	5	4	7
6	9	7	3	7	9	8	0
7	7	0	7	2	9	1	0
8	6	2	4	4	0	2	6
9	2	5	0	0	0	8	3

Epoch #50

6	1	4	1	5	1	6	4
9	9	3	0	9	2	8	9
8	8	7	6	7	7	6	6
6	0	6	8	9	2	0	0
0	0	9	7	3	5	7	0
4	1	0	0	1	0	6	4
0	4	9	1	2	4	6	7
5	8	0	2	7	5	0	8

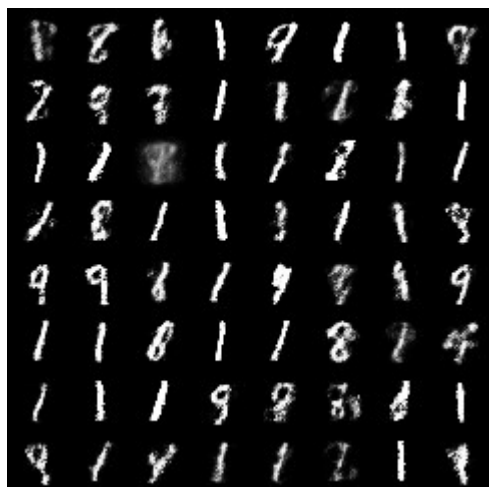


B

Epoch #10



Epoch #20



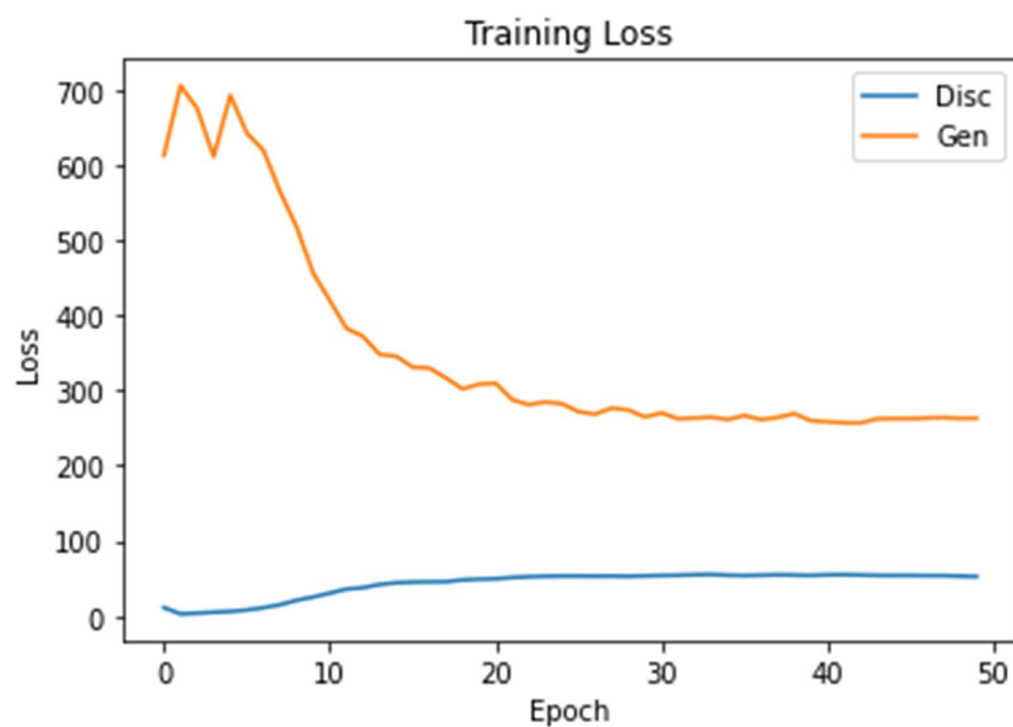
Epoch #30

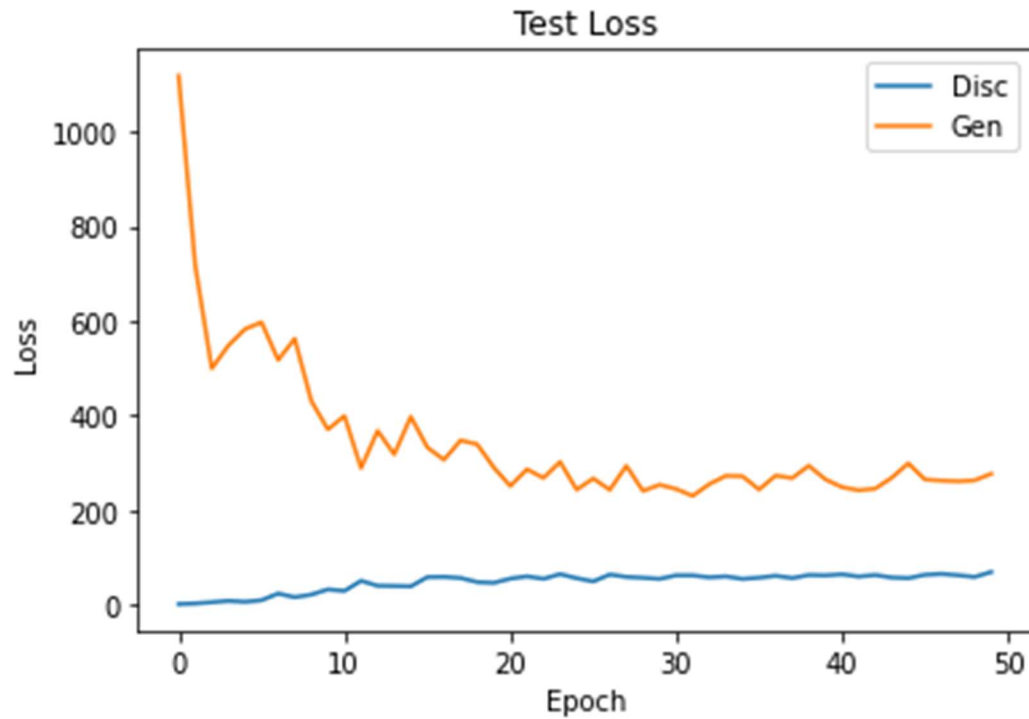


Epoch #40



Epoch #50





C

By using GANs created clearer images in comparison to VAEs. The initial GAN images produced were worse than the initial VAE images but over time got clearer. VAEs had a greater initial loss reduction but quickly flattened out over epochs. Seems that VAE are better for low iteration while GANs would be better for high iteration and time allowances.