

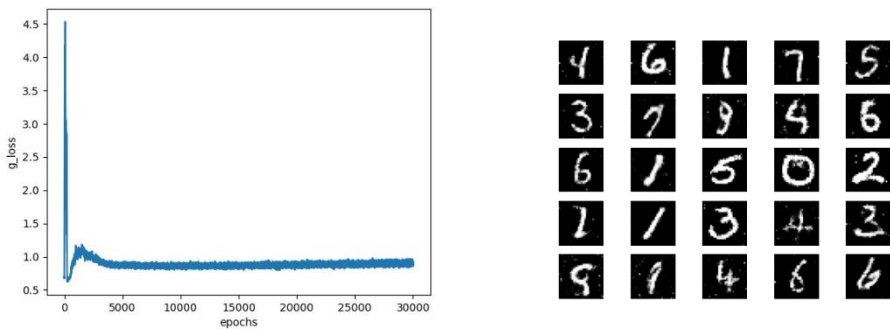
Project report 3-Yubo Wang (5334-5862)

■ **GAN: Adam optimizer (learning rate 0.0005), binary cross-entropy, epochs=30000, batch_size=200, 70000 images**

For the generator, I increased the parameter of the first three full-connection layers, and now they contain 256, 512, 1024 nodes, respectively,

For the discriminator, I increased the parameter of the first three full-connection layers, now they contain 512, 256, 1 node(s) respectively, two activation layers all with Leaky ReLU function, and one flatten layer at the first of the model.

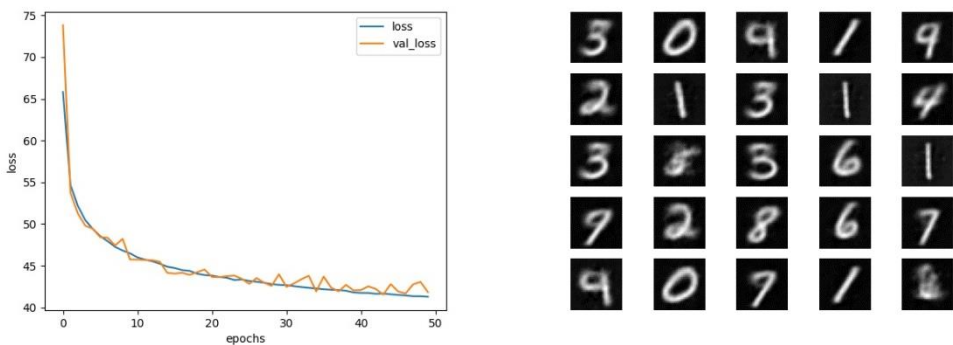
The results of the GAN are shown as follow:



■ **VAE: Adam optimizer (learning rate 0.0005), epochs=50, batch_size=150, validation_split=0.2, 70000 images**

For the VAE model, I just increased the number of input images to 70000. (a combination of the MNIST training and testing sets)

The results of the VAE are shown as follow:



Although my GAN results seem better than the VAE result, as the graph of the VAE shows if I keep increasing the epoch, I think I would get an even better result using VAE.