

[!\[\]\(919a2cb85b99741a73c0c31a427236a8_img.jpg\) Open in Colab](#)

(https://colab.research.google.com/github/yokolet/DeepLearning/blob/master/DCGAN_by_PyTorch.ipynb)

DCGAN by PyTorch

This is a Deep Convolutional Generative Adversarial Networks(DCGAN) using Street View House Numbers Dataset(SVHN).

The code is originally Udacity's Deep Learning tutorial, [dcgan-svhn](https://github.com/udacity/deep-learning/tree/master/dcgan-svhn) (<https://github.com/udacity/deep-learning/tree/master/dcgan-svhn>). It is written by TensorFlow. Recently, another major machine learning library, PyTorch (<https://pytorch.org/>) drew people's attention. I'm among them. Out of my curiosity, I tried the same DCGAN by PyTorch. For this attempt, some parts of code were taken from PyTorch's [dcgan example](https://github.com/pytorch/examples/blob/master/dcgan/main.py) (<https://github.com/pytorch/examples/blob/master/dcgan/main.py>).

The model is created following the [Original DCGAN paper](https://arxiv.org/pdf/1511.06434.pdf) (<https://arxiv.org/pdf/1511.06434.pdf>). The dataset is [the Street View House Numbers Dataset \(SVHN\)](http://ufldl.stanford.edu/housenumbers/) (<http://ufldl.stanford.edu/housenumbers/>), whose size is 32 x 32.

The notebook works on Google's colaboratory environment with setting of GPU for its runtime. The code includes PyTorch installation since PyTorch is not preinstalled on colaboratory at this moment.

PyTorch Installation and import

For the first time importing torch without install PyTorch, the colaboratory provides the code to install PyTorch. The code is set up to look at a specific website. This works, but simply calling pip install works as well.

```
In [1]: # http://pytorch.org/
from os.path import exists
from wheel.pep425tags import get_abbr_impl, get_impl_ver, get_abi_tag
platform = '{}{}-{}'.format(get_abbr_impl(), get_impl_ver(), get_abi_tag())
cuda_output = !ldconfig -p|grep cudart.so|sed -e 's/.*\.\([0-9]*\)\.\([0-9]*\)$/\cu\1\2/'
accelerator = cuda_output[0] if exists('/dev/nvidia0') else 'cpu'

!pip3 install torch torchvision
import torch
import torch.nn as nn
import torch.optim as optim
import torchvision
import torchvision.transforms as transforms

Collecting torch
  Downloading https://files.pythonhosted.org/packages/49/0e/e382bcf1a6ae8225f50b99cc26effa2d4cc6d66975ccf3fa9590efcbedce/torch-0.4.1-cp36-cp36-manylinux1_x86_64.whl (519.5MB)
    100% |██████████| 519.5MB 32kB/s
tcmalloc: large alloc 1073750016 bytes == 0x59cca000 @ 0x7f26d2db12a4
0x594e17 0x626104 0x51190a 0x4f5277 0x510c78 0x5119bd 0x4f5277 0x4f3338
0x510fb0 0x5119bd 0x4f5277 0x4f3338 0x510fb0 0x5119bd 0x4f5277 0x4f3338
0x510fb0 0x5119bd 0x4f6070 0x510c78 0x5119bd 0x4f5277 0x4f3338 0x510fb0
0x5119bd 0x4f6070 0x4f3338 0x510fb0 0x5119bd 0x4f6070
Collecting torchvision
  Downloading https://files.pythonhosted.org/packages/ca/0d/f00b2885711e08bd71242ebe7b96561e6f6d01fdb4b9dcf4d37e2e13c5e1/torchvision-0.2.1-py2.py3-none-any.whl (54kB)
    100% |██████████| 61kB 20.4MB/s
Requirement already satisfied: six in /usr/local/lib/python3.6/dist-packages (from torchvision) (1.11.0)
Collecting pillow>=4.1.1 (from torchvision)
  Downloading https://files.pythonhosted.org/packages/62/94/5430eba83f91cc7a9f687ff5238e26164a779cca2ef9903232268b0a318/Pillow-5.3.0-cp36-cp36-manylinux1_x86_64.whl (2.0MB)
    100% |██████████| 2.0MB 4.4MB/s
Requirement already satisfied: numpy in /usr/local/lib/python3.6/dist-packages (from torchvision) (1.14.6)
Installing collected packages: torch, pillow, torchvision
  Found existing installation: Pillow 4.0.0
  Uninstalling Pillow-4.0.0:
    Successfully uninstalled Pillow-4.0.0
Successfully installed pillow-5.3.0 torch-0.4.1 torchvision-0.2.1
```

Other libraries

To show SVHN images, the cell below imports three libraries.

```
In [0]: %matplotlib inline

import matplotlib.pyplot as plt
import numpy as np
from scipy.io import loadmat
```

Parameters

Below is definitions of various parameters.

```
In [3]: dataroot = './data'      # path to dataset
batchSize = 128                 # input batch size
workers = 2                      # number of data loading workers
nz = 100                         # size of a noise vector z
ngf = 64                          # generator factor
ndf = 64                          # discriminator factor
nc = 3                            # number of color channels
lr = 0.0002                       # learning rate
alpha = 0.2                        # leaky ReLU parameter
beta1 = 0.5                        # Adam Optimizer parameter
niter = 25                         # number of epochs

device = torch.device("cuda:0" if torch.cuda.is_available() else "cpu")
print(device)

cuda:0
```

Getting the dataset

The cell below downloads the SVHN dataset using torchvision. Also, dataloader are created using PyTorch's DataLoader.

```
In [4]: transform = transforms.Compose(
    [transforms.ToTensor(),
     transforms.Normalize((0.5, 0.5, 0.5), (0.5, 0.5, 0.5))]
)
trainset = torchvision.datasets.SVHN(root=dataroot, split='train',
                                     transform=transforms.Compose([
                                         transforms.ToTensor(),
                                         transforms.Normalize((0.5, 0.5,
0.5), (0.5, 0.5, 0.5)),
                                         ]),
                                     download=True)
trainloader = torch.utils.data.DataLoader(trainset, batch_size=batchSize,
                                         shuffle=True, num_workers=workers)
testset = torchvision.datasets.SVHN(root=dataroot, split='test',
                                     transform=transforms.Compose([
                                         transforms.ToTensor(),
                                         transforms.Normalize((0.5, 0.5,
0.5), (0.5, 0.5, 0.5)),
                                         ]),
                                     download=True)
testloader = torch.utils.data.DataLoader(testset, batch_size=batchSize,
                                         shuffle=False, num_workers=workers)

Downloading http://ufldl.stanford.edu/housenumbers/train_32x32.mat to
./data/train_32x32.mat
Downloading http://ufldl.stanford.edu/housenumbers/test_32x32.mat to ./data/test_32x32.mat
```

Sample images

The SVHN files are .mat files typically used with Matlab. Those are loaded using `scipy.io.loadmat` which is imported above. Each image is 32 x 32 with 3 color channels (RGB). These are the real images to be passed to the discriminator. The generator is expected to create the same image eventually.

```
In [0]: trainset = loadmat(dataroot + '/train_32x32.mat')
testset = loadmat(dataroot + '/test_32x32.mat')
```

```
In [6]: idx = np.random.randint(0, trainset['X'].shape[3], size=36)
fig, axes = plt.subplots(6, 6, sharex=True, sharey=True, figsize=(5,5),)
for ii, ax in zip(idx, axes.flatten()):
    ax.imshow(trainset['X'][::,:,:,ii], aspect='equal')
    ax.xaxis.set_visible(False)
    ax.yaxis.set_visible(False)
plt.subplots_adjust(wspace=0, hspace=0)
```



Generator

The input will be a noise vector z . The output will be a $tanh$ output with size of 32×32 which is the size of the SVHN images.

The generator will have convolutional layers to create new images. The first layer creates a deep and narrow layer, something like $4 \times 4 \times 512$ as in the original DCGAN paper. In the layer, a batch normalization and a leaky ReLU activation will be used. Following transposed convolution layers halve the depth and double the width and height of the previous layer. Again, the batch normalization and leaky ReLU come here.

```
In [0]: class Generator(nn.Module):
    def __init__(self):
        super(Generator, self).__init__()
        self.main = nn.Sequential(
            # input is Z, going into a convolution
            nn.ConvTranspose2d(nz, ngf * 8, 4, 1, 0, bias=False),
            nn.BatchNorm2d(ngf * 8),
            nn.LeakyReLU(alpha, inplace=True),
            # state size. (ngf*8) x 4 x 4
            nn.ConvTranspose2d(ngf * 8, ngf * 4, 4, 2, 1, bias=False),
            nn.BatchNorm2d(ngf * 4),
            nn.LeakyReLU(alpha, inplace=True),
            # state size. (ngf*4) x 8 x 8
            nn.ConvTranspose2d(ngf * 4, ngf * 2, 4, 2, 1, bias=False),
            nn.BatchNorm2d(ngf * 2),
            nn.LeakyReLU(alpha, inplace=True),
            # state size. (ngf*2) x 16 x 16
            nn.ConvTranspose2d(ngf * 2, nc, 4, 2, 1, bias=False),
            nn.Tanh()
            # state size. (nc) x 32 x 32
        )

        def forward(self, input):
            output = self.main(input)
            return output
```

Discriminator

The discriminator is basically a convolutional classifier. The inputs to the discriminator are 32x32x3 tensors/images. The discriminator will have a few convolutional layers, then a fully connected layer for the output. At the last layer, an activation is sigmoid.

In the original DCGAN paper, they did all the downsampling using only strided convolutional layers with no maxpool layers.

```
In [0]: class Discriminator(nn.Module):
    def __init__(self):
        super(Discriminator, self).__init__()
        self.main = nn.Sequential(
            # input is (nc) x 32 x 32
            nn.Conv2d(nc, ndf, 4, 2, 1, bias=False),
            nn.LeakyReLU(alpha, inplace=True),
            # state size. (ndf) x 16 x 16
            nn.Conv2d(ndf, ndf * 2, 4, 2, 1, bias=False),
            nn.BatchNorm2d(ndf * 2),
            nn.LeakyReLU(alpha, inplace=True),
            # state size. (ndf*2) x 8 x 8
            nn.Conv2d(ndf * 2, ndf * 4, 4, 2, 1, bias=False),
            nn.BatchNorm2d(ndf * 4),
            nn.LeakyReLU(alpha, inplace=True),
            # state size. (ndf*4) x 4 x 4
            nn.Conv2d(ndf * 4, 1, 4, 1, 0, bias=False),
            nn.Sigmoid()
        )

        def forward(self, input):
            output = self.main(input)
            return output.view(-1, 1).squeeze(1)
```

Initializes models, defines a loss function and optimizers

Here, the generator and discriminator models are initialized with weights. The loss function is BCELoss, which is Binary Cross Entropy. The BCELoss is a counterpart of TensorFlow's sigmoid_cross_entropy_with_logits. The optimizer is Adam Optimizer.

```
In [9]: # custom weights initialization called on models
def weights_init(m):
    classname = m.__class__.__name__
    if classname.find('Conv') != -1:
        m.weight.data.normal_(0.0, 0.02)
    elif classname.find('BatchNorm') != -1:
        m.weight.data.normal_(1.0, 0.02)
        m.bias.data.fill_(0)

g_model = Generator().to(device)
g_model.apply(weights_init)
print(g_model)

d_model = Discriminator().to(device)
d_model.apply(weights_init)
print(d_model)

# loss function
criterion = nn.BCELoss()

fixed_noise = torch.randn(batchSize, nz, 1, 1, device=device)
sample_noise = torch.randn(72, nz, 1, 1, device=device)
real_label = 1
fake_label = 0

# setup optimizer
d_train_optim = optim.Adam(d_model.parameters(), lr=lr, betas=(beta1, 0.999))
g_train_optim = optim.Adam(g_model.parameters(), lr=lr, betas=(beta1, 0.999))
```

```

Generator(
    (main): Sequential(
        (0): ConvTranspose2d(100, 512, kernel_size=(4, 4), stride=(1, 1), bias=False)
        (1): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
        (2): LeakyReLU(negative_slope=0.2, inplace)
        (3): ConvTranspose2d(512, 256, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1), bias=False)
        (4): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
        (5): LeakyReLU(negative_slope=0.2, inplace)
        (6): ConvTranspose2d(256, 128, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1), bias=False)
        (7): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
        (8): LeakyReLU(negative_slope=0.2, inplace)
        (9): ConvTranspose2d(128, 3, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1), bias=False)
        (10): Tanh()
    )
)
Discriminator(
    (main): Sequential(
        (0): Conv2d(3, 64, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1), bias=False)
        (1): LeakyReLU(negative_slope=0.2, inplace)
        (2): Conv2d(64, 128, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1), bias=False)
        (3): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
        (4): LeakyReLU(negative_slope=0.2, inplace)
        (5): Conv2d(128, 256, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1), bias=False)
        (6): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
        (7): LeakyReLU(negative_slope=0.2, inplace)
        (8): Conv2d(256, 1, kernel_size=(4, 4), stride=(1, 1), bias=False)
        (9): Sigmoid()
    )
)

```

Showing samples

The cell below defines a function to show samples. The function is called during the training and after the training.

```
In [0]: def view_samples(epoch, samples, nrows, ncols, figsize=(5,5)):
    fig, axes = plt.subplots(figsize=figsize, nrows=nrows, ncols=ncols,
                           sharey=True, sharex=True)
    for ax, img in zip(axes.flatten(), samples[epoch]):
        img = np.rollaxis(img, 0, 3)
        ax.axis('off')
        img = ((img - img.min())*255 / (img.max() - img.min())).astype(np.uint8)
        ax.set_adjustable('box-forced')
        im = ax.imshow(img, aspect='equal')

    plt.subplots_adjust(wspace=0, hspace=0)
    return fig, axes
```

Training

```
In [11]: print_every=10
show_every=1000
samples, losses = [], []

for epoch in range(niter):
    for i, data in enumerate(trainloader, 0):
        if data[0].size()[0] < batchSize:
            continue
        real_data = data[0].to(device)
        #####
        # (1) Update D network: maximize log(D(x)) + log(1 - D(G(z)))
        #####
        # train with real
        d_model.zero_grad()

        output = d_model(real_data)
        label = torch.full((batchSize,), real_label, device=device)

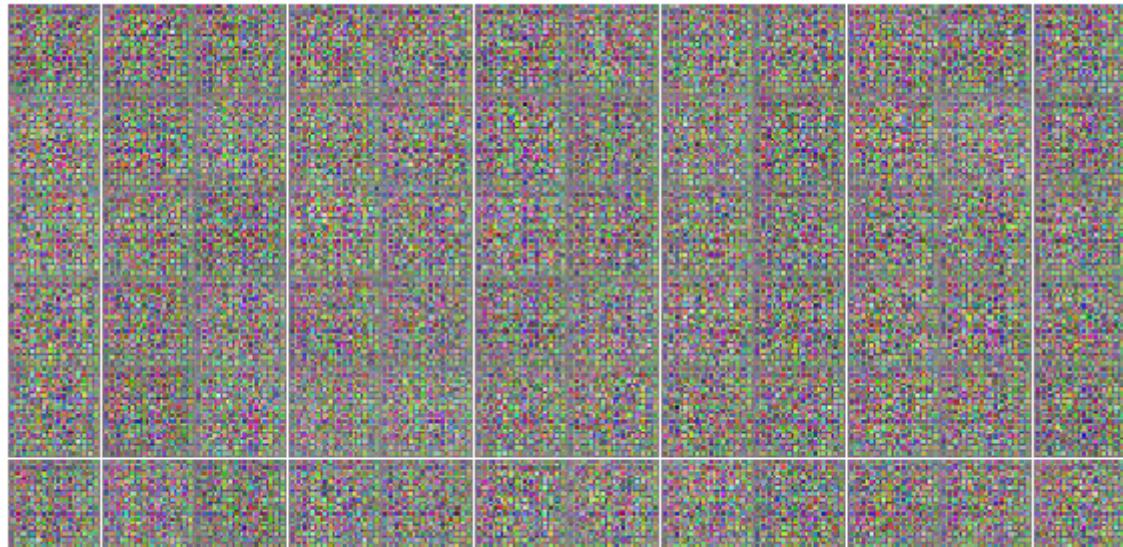
        d_loss_real = criterion(output, label)
        d_loss_real.backward()
        D_x = output.mean().item()

        # train with fake
        noise = torch.randn(batchSize, nz, 1, 1, device=device)
        fake = g_model(noise)
        label.fill_(fake_label)
        output = d_model(fake.detach())
        d_loss_fake = criterion(output, label)
        d_loss_fake.backward()
        D_G_z1 = output.mean().item()
        d_loss = d_loss_real + d_loss_fake
        d_train_optim.step()

        #####
        # (2) Update G network: maximize log(D(G(z)))
        #####
        g_model.zero_grad()
        label.fill_(real_label) # fake labels are real for generator cost
        output = d_model(fake)
        g_loss = criterion(output, label)
        g_loss.backward()
        D_G_z2 = output.mean().item()
        g_train_optim.step()

        if i % print_every == 0:
            print('[%d/%d][%d/%d] Loss_D: %.4f Loss_G: %.4f D(x): %.4f D(G(z)): %.4f / %.4f'
                  % (epoch, niter, i, len(trainloader),
                     d_loss.item(), g_loss.item(), D_x, D_G_z1, D_G_z2))
            losses.append((d_loss.item(), g_loss.item()))
        if i % show_every == 0:
            gen_samples = g_model(sample_noise).detach()
            sample = gen_samples.to(torch.device('cpu')).numpy()
            samples.append(sample)
            _ = view_samples(-1, samples, 6, 12, figsize=(10,5))
            plt.show()
```

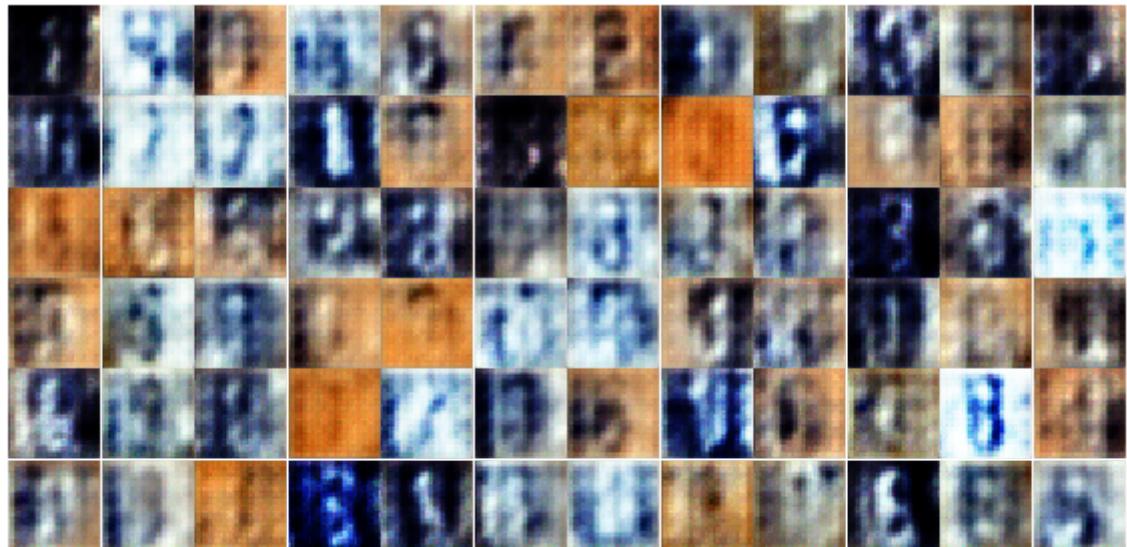

[0 / 25] [0 / 573] Loss_D: 1.7614 Loss_G: 1.4815 D(x): 0.3435 D(G(z)): 0.343
6 / 0.2537



```
[0/25][10/573] Loss_D: 1.1651 Loss_G: 3.7945 D(x): 0.6169 D(G(z)): 0.42  
35 / 0.0272  
[0/25][20/573] Loss_D: 0.5996 Loss_G: 4.5968 D(x): 0.7708 D(G(z)): 0.25  
42 / 0.0125  
[0/25][30/573] Loss_D: 0.3073 Loss_G: 4.6883 D(x): 0.8671 D(G(z)): 0.13  
58 / 0.0114  
[0/25][40/573] Loss_D: 0.1831 Loss_G: 5.3721 D(x): 0.9410 D(G(z)): 0.11  
20 / 0.0056  
[0/25][50/573] Loss_D: 0.1229 Loss_G: 5.5421 D(x): 0.9569 D(G(z)): 0.07  
35 / 0.0050  
[0/25][60/573] Loss_D: 0.1182 Loss_G: 5.3637 D(x): 0.9572 D(G(z)): 0.06  
96 / 0.0059  
[0/25][70/573] Loss_D: 0.1888 Loss_G: 4.9429 D(x): 0.9219 D(G(z)): 0.09  
43 / 0.0088  
[0/25][80/573] Loss_D: 0.6924 Loss_G: 5.6408 D(x): 0.8484 D(G(z)): 0.36  
47 / 0.0057  
[0/25][90/573] Loss_D: 0.7892 Loss_G: 2.8051 D(x): 0.7062 D(G(z)): 0.27  
26 / 0.0800  
[0/25][100/573] Loss_D: 0.5287 Loss_G: 2.9222 D(x): 0.8217 D(G(z)): 0.2  
281 / 0.0642  
[0/25][110/573] Loss_D: 0.4466 Loss_G: 2.6576 D(x): 0.7850 D(G(z)): 0.1  
380 / 0.0786  
[0/25][120/573] Loss_D: 0.9463 Loss_G: 1.5493 D(x): 0.5978 D(G(z)): 0.1  
003 / 0.2730  
[0/25][130/573] Loss_D: 0.6575 Loss_G: 3.8531 D(x): 0.7516 D(G(z)): 0.2  
469 / 0.0278  
[0/25][140/573] Loss_D: 1.1851 Loss_G: 1.9996 D(x): 0.4395 D(G(z)): 0.0  
694 / 0.1971  
[0/25][150/573] Loss_D: 0.6325 Loss_G: 3.3297 D(x): 0.7655 D(G(z)): 0.2  
658 / 0.0438  
[0/25][160/573] Loss_D: 0.3884 Loss_G: 3.3843 D(x): 0.8435 D(G(z)): 0.1  
697 / 0.0418  
[0/25][170/573] Loss_D: 0.4121 Loss_G: 4.7764 D(x): 0.7979 D(G(z)): 0.1  
391 / 0.0209  
[0/25][180/573] Loss_D: 0.2585 Loss_G: 4.3206 D(x): 0.9107 D(G(z)): 0.1  
440 / 0.0155  
[0/25][190/573] Loss_D: 0.3480 Loss_G: 4.2723 D(x): 0.8621 D(G(z)): 0.1  
546 / 0.0178  
[0/25][200/573] Loss_D: 0.3760 Loss_G: 3.5123 D(x): 0.8236 D(G(z)): 0.1  
357 / 0.0402  
[0/25][210/573] Loss_D: 0.7058 Loss_G: 3.5339 D(x): 0.7863 D(G(z)): 0.2  
914 / 0.0527  
[0/25][220/573] Loss_D: 0.5253 Loss_G: 2.4440 D(x): 0.7581 D(G(z)): 0.1  
701 / 0.1311  
[0/25][230/573] Loss_D: 0.5719 Loss_G: 1.7685 D(x): 0.7956 D(G(z)): 0.2  
613 / 0.1918  
[0/25][240/573] Loss_D: 0.4936 Loss_G: 3.2877 D(x): 0.8065 D(G(z)): 0.2  
210 / 0.0445  
[0/25][250/573] Loss_D: 0.6096 Loss_G: 3.3046 D(x): 0.7589 D(G(z)): 0.2  
484 / 0.0436  
[0/25][260/573] Loss_D: 0.3240 Loss_G: 3.0921 D(x): 0.8650 D(G(z)): 0.1  
479 / 0.0572  
[0/25][270/573] Loss_D: 0.4041 Loss_G: 2.8470 D(x): 0.8218 D(G(z)): 0.1  
648 / 0.0672  
[0/25][280/573] Loss_D: 0.3704 Loss_G: 2.2632 D(x): 0.7802 D(G(z)): 0.0  
915 / 0.1227  
[0/25][290/573] Loss_D: 0.8688 Loss_G: 4.3608 D(x): 0.6682 D(G(z)): 0.1
```

```
451 / 0.0193
[0/25][300/573] Loss_D: 0.6911 Loss_G: 0.8480 D(x): 0.6288 D(G(z)): 0.1
151 / 0.5275
[0/25][310/573] Loss_D: 0.4079 Loss_G: 2.7919 D(x): 0.8272 D(G(z)): 0.1
749 / 0.0774
[0/25][320/573] Loss_D: 0.5099 Loss_G: 4.1772 D(x): 0.8420 D(G(z)): 0.2
643 / 0.0254
[0/25][330/573] Loss_D: 1.0364 Loss_G: 3.9549 D(x): 0.5081 D(G(z)): 0.0
924 / 0.0285
[0/25][340/573] Loss_D: 0.9575 Loss_G: 2.2497 D(x): 0.7375 D(G(z)): 0.4
314 / 0.1281
[0/25][350/573] Loss_D: 0.4800 Loss_G: 2.9038 D(x): 0.7809 D(G(z)): 0.1
877 / 0.0660
[0/25][360/573] Loss_D: 0.2012 Loss_G: 3.5204 D(x): 0.8894 D(G(z)): 0.0
742 / 0.0402
[0/25][370/573] Loss_D: 0.4357 Loss_G: 3.9658 D(x): 0.8864 D(G(z)): 0.2
582 / 0.0238
[0/25][380/573] Loss_D: 0.6373 Loss_G: 3.4978 D(x): 0.6311 D(G(z)): 0.0
600 / 0.0485
[0/25][390/573] Loss_D: 0.1775 Loss_G: 3.2834 D(x): 0.9305 D(G(z)): 0.0
960 / 0.0434
[0/25][400/573] Loss_D: 0.3280 Loss_G: 3.6086 D(x): 0.8945 D(G(z)): 0.1
779 / 0.0366
[0/25][410/573] Loss_D: 0.3314 Loss_G: 3.2658 D(x): 0.8688 D(G(z)): 0.1
554 / 0.0506
[0/25][420/573] Loss_D: 0.1922 Loss_G: 3.4788 D(x): 0.8745 D(G(z)): 0.0
479 / 0.0429
[0/25][430/573] Loss_D: 0.3714 Loss_G: 3.1869 D(x): 0.8330 D(G(z)): 0.1
560 / 0.0540
[0/25][440/573] Loss_D: 1.1159 Loss_G: 1.9126 D(x): 0.6345 D(G(z)): 0.4
154 / 0.1979
[0/25][450/573] Loss_D: 0.7077 Loss_G: 2.8137 D(x): 0.6998 D(G(z)): 0.1
850 / 0.0830
[0/25][460/573] Loss_D: 0.8013 Loss_G: 2.8175 D(x): 0.5802 D(G(z)): 0.0
861 / 0.0869
[0/25][470/573] Loss_D: 1.3343 Loss_G: 4.1978 D(x): 0.8851 D(G(z)): 0.6
651 / 0.0195
[0/25][480/573] Loss_D: 0.4999 Loss_G: 2.3733 D(x): 0.8214 D(G(z)): 0.2
330 / 0.1229
[0/25][490/573] Loss_D: 0.3161 Loss_G: 2.6098 D(x): 0.8251 D(G(z)): 0.1
008 / 0.0901
[0/25][500/573] Loss_D: 0.2172 Loss_G: 3.0814 D(x): 0.8834 D(G(z)): 0.0
820 / 0.0576
[0/25][510/573] Loss_D: 1.5658 Loss_G: 1.8745 D(x): 0.4714 D(G(z)): 0.4
216 / 0.2467
[0/25][520/573] Loss_D: 0.5749 Loss_G: 4.0034 D(x): 0.7857 D(G(z)): 0.2
484 / 0.0311
[0/25][530/573] Loss_D: 0.7300 Loss_G: 2.9766 D(x): 0.5928 D(G(z)): 0.0
522 / 0.0791
[0/25][540/573] Loss_D: 0.9610 Loss_G: 2.4282 D(x): 0.4954 D(G(z)): 0.1
037 / 0.1315
[0/25][550/573] Loss_D: 0.4066 Loss_G: 2.7817 D(x): 0.9152 D(G(z)): 0.2
462 / 0.0839
[0/25][560/573] Loss_D: 0.4710 Loss_G: 3.0955 D(x): 0.8280 D(G(z)): 0.2
189 / 0.0613
[0/25][570/573] Loss_D: 1.0457 Loss_G: 1.6673 D(x): 0.6328 D(G(z)): 0.3
676 / 0.2334
```

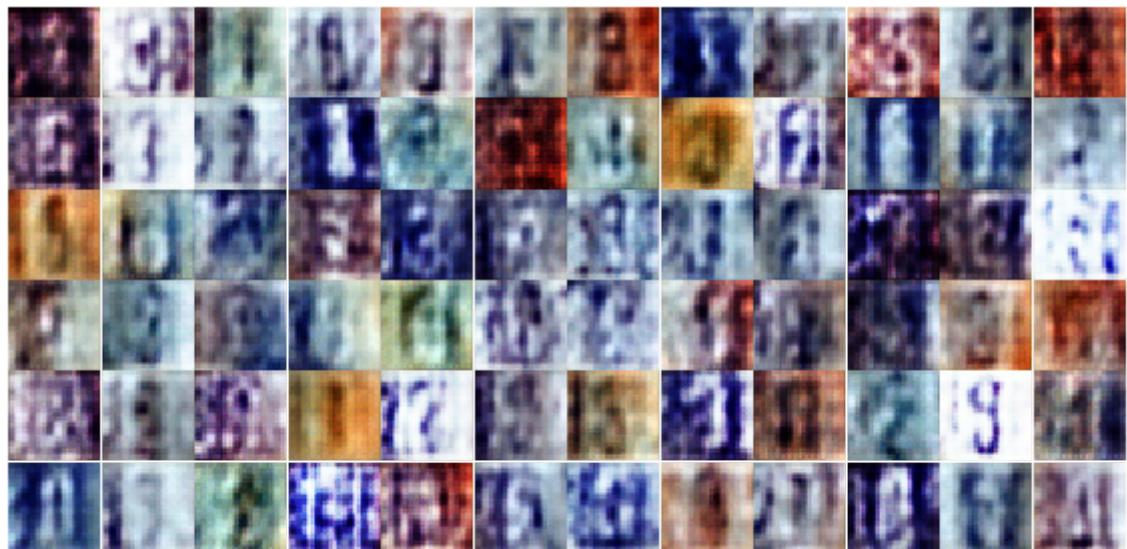
[1/25] [0/573] Loss_D: 0.7401 Loss_G: 1.5035 D(x): 0.6126 D(G(z)): 0.135
2 / 0.2776



```
[1/25][10/573] Loss_D: 1.4928 Loss_G: 3.9938 D(x): 0.8285 D(G(z)): 0.66  
22 / 0.0253  
[1/25][20/573] Loss_D: 0.8298 Loss_G: 2.8510 D(x): 0.8011 D(G(z)): 0.42  
13 / 0.0767  
[1/25][30/573] Loss_D: 1.0044 Loss_G: 2.2581 D(x): 0.6529 D(G(z)): 0.35  
94 / 0.1509  
[1/25][40/573] Loss_D: 0.4551 Loss_G: 2.8560 D(x): 0.7877 D(G(z)): 0.14  
65 / 0.0746  
[1/25][50/573] Loss_D: 0.6216 Loss_G: 3.0177 D(x): 0.8174 D(G(z)): 0.31  
40 / 0.0615  
[1/25][60/573] Loss_D: 0.7082 Loss_G: 2.8091 D(x): 0.7946 D(G(z)): 0.33  
53 / 0.0883  
[1/25][70/573] Loss_D: 0.6853 Loss_G: 2.6635 D(x): 0.7513 D(G(z)): 0.27  
84 / 0.0892  
[1/25][80/573] Loss_D: 0.5606 Loss_G: 2.1749 D(x): 0.7878 D(G(z)): 0.24  
50 / 0.1434  
[1/25][90/573] Loss_D: 0.5570 Loss_G: 2.2938 D(x): 0.7931 D(G(z)): 0.24  
28 / 0.1209  
[1/25][100/573] Loss_D: 0.8784 Loss_G: 0.6529 D(x): 0.5614 D(G(z)): 0.1  
735 / 0.5559  
[1/25][110/573] Loss_D: 0.6149 Loss_G: 2.5626 D(x): 0.8186 D(G(z)): 0.3  
070 / 0.0917  
[1/25][120/573] Loss_D: 0.5291 Loss_G: 2.0922 D(x): 0.7670 D(G(z)): 0.2  
034 / 0.1603  
[1/25][130/573] Loss_D: 0.8176 Loss_G: 1.9449 D(x): 0.6964 D(G(z)): 0.2  
415 / 0.2024  
[1/25][140/573] Loss_D: 0.5837 Loss_G: 2.6557 D(x): 0.8428 D(G(z)): 0.3  
096 / 0.0982  
[1/25][150/573] Loss_D: 0.8299 Loss_G: 1.7799 D(x): 0.6551 D(G(z)): 0.2  
682 / 0.2038  
[1/25][160/573] Loss_D: 1.6170 Loss_G: 3.0284 D(x): 0.9441 D(G(z)): 0.7  
308 / 0.0707  
[1/25][170/573] Loss_D: 1.6286 Loss_G: 3.4325 D(x): 0.8284 D(G(z)): 0.6  
926 / 0.0509  
[1/25][180/573] Loss_D: 1.0640 Loss_G: 1.8956 D(x): 0.6270 D(G(z)): 0.3  
176 / 0.2427  
[1/25][190/573] Loss_D: 0.9363 Loss_G: 1.7717 D(x): 0.6565 D(G(z)): 0.3  
576 / 0.2014  
[1/25][200/573] Loss_D: 0.9407 Loss_G: 1.7090 D(x): 0.6030 D(G(z)): 0.2  
860 / 0.2385  
[1/25][210/573] Loss_D: 0.6643 Loss_G: 2.5330 D(x): 0.7834 D(G(z)): 0.3  
066 / 0.1007  
[1/25][220/573] Loss_D: 0.9643 Loss_G: 1.6118 D(x): 0.5508 D(G(z)): 0.1  
739 / 0.2560  
[1/25][230/573] Loss_D: 0.5178 Loss_G: 2.2548 D(x): 0.7671 D(G(z)): 0.2  
009 / 0.1331  
[1/25][240/573] Loss_D: 0.6006 Loss_G: 2.6401 D(x): 0.7436 D(G(z)): 0.2  
304 / 0.0892  
[1/25][250/573] Loss_D: 0.8196 Loss_G: 2.7815 D(x): 0.7942 D(G(z)): 0.4  
059 / 0.0849  
[1/25][260/573] Loss_D: 0.8625 Loss_G: 2.5026 D(x): 0.7793 D(G(z)): 0.4  
142 / 0.1139  
[1/25][270/573] Loss_D: 0.8739 Loss_G: 1.9784 D(x): 0.6150 D(G(z)): 0.2  
804 / 0.1652  
[1/25][280/573] Loss_D: 0.9351 Loss_G: 2.0208 D(x): 0.6805 D(G(z)): 0.3  
661 / 0.2007  
[1/25][290/573] Loss_D: 1.1221 Loss_G: 0.7588 D(x): 0.4606 D(G(z)): 0.2
```

```
133 / 0.5066
[1/25][300/573] Loss_D: 0.8627 Loss_G: 1.2377 D(x): 0.6783 D(G(z)): 0.3
415 / 0.3242
[1/25][310/573] Loss_D: 1.2622 Loss_G: 1.8621 D(x): 0.7814 D(G(z)): 0.5
811 / 0.1925
[1/25][320/573] Loss_D: 0.7750 Loss_G: 2.4211 D(x): 0.8328 D(G(z)): 0.4
169 / 0.1057
[1/25][330/573] Loss_D: 1.2342 Loss_G: 1.1492 D(x): 0.5033 D(G(z)): 0.3
446 / 0.3464
[1/25][340/573] Loss_D: 1.5432 Loss_G: 0.9514 D(x): 0.2981 D(G(z)): 0.1
663 / 0.4307
[1/25][350/573] Loss_D: 1.0649 Loss_G: 1.2573 D(x): 0.6246 D(G(z)): 0.3
996 / 0.3181
[1/25][360/573] Loss_D: 1.2428 Loss_G: 1.2547 D(x): 0.4368 D(G(z)): 0.2
611 / 0.3129
[1/25][370/573] Loss_D: 0.9432 Loss_G: 1.4525 D(x): 0.6144 D(G(z)): 0.3
296 / 0.2612
[1/25][380/573] Loss_D: 1.3844 Loss_G: 1.0667 D(x): 0.3623 D(G(z)): 0.2
222 / 0.3699
[1/25][390/573] Loss_D: 1.0714 Loss_G: 1.3328 D(x): 0.5027 D(G(z)): 0.2
533 / 0.2968
[1/25][400/573] Loss_D: 1.1553 Loss_G: 1.5728 D(x): 0.7406 D(G(z)): 0.5
373 / 0.2372
[1/25][410/573] Loss_D: 1.0927 Loss_G: 2.6082 D(x): 0.8011 D(G(z)): 0.5
478 / 0.0917
[1/25][420/573] Loss_D: 1.2193 Loss_G: 2.0630 D(x): 0.4584 D(G(z)): 0.2
349 / 0.1973
[1/25][430/573] Loss_D: 1.2593 Loss_G: 1.3185 D(x): 0.5584 D(G(z)): 0.4
379 / 0.3033
[1/25][440/573] Loss_D: 1.1492 Loss_G: 1.6547 D(x): 0.6197 D(G(z)): 0.4
249 / 0.2303
[1/25][450/573] Loss_D: 0.9760 Loss_G: 1.3349 D(x): 0.5188 D(G(z)): 0.2
110 / 0.3157
[1/25][460/573] Loss_D: 0.9765 Loss_G: 2.3888 D(x): 0.7897 D(G(z)): 0.4
866 / 0.1102
[1/25][470/573] Loss_D: 0.9926 Loss_G: 1.4452 D(x): 0.7002 D(G(z)): 0.4
198 / 0.2745
[1/25][480/573] Loss_D: 0.8661 Loss_G: 2.0500 D(x): 0.7046 D(G(z)): 0.3
611 / 0.1576
[1/25][490/573] Loss_D: 1.0914 Loss_G: 1.8638 D(x): 0.7376 D(G(z)): 0.5
129 / 0.1820
[1/25][500/573] Loss_D: 1.0325 Loss_G: 1.9203 D(x): 0.6636 D(G(z)): 0.4
273 / 0.1636
[1/25][510/573] Loss_D: 1.1394 Loss_G: 1.6113 D(x): 0.5641 D(G(z)): 0.3
870 / 0.2253
[1/25][520/573] Loss_D: 0.9872 Loss_G: 1.2108 D(x): 0.6075 D(G(z)): 0.3
431 / 0.3232
[1/25][530/573] Loss_D: 1.2198 Loss_G: 1.0171 D(x): 0.4658 D(G(z)): 0.2
945 / 0.3921
[1/25][540/573] Loss_D: 0.9598 Loss_G: 1.2706 D(x): 0.5616 D(G(z)): 0.2
691 / 0.3077
[1/25][550/573] Loss_D: 1.2160 Loss_G: 1.5760 D(x): 0.6359 D(G(z)): 0.4
847 / 0.2451
[1/25][560/573] Loss_D: 1.0939 Loss_G: 2.4514 D(x): 0.8258 D(G(z)): 0.5
559 / 0.1063
[1/25][570/573] Loss_D: 1.0883 Loss_G: 1.5067 D(x): 0.5404 D(G(z)): 0.3
274 / 0.2409
```

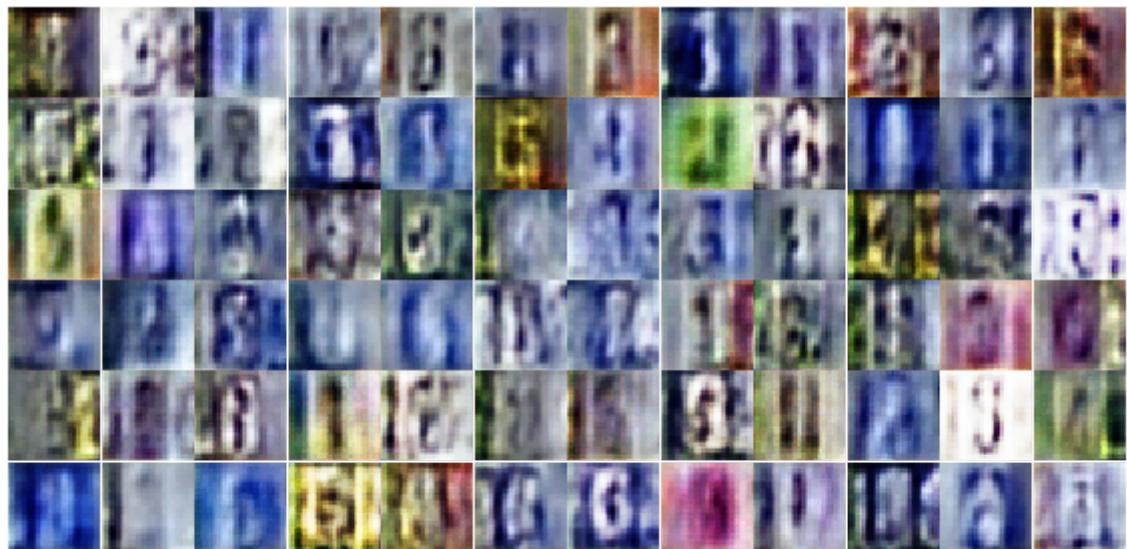
[2 / 25] [0 / 573] Loss_D: 1.0054 Loss_G: 1.3500 D(x): 0.6343 D(G(z)): 0.385
5 / 0.2851



```
[2/25][10/573] Loss_D: 1.2448 Loss_G: 1.3276 D(x): 0.4375 D(G(z)): 0.26  
93 / 0.3065  
[2/25][20/573] Loss_D: 1.0108 Loss_G: 2.5632 D(x): 0.8305 D(G(z)): 0.52  
59 / 0.0984  
[2/25][30/573] Loss_D: 1.1650 Loss_G: 1.4476 D(x): 0.5552 D(G(z)): 0.39  
22 / 0.2588  
[2/25][40/573] Loss_D: 1.3334 Loss_G: 1.3190 D(x): 0.4084 D(G(z)): 0.21  
38 / 0.3053  
[2/25][50/573] Loss_D: 0.9671 Loss_G: 1.5242 D(x): 0.6412 D(G(z)): 0.37  
16 / 0.2445  
[2/25][60/573] Loss_D: 1.2892 Loss_G: 1.3960 D(x): 0.6185 D(G(z)): 0.48  
91 / 0.2958  
[2/25][70/573] Loss_D: 1.1982 Loss_G: 1.4830 D(x): 0.6171 D(G(z)): 0.45  
54 / 0.2593  
[2/25][80/573] Loss_D: 1.2858 Loss_G: 1.3438 D(x): 0.3715 D(G(z)): 0.14  
31 / 0.2941  
[2/25][90/573] Loss_D: 0.9504 Loss_G: 1.4044 D(x): 0.6531 D(G(z)): 0.37  
31 / 0.2714  
[2/25][100/573] Loss_D: 1.1677 Loss_G: 1.4885 D(x): 0.6020 D(G(z)): 0.4  
358 / 0.2553  
[2/25][110/573] Loss_D: 1.1970 Loss_G: 1.0386 D(x): 0.4434 D(G(z)): 0.2  
444 / 0.3801  
[2/25][120/573] Loss_D: 1.0982 Loss_G: 1.3242 D(x): 0.6042 D(G(z)): 0.4  
012 / 0.2923  
[2/25][130/573] Loss_D: 0.7548 Loss_G: 1.9778 D(x): 0.7149 D(G(z)): 0.3  
155 / 0.1691  
[2/25][140/573] Loss_D: 1.2696 Loss_G: 1.2370 D(x): 0.4402 D(G(z)): 0.2  
845 / 0.3194  
[2/25][150/573] Loss_D: 1.0540 Loss_G: 2.0475 D(x): 0.7504 D(G(z)): 0.4  
866 / 0.1563  
[2/25][160/573] Loss_D: 1.1354 Loss_G: 1.6873 D(x): 0.4963 D(G(z)): 0.2  
638 / 0.2181  
[2/25][170/573] Loss_D: 0.8405 Loss_G: 1.9373 D(x): 0.6997 D(G(z)): 0.3  
441 / 0.1742  
[2/25][180/573] Loss_D: 1.3659 Loss_G: 2.1168 D(x): 0.7000 D(G(z)): 0.6  
025 / 0.1528  
[2/25][190/573] Loss_D: 0.8117 Loss_G: 2.0504 D(x): 0.6973 D(G(z)): 0.3  
308 / 0.1514  
[2/25][200/573] Loss_D: 0.9245 Loss_G: 2.2667 D(x): 0.7471 D(G(z)): 0.4  
381 / 0.1276  
[2/25][210/573] Loss_D: 1.2447 Loss_G: 1.1426 D(x): 0.5326 D(G(z)): 0.4  
011 / 0.3490  
[2/25][220/573] Loss_D: 0.9316 Loss_G: 1.3511 D(x): 0.6767 D(G(z)): 0.3  
804 / 0.2895  
[2/25][230/573] Loss_D: 0.7947 Loss_G: 2.3091 D(x): 0.7516 D(G(z)): 0.3  
791 / 0.1164  
[2/25][240/573] Loss_D: 0.6438 Loss_G: 1.9644 D(x): 0.7485 D(G(z)): 0.2  
763 / 0.1655  
[2/25][250/573] Loss_D: 0.9739 Loss_G: 1.8851 D(x): 0.7377 D(G(z)): 0.4  
542 / 0.1742  
[2/25][260/573] Loss_D: 0.8137 Loss_G: 1.9337 D(x): 0.7069 D(G(z)): 0.3  
399 / 0.1682  
[2/25][270/573] Loss_D: 0.8028 Loss_G: 2.2489 D(x): 0.7797 D(G(z)): 0.4  
034 / 0.1199  
[2/25][280/573] Loss_D: 0.8809 Loss_G: 1.9383 D(x): 0.7126 D(G(z)): 0.3  
901 / 0.1652  
[2/25][290/573] Loss_D: 1.1170 Loss_G: 1.3849 D(x): 0.4804 D(G(z)): 0.2
```

554 / 0.2825
[2/25][300/573] Loss_D: 1.0534 Loss_G: 1.3510 D(x): 0.5395 D(G(z)): 0.3
129 / 0.2875
[2/25][310/573] Loss_D: 1.3587 Loss_G: 0.2721 D(x): 0.3544 D(G(z)): 0.1
823 / 0.7782
[2/25][320/573] Loss_D: 0.9306 Loss_G: 2.2718 D(x): 0.6808 D(G(z)): 0.3
778 / 0.1322
[2/25][330/573] Loss_D: 1.1874 Loss_G: 1.4747 D(x): 0.5987 D(G(z)): 0.4
333 / 0.2600
[2/25][340/573] Loss_D: 1.0544 Loss_G: 0.9827 D(x): 0.5277 D(G(z)): 0.2
750 / 0.4181
[2/25][350/573] Loss_D: 0.9019 Loss_G: 1.5484 D(x): 0.5446 D(G(z)): 0.2
145 / 0.2461
[2/25][360/573] Loss_D: 0.9084 Loss_G: 2.1335 D(x): 0.7071 D(G(z)): 0.3
904 / 0.1448
[2/25][370/573] Loss_D: 1.0471 Loss_G: 1.6284 D(x): 0.6217 D(G(z)): 0.3
953 / 0.2227
[2/25][380/573] Loss_D: 0.7537 Loss_G: 2.0540 D(x): 0.6934 D(G(z)): 0.2
876 / 0.1518
[2/25][390/573] Loss_D: 1.0402 Loss_G: 1.1731 D(x): 0.4652 D(G(z)): 0.1
740 / 0.3472
[2/25][400/573] Loss_D: 0.8464 Loss_G: 2.1662 D(x): 0.7398 D(G(z)): 0.3
888 / 0.1377
[2/25][410/573] Loss_D: 0.8179 Loss_G: 2.0724 D(x): 0.7107 D(G(z)): 0.3
422 / 0.1575
[2/25][420/573] Loss_D: 0.8536 Loss_G: 1.5867 D(x): 0.6174 D(G(z)): 0.2
667 / 0.2392
[2/25][430/573] Loss_D: 0.7953 Loss_G: 2.0140 D(x): 0.8053 D(G(z)): 0.4
078 / 0.1584
[2/25][440/573] Loss_D: 1.4250 Loss_G: 2.3080 D(x): 0.6605 D(G(z)): 0.5
851 / 0.1386
[2/25][450/573] Loss_D: 1.0665 Loss_G: 2.1244 D(x): 0.7483 D(G(z)): 0.4
709 / 0.1449
[2/25][460/573] Loss_D: 1.0060 Loss_G: 3.1127 D(x): 0.7244 D(G(z)): 0.4
432 / 0.0617
[2/25][470/573] Loss_D: 0.8389 Loss_G: 1.5851 D(x): 0.6052 D(G(z)): 0.2
394 / 0.2351
[2/25][480/573] Loss_D: 0.9717 Loss_G: 1.6541 D(x): 0.6237 D(G(z)): 0.3
356 / 0.2327
[2/25][490/573] Loss_D: 1.0046 Loss_G: 2.3370 D(x): 0.6693 D(G(z)): 0.4
157 / 0.1219
[2/25][500/573] Loss_D: 1.1946 Loss_G: 0.7108 D(x): 0.4858 D(G(z)): 0.3
074 / 0.5133
[2/25][510/573] Loss_D: 0.9005 Loss_G: 1.8629 D(x): 0.8008 D(G(z)): 0.4
608 / 0.1802
[2/25][520/573] Loss_D: 0.9811 Loss_G: 1.8091 D(x): 0.5679 D(G(z)): 0.2
880 / 0.1930
[2/25][530/573] Loss_D: 0.8668 Loss_G: 1.6511 D(x): 0.6900 D(G(z)): 0.3
619 / 0.2215
[2/25][540/573] Loss_D: 0.6839 Loss_G: 2.2262 D(x): 0.7703 D(G(z)): 0.3
157 / 0.1233
[2/25][550/573] Loss_D: 0.7742 Loss_G: 1.3505 D(x): 0.6079 D(G(z)): 0.1
973 / 0.2978
[2/25][560/573] Loss_D: 1.4312 Loss_G: 1.1430 D(x): 0.4326 D(G(z)): 0.2
037 / 0.3774
[2/25][570/573] Loss_D: 0.8645 Loss_G: 1.5579 D(x): 0.5811 D(G(z)): 0.2
027 / 0.2466

[3/25] [0/573] Loss_D: 0.5567 Loss_G: 2.1416 D(x): 0.7601 D(G(z)): 0.225
3 / 0.1388



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[3/25][10/573] Loss_D: 0.6693 Loss_G: 1.5807 D(x): 0.6847 D(G(z)): 0.22  
08 / 0.2373  
[3/25][20/573] Loss_D: 0.6206 Loss_G: 1.7400 D(x): 0.6856 D(G(z)): 0.17  
98 / 0.2143  
[3/25][30/573] Loss_D: 0.7321 Loss_G: 1.6783 D(x): 0.6827 D(G(z)): 0.25  
64 / 0.2149  
[3/25][40/573] Loss_D: 0.5956 Loss_G: 2.5483 D(x): 0.7985 D(G(z)): 0.28  
68 / 0.0927  
[3/25][50/573] Loss_D: 2.4233 Loss_G: 3.4679 D(x): 0.8984 D(G(z)): 0.86  
47 / 0.0481  
[3/25][60/573] Loss_D: 1.2260 Loss_G: 2.3691 D(x): 0.6478 D(G(z)): 0.49  
35 / 0.1366  
[3/25][70/573] Loss_D: 0.6639 Loss_G: 2.4380 D(x): 0.8634 D(G(z)): 0.37  
19 / 0.1152  
[3/25][80/573] Loss_D: 0.8331 Loss_G: 1.8624 D(x): 0.7361 D(G(z)): 0.38  
24 / 0.1844  
[3/25][90/573] Loss_D: 0.8992 Loss_G: 1.4885 D(x): 0.5590 D(G(z)): 0.18  
03 / 0.2638  
[3/25][100/573] Loss_D: 0.8438 Loss_G: 1.7299 D(x): 0.5336 D(G(z)): 0.1  
182 / 0.2180  
[3/25][110/573] Loss_D: 0.5559 Loss_G: 2.2145 D(x): 0.7984 D(G(z)): 0.2  
561 / 0.1393  
[3/25][120/573] Loss_D: 0.6248 Loss_G: 1.9757 D(x): 0.6928 D(G(z)): 0.1  
962 / 0.1754  
[3/25][130/573] Loss_D: 0.8578 Loss_G: 1.6111 D(x): 0.6110 D(G(z)): 0.2  
620 / 0.2337  
[3/25][140/573] Loss_D: 0.4920 Loss_G: 2.0498 D(x): 0.7398 D(G(z)): 0.1  
558 / 0.1557  
[3/25][150/573] Loss_D: 0.7487 Loss_G: 1.6539 D(x): 0.6795 D(G(z)): 0.2  
615 / 0.2299  
[3/25][160/573] Loss_D: 0.9453 Loss_G: 1.3338 D(x): 0.6022 D(G(z)): 0.3  
032 / 0.2892  
[3/25][170/573] Loss_D: 0.5799 Loss_G: 1.8639 D(x): 0.6851 D(G(z)): 0.1  
539 / 0.1783  
[3/25][180/573] Loss_D: 0.4702 Loss_G: 2.0362 D(x): 0.7299 D(G(z)): 0.1  
167 / 0.1595  
[3/25][190/573] Loss_D: 0.4445 Loss_G: 2.2861 D(x): 0.7551 D(G(z)): 0.1  
269 / 0.1250  
[3/25][200/573] Loss_D: 0.4026 Loss_G: 2.4548 D(x): 0.8077 D(G(z)): 0.1  
407 / 0.1115  
[3/25][210/573] Loss_D: 1.3607 Loss_G: 5.0571 D(x): 0.9275 D(G(z)): 0.6  
398 / 0.0096  
[3/25][220/573] Loss_D: 0.8909 Loss_G: 1.9441 D(x): 0.7101 D(G(z)): 0.3  
804 / 0.1719  
[3/25][230/573] Loss_D: 0.8174 Loss_G: 1.1958 D(x): 0.5365 D(G(z)): 0.1  
017 / 0.3548  
[3/25][240/573] Loss_D: 0.7445 Loss_G: 2.2431 D(x): 0.7758 D(G(z)): 0.3  
522 / 0.1361  
[3/25][250/573] Loss_D: 0.6382 Loss_G: 2.3506 D(x): 0.8419 D(G(z)): 0.3  
426 / 0.1168  
[3/25][260/573] Loss_D: 0.5557 Loss_G: 1.6977 D(x): 0.7522 D(G(z)): 0.2  
076 / 0.2306  
[3/25][270/573] Loss_D: 0.6279 Loss_G: 2.0512 D(x): 0.7257 D(G(z)): 0.2  
342 / 0.1517  
[3/25][280/573] Loss_D: 0.7035 Loss_G: 1.5648 D(x): 0.6525 D(G(z)): 0.2  
041 / 0.2537  
[3/25][290/573] Loss_D: 0.5302 Loss_G: 1.6463 D(x): 0.7330 D(G(z)): 0.1
```

763 / 0.2192
[3/25][300/573] Loss_D: 0.4954 Loss_G: 2.2745 D(x): 0.7878 D(G(z)): 0.2045 / 0.1199
[3/25][310/573] Loss_D: 0.7013 Loss_G: 1.2059 D(x): 0.5992 D(G(z)): 0.1177 / 0.3344
[3/25][320/573] Loss_D: 1.4078 Loss_G: 2.2993 D(x): 0.7738 D(G(z)): 0.6060 / 0.1467
[3/25][330/573] Loss_D: 0.6486 Loss_G: 2.2827 D(x): 0.8295 D(G(z)): 0.3435 / 0.1246
[3/25][340/573] Loss_D: 0.6293 Loss_G: 2.2684 D(x): 0.7440 D(G(z)): 0.2560 / 0.1302
[3/25][350/573] Loss_D: 0.5292 Loss_G: 2.0527 D(x): 0.7483 D(G(z)): 0.1941 / 0.1517
[3/25][360/573] Loss_D: 0.4720 Loss_G: 2.0396 D(x): 0.8114 D(G(z)): 0.2116 / 0.1534
[3/25][370/573] Loss_D: 0.5407 Loss_G: 2.0244 D(x): 0.7856 D(G(z)): 0.2373 / 0.1618
[3/25][380/573] Loss_D: 0.5168 Loss_G: 1.9863 D(x): 0.8146 D(G(z)): 0.2473 / 0.1681
[3/25][390/573] Loss_D: 0.9058 Loss_G: 2.8674 D(x): 0.8866 D(G(z)): 0.5001 / 0.0797
[3/25][400/573] Loss_D: 0.5952 Loss_G: 1.5747 D(x): 0.6592 D(G(z)): 0.1288 / 0.2421
[3/25][410/573] Loss_D: 0.6505 Loss_G: 2.2866 D(x): 0.8506 D(G(z)): 0.3619 / 0.1240
[3/25][420/573] Loss_D: 0.5289 Loss_G: 2.2025 D(x): 0.8127 D(G(z)): 0.2531 / 0.1363
[3/25][430/573] Loss_D: 0.5069 Loss_G: 2.4983 D(x): 0.7730 D(G(z)): 0.1978 / 0.1084
[3/25][440/573] Loss_D: 0.5643 Loss_G: 1.8457 D(x): 0.7725 D(G(z)): 0.2364 / 0.2012
[3/25][450/573] Loss_D: 0.8743 Loss_G: 2.1732 D(x): 0.8168 D(G(z)): 0.4285 / 0.1482
[3/25][460/573] Loss_D: 0.6583 Loss_G: 2.2716 D(x): 0.8455 D(G(z)): 0.3535 / 0.1385
[3/25][470/573] Loss_D: 0.7157 Loss_G: 1.3952 D(x): 0.5976 D(G(z)): 0.1167 / 0.2851
[3/25][480/573] Loss_D: 0.6252 Loss_G: 1.5734 D(x): 0.6412 D(G(z)): 0.1341 / 0.2579
[3/25][490/573] Loss_D: 0.5764 Loss_G: 1.7491 D(x): 0.7188 D(G(z)): 0.1861 / 0.2185
[3/25][500/573] Loss_D: 0.5643 Loss_G: 1.6277 D(x): 0.6553 D(G(z)): 0.0923 / 0.2363
[3/25][510/573] Loss_D: 0.7794 Loss_G: 1.2598 D(x): 0.5482 D(G(z)): 0.0900 / 0.3576
[3/25][520/573] Loss_D: 0.8866 Loss_G: 3.9793 D(x): 0.9034 D(G(z)): 0.5091 / 0.0252
[3/25][530/573] Loss_D: 0.7806 Loss_G: 2.0076 D(x): 0.6810 D(G(z)): 0.2705 / 0.1922
[3/25][540/573] Loss_D: 0.8932 Loss_G: 2.0053 D(x): 0.7998 D(G(z)): 0.4267 / 0.1913
[3/25][550/573] Loss_D: 1.5950 Loss_G: 0.4233 D(x): 0.2772 D(G(z)): 0.0343 / 0.6758
[3/25][560/573] Loss_D: 0.5758 Loss_G: 1.7209 D(x): 0.7150 D(G(z)): 0.1812 / 0.2143
[3/25][570/573] Loss_D: 0.5180 Loss_G: 2.0958 D(x): 0.8309 D(G(z)): 0.2622 / 0.1502

[4 / 25] [0 / 573] Loss_D: 0.3930 Loss_G: 2.2182 D(x): 0.7819 D(G(z)): 0.120
2 / 0.1283



```
[4/25][10/573] Loss_D: 0.4916 Loss_G: 2.0317 D(x): 0.8037 D(G(z)): 0.21  
90 / 0.1607  
[4/25][20/573] Loss_D: 0.5327 Loss_G: 1.7264 D(x): 0.7055 D(G(z)): 0.13  
18 / 0.2172  
[4/25][30/573] Loss_D: 0.5123 Loss_G: 1.8157 D(x): 0.6814 D(G(z)): 0.09  
58 / 0.2033  
[4/25][40/573] Loss_D: 0.5314 Loss_G: 2.2454 D(x): 0.7442 D(G(z)): 0.16  
73 / 0.1479  
[4/25][50/573] Loss_D: 0.4505 Loss_G: 1.8704 D(x): 0.7775 D(G(z)): 0.15  
88 / 0.1849  
[4/25][60/573] Loss_D: 0.6696 Loss_G: 2.4566 D(x): 0.8722 D(G(z)): 0.36  
90 / 0.1092  
[4/25][70/573] Loss_D: 0.5493 Loss_G: 1.8387 D(x): 0.6880 D(G(z)): 0.12  
19 / 0.2065  
[4/25][80/573] Loss_D: 1.2761 Loss_G: 1.6064 D(x): 0.4467 D(G(z)): 0.10  
78 / 0.2603  
[4/25][90/573] Loss_D: 0.5084 Loss_G: 1.9118 D(x): 0.7474 D(G(z)): 0.16  
82 / 0.2012  
[4/25][100/573] Loss_D: 0.5710 Loss_G: 2.8776 D(x): 0.8576 D(G(z)): 0.3  
105 / 0.0750  
[4/25][110/573] Loss_D: 0.6032 Loss_G: 2.8651 D(x): 0.8877 D(G(z)): 0.3  
587 / 0.0783  
[4/25][120/573] Loss_D: 0.4597 Loss_G: 2.0612 D(x): 0.7684 D(G(z)): 0.1  
598 / 0.1491  
[4/25][130/573] Loss_D: 0.4326 Loss_G: 2.1513 D(x): 0.8021 D(G(z)): 0.1  
738 / 0.1395  
[4/25][140/573] Loss_D: 0.4576 Loss_G: 2.5511 D(x): 0.9005 D(G(z)): 0.2  
768 / 0.0995  
[4/25][150/573] Loss_D: 0.4901 Loss_G: 2.0754 D(x): 0.7327 D(G(z)): 0.1  
328 / 0.1560  
[4/25][160/573] Loss_D: 0.6907 Loss_G: 1.2870 D(x): 0.6424 D(G(z)): 0.1  
249 / 0.3740  
[4/25][170/573] Loss_D: 1.1473 Loss_G: 3.7496 D(x): 0.9537 D(G(z)): 0.6  
020 / 0.0330  
[4/25][180/573] Loss_D: 0.5737 Loss_G: 1.6820 D(x): 0.6837 D(G(z)): 0.1  
446 / 0.2244  
[4/25][190/573] Loss_D: 0.6455 Loss_G: 1.5485 D(x): 0.6451 D(G(z)): 0.1  
460 / 0.2555  
[4/25][200/573] Loss_D: 0.3293 Loss_G: 2.3869 D(x): 0.8482 D(G(z)): 0.1  
389 / 0.1152  
[4/25][210/573] Loss_D: 0.5511 Loss_G: 2.9745 D(x): 0.8810 D(G(z)): 0.3  
235 / 0.0645  
[4/25][220/573] Loss_D: 0.6049 Loss_G: 1.6918 D(x): 0.6157 D(G(z)): 0.0  
550 / 0.2234  
[4/25][230/573] Loss_D: 0.4865 Loss_G: 2.4950 D(x): 0.9088 D(G(z)): 0.3  
051 / 0.1003  
[4/25][240/573] Loss_D: 1.0329 Loss_G: 4.8392 D(x): 0.9250 D(G(z)): 0.5  
599 / 0.0124  
[4/25][250/573] Loss_D: 0.7046 Loss_G: 2.3847 D(x): 0.7415 D(G(z)): 0.2  
761 / 0.1319  
[4/25][260/573] Loss_D: 0.5327 Loss_G: 1.8375 D(x): 0.7547 D(G(z)): 0.2  
011 / 0.1864  
[4/25][270/573] Loss_D: 0.5075 Loss_G: 1.7144 D(x): 0.7154 D(G(z)): 0.1  
329 / 0.2120  
[4/25][280/573] Loss_D: 0.5492 Loss_G: 2.3527 D(x): 0.8004 D(G(z)): 0.2  
457 / 0.1170  
[4/25][290/573] Loss_D: 0.5390 Loss_G: 1.9517 D(x): 0.6907 D(G(z)): 0.1
```

```
257 / 0.1722
[4/25][300/573] Loss_D: 0.7658 Loss_G: 1.3477 D(x): 0.5586 D(G(z)): 0.0
847 / 0.2976
[4/25][310/573] Loss_D: 0.4761 Loss_G: 1.9470 D(x): 0.7795 D(G(z)): 0.1
866 / 0.1771
[4/25][320/573] Loss_D: 0.9078 Loss_G: 1.5254 D(x): 0.5821 D(G(z)): 0.2
175 / 0.2693
[4/25][330/573] Loss_D: 0.6720 Loss_G: 2.2688 D(x): 0.7732 D(G(z)): 0.2
895 / 0.1575
[4/25][340/573] Loss_D: 0.5973 Loss_G: 2.4783 D(x): 0.8853 D(G(z)): 0.3
501 / 0.1015
[4/25][350/573] Loss_D: 0.4692 Loss_G: 1.7475 D(x): 0.7548 D(G(z)): 0.1
481 / 0.2304
[4/25][360/573] Loss_D: 0.4551 Loss_G: 2.1136 D(x): 0.7637 D(G(z)): 0.1
342 / 0.1466
[4/25][370/573] Loss_D: 0.4409 Loss_G: 2.8750 D(x): 0.8789 D(G(z)): 0.2
536 / 0.0693
[4/25][380/573] Loss_D: 0.4858 Loss_G: 1.8296 D(x): 0.7018 D(G(z)): 0.0
917 / 0.1945
[4/25][390/573] Loss_D: 0.7066 Loss_G: 1.2320 D(x): 0.5946 D(G(z)): 0.1
062 / 0.3360
[4/25][400/573] Loss_D: 0.4040 Loss_G: 1.9418 D(x): 0.7940 D(G(z)): 0.1
433 / 0.1723
[4/25][410/573] Loss_D: 1.0578 Loss_G: 0.8557 D(x): 0.4137 D(G(z)): 0.0
439 / 0.4664
[4/25][420/573] Loss_D: 0.5670 Loss_G: 1.7422 D(x): 0.7460 D(G(z)): 0.1
775 / 0.2389
[4/25][430/573] Loss_D: 0.5093 Loss_G: 2.5108 D(x): 0.8327 D(G(z)): 0.2
577 / 0.1003
[4/25][440/573] Loss_D: 0.4406 Loss_G: 2.7130 D(x): 0.8406 D(G(z)): 0.2
120 / 0.0849
[4/25][450/573] Loss_D: 0.4889 Loss_G: 2.1709 D(x): 0.7809 D(G(z)): 0.1
904 / 0.1462
[4/25][460/573] Loss_D: 1.1404 Loss_G: 0.9811 D(x): 0.4116 D(G(z)): 0.0
857 / 0.4800
[4/25][470/573] Loss_D: 0.7839 Loss_G: 0.9917 D(x): 0.5427 D(G(z)): 0.0
928 / 0.4439
[4/25][480/573] Loss_D: 0.7047 Loss_G: 1.7607 D(x): 0.6224 D(G(z)): 0.1
348 / 0.2183
[4/25][490/573] Loss_D: 0.4513 Loss_G: 2.4858 D(x): 0.8148 D(G(z)): 0.2
020 / 0.1025
[4/25][500/573] Loss_D: 0.7541 Loss_G: 1.4324 D(x): 0.5762 D(G(z)): 0.0
985 / 0.2997
[4/25][510/573] Loss_D: 0.5528 Loss_G: 1.7638 D(x): 0.7147 D(G(z)): 0.1
500 / 0.2055
[4/25][520/573] Loss_D: 0.5035 Loss_G: 2.2562 D(x): 0.8187 D(G(z)): 0.2
424 / 0.1301
[4/25][530/573] Loss_D: 0.5226 Loss_G: 2.3124 D(x): 0.7351 D(G(z)): 0.1
589 / 0.1402
[4/25][540/573] Loss_D: 0.4996 Loss_G: 2.6144 D(x): 0.8447 D(G(z)): 0.2
646 / 0.0918
[4/25][550/573] Loss_D: 0.3712 Loss_G: 2.5806 D(x): 0.8941 D(G(z)): 0.2
168 / 0.0958
[4/25][560/573] Loss_D: 1.3293 Loss_G: 3.3334 D(x): 0.9556 D(G(z)): 0.6
566 / 0.0547
[4/25][570/573] Loss_D: 1.2299 Loss_G: 0.3685 D(x): 0.3564 D(G(z)): 0.0
618 / 0.7295
```

[5/25] [0/573] Loss_D: 1.5173 Loss_G: 0.4832 D(x): 0.2708 D(G(z)): 0.034
4 / 0.6619



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[5/25][10/573] Loss_D: 0.7034 Loss_G: 1.6544 D(x): 0.5995 D(G(z)): 0.12  
84 / 0.2552  
[5/25][20/573] Loss_D: 0.6154 Loss_G: 1.8273 D(x): 0.7162 D(G(z)): 0.22  
01 / 0.1913  
[5/25][30/573] Loss_D: 0.6356 Loss_G: 1.4053 D(x): 0.6493 D(G(z)): 0.15  
30 / 0.2947  
[5/25][40/573] Loss_D: 0.4685 Loss_G: 2.0555 D(x): 0.8126 D(G(z)): 0.20  
93 / 0.1588  
[5/25][50/573] Loss_D: 0.6128 Loss_G: 2.0858 D(x): 0.7884 D(G(z)): 0.28  
93 / 0.1512  
[5/25][60/573] Loss_D: 0.5074 Loss_G: 1.4635 D(x): 0.7078 D(G(z)): 0.12  
16 / 0.2707  
[5/25][70/573] Loss_D: 0.5035 Loss_G: 2.1814 D(x): 0.7707 D(G(z)): 0.18  
84 / 0.1444  
[5/25][80/573] Loss_D: 0.5457 Loss_G: 2.5547 D(x): 0.8549 D(G(z)): 0.29  
93 / 0.0994  
[5/25][90/573] Loss_D: 0.7467 Loss_G: 1.1549 D(x): 0.5365 D(G(z)): 0.05  
81 / 0.3705  
[5/25][100/573] Loss_D: 0.6982 Loss_G: 1.3786 D(x): 0.6011 D(G(z)): 0.1  
157 / 0.2897  
[5/25][110/573] Loss_D: 0.6123 Loss_G: 0.7964 D(x): 0.6369 D(G(z)): 0.1  
111 / 0.4938  
[5/25][120/573] Loss_D: 0.5822 Loss_G: 1.7570 D(x): 0.6347 D(G(z)): 0.0  
803 / 0.2249  
[5/25][130/573] Loss_D: 0.3338 Loss_G: 2.2062 D(x): 0.8818 D(G(z)): 0.1  
800 / 0.1347  
[5/25][140/573] Loss_D: 0.5578 Loss_G: 1.6741 D(x): 0.6356 D(G(z)): 0.0  
618 / 0.2308  
[5/25][150/573] Loss_D: 0.4559 Loss_G: 1.9121 D(x): 0.7505 D(G(z)): 0.1  
315 / 0.1813  
[5/25][160/573] Loss_D: 0.7499 Loss_G: 3.7312 D(x): 0.9461 D(G(z)): 0.4  
542 / 0.0357  
[5/25][170/573] Loss_D: 1.1369 Loss_G: 0.4999 D(x): 0.4112 D(G(z)): 0.0  
995 / 0.6687  
[5/25][180/573] Loss_D: 0.9301 Loss_G: 3.0445 D(x): 0.8931 D(G(z)): 0.5  
059 / 0.0700  
[5/25][190/573] Loss_D: 0.8892 Loss_G: 0.9089 D(x): 0.4963 D(G(z)): 0.1  
007 / 0.4669  
[5/25][200/573] Loss_D: 0.7875 Loss_G: 1.5567 D(x): 0.5746 D(G(z)): 0.1  
487 / 0.2521  
[5/25][210/573] Loss_D: 0.8876 Loss_G: 2.5980 D(x): 0.8618 D(G(z)): 0.4  
836 / 0.0952  
[5/25][220/573] Loss_D: 0.5434 Loss_G: 1.7331 D(x): 0.7559 D(G(z)): 0.2  
100 / 0.2025  
[5/25][230/573] Loss_D: 0.6309 Loss_G: 2.3070 D(x): 0.8271 D(G(z)): 0.3  
299 / 0.1201  
[5/25][240/573] Loss_D: 0.6786 Loss_G: 1.9316 D(x): 0.7592 D(G(z)): 0.3  
046 / 0.1788  
[5/25][250/573] Loss_D: 0.4852 Loss_G: 2.1710 D(x): 0.7592 D(G(z)): 0.1  
689 / 0.1380  
[5/25][260/573] Loss_D: 0.5148 Loss_G: 1.8482 D(x): 0.7192 D(G(z)): 0.1  
413 / 0.1909  
[5/25][270/573] Loss_D: 0.6070 Loss_G: 1.6706 D(x): 0.7520 D(G(z)): 0.2  
452 / 0.2206  
[5/25][280/573] Loss_D: 0.4153 Loss_G: 2.5114 D(x): 0.7144 D(G(z)): 0.0  
455 / 0.1019  
[5/25][290/573] Loss_D: 0.6036 Loss_G: 2.4381 D(x): 0.8035 D(G(z)): 0.2
```

862 / 0.1190
[5/25][300/573] Loss_D: 1.0827 Loss_G: 0.6043 D(x): 0.4363 D(G(z)): 0.1
209 / 0.5837
[5/25][310/573] Loss_D: 0.8290 Loss_G: 3.0623 D(x): 0.8607 D(G(z)): 0.4
539 / 0.0623
[5/25][320/573] Loss_D: 0.6231 Loss_G: 1.9320 D(x): 0.6518 D(G(z)): 0.1
343 / 0.1974
[5/25][330/573] Loss_D: 0.8062 Loss_G: 1.5019 D(x): 0.5206 D(G(z)): 0.0
745 / 0.2716
[5/25][340/573] Loss_D: 0.9041 Loss_G: 1.6449 D(x): 0.7474 D(G(z)): 0.3
859 / 0.2295
[5/25][350/573] Loss_D: 0.8319 Loss_G: 2.0425 D(x): 0.6626 D(G(z)): 0.2
942 / 0.1834
[5/25][360/573] Loss_D: 0.6187 Loss_G: 2.2122 D(x): 0.8101 D(G(z)): 0.3
113 / 0.1360
[5/25][370/573] Loss_D: 0.3132 Loss_G: 2.6476 D(x): 0.8412 D(G(z)): 0.1
203 / 0.0867
[5/25][380/573] Loss_D: 0.5186 Loss_G: 1.9351 D(x): 0.7766 D(G(z)): 0.2
131 / 0.1763
[5/25][390/573] Loss_D: 0.4916 Loss_G: 2.2014 D(x): 0.7930 D(G(z)): 0.2
096 / 0.1267
[5/25][400/573] Loss_D: 0.4801 Loss_G: 1.9309 D(x): 0.7622 D(G(z)): 0.1
679 / 0.1807
[5/25][410/573] Loss_D: 0.4132 Loss_G: 3.2374 D(x): 0.9033 D(G(z)): 0.2
555 / 0.0521
[5/25][420/573] Loss_D: 0.5190 Loss_G: 2.8374 D(x): 0.8446 D(G(z)): 0.2
756 / 0.0747
[5/25][430/573] Loss_D: 1.3999 Loss_G: 0.3390 D(x): 0.3612 D(G(z)): 0.1
071 / 0.7474
[5/25][440/573] Loss_D: 0.6215 Loss_G: 2.0593 D(x): 0.6403 D(G(z)): 0.1
243 / 0.1561
[5/25][450/573] Loss_D: 0.5555 Loss_G: 1.9306 D(x): 0.7247 D(G(z)): 0.1
807 / 0.1810
[5/25][460/573] Loss_D: 0.9381 Loss_G: 1.1512 D(x): 0.5197 D(G(z)): 0.1
353 / 0.3462
[5/25][470/573] Loss_D: 0.6237 Loss_G: 2.2008 D(x): 0.8470 D(G(z)): 0.3
385 / 0.1453
[5/25][480/573] Loss_D: 0.7650 Loss_G: 1.7259 D(x): 0.5891 D(G(z)): 0.1
558 / 0.2171
[5/25][490/573] Loss_D: 0.6787 Loss_G: 2.9508 D(x): 0.9051 D(G(z)): 0.4
091 / 0.0687
[5/25][500/573] Loss_D: 0.5178 Loss_G: 2.0466 D(x): 0.6985 D(G(z)): 0.1
172 / 0.1598
[5/25][510/573] Loss_D: 0.7253 Loss_G: 2.0762 D(x): 0.7819 D(G(z)): 0.3
511 / 0.1749
[5/25][520/573] Loss_D: 0.6655 Loss_G: 1.1179 D(x): 0.6640 D(G(z)): 0.1
825 / 0.3654
[5/25][530/573] Loss_D: 0.7457 Loss_G: 1.8309 D(x): 0.6880 D(G(z)): 0.2
742 / 0.1856
[5/25][540/573] Loss_D: 0.9669 Loss_G: 0.8623 D(x): 0.5592 D(G(z)): 0.2
731 / 0.4697
[5/25][550/573] Loss_D: 0.5878 Loss_G: 2.1122 D(x): 0.7594 D(G(z)): 0.2
436 / 0.1387
[5/25][560/573] Loss_D: 0.4416 Loss_G: 2.6188 D(x): 0.8031 D(G(z)): 0.1
727 / 0.0906
[5/25][570/573] Loss_D: 0.5311 Loss_G: 1.4210 D(x): 0.7020 D(G(z)): 0.1
409 / 0.2670

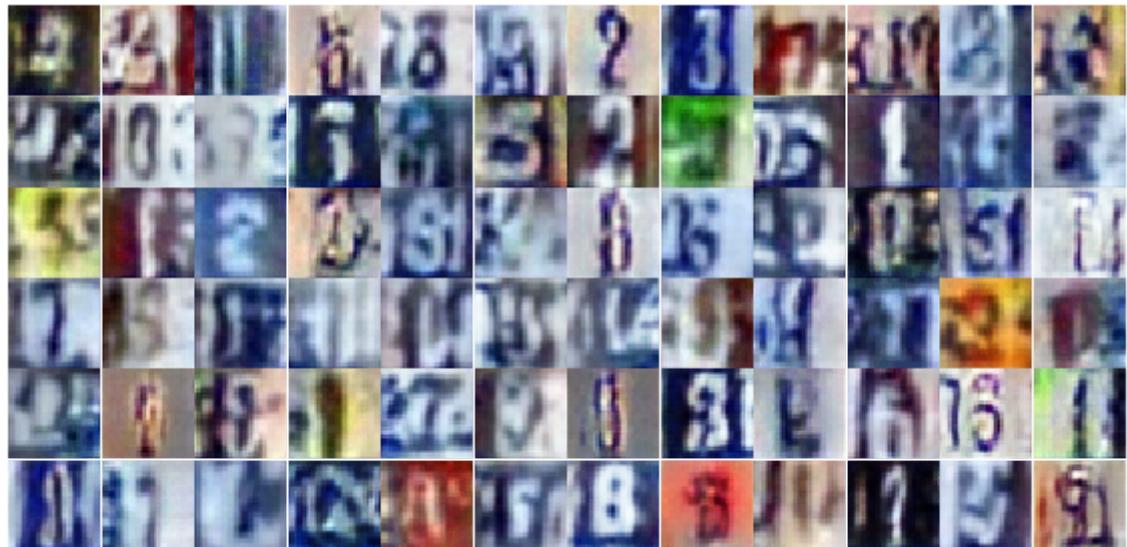
[6/25] [0/573] Loss_D: 0.4086 Loss_G: 2.4828 D(x): 0.7316 D(G(z)): 0.069
4 / 0.1097



```
[6/25][10/573] Loss_D: 1.3270 Loss_G: 4.2074 D(x): 0.9042 D(G(z)): 0.65  
57 / 0.0247  
[6/25][20/573] Loss_D: 0.9092 Loss_G: 1.4984 D(x): 0.4722 D(G(z)): 0.06  
94 / 0.2726  
[6/25][30/573] Loss_D: 0.6445 Loss_G: 2.1917 D(x): 0.8468 D(G(z)): 0.35  
75 / 0.1352  
[6/25][40/573] Loss_D: 0.8037 Loss_G: 1.6206 D(x): 0.6513 D(G(z)): 0.27  
77 / 0.2259  
[6/25][50/573] Loss_D: 0.5724 Loss_G: 2.1168 D(x): 0.7955 D(G(z)): 0.27  
50 / 0.1384  
[6/25][60/573] Loss_D: 0.7341 Loss_G: 2.9379 D(x): 0.8500 D(G(z)): 0.40  
24 / 0.0708  
[6/25][70/573] Loss_D: 0.8869 Loss_G: 1.5491 D(x): 0.4956 D(G(z)): 0.08  
94 / 0.2591  
[6/25][80/573] Loss_D: 0.5712 Loss_G: 1.9494 D(x): 0.7548 D(G(z)): 0.21  
81 / 0.1803  
[6/25][90/573] Loss_D: 0.7388 Loss_G: 1.5437 D(x): 0.5665 D(G(z)): 0.10  
07 / 0.2486  
[6/25][100/573] Loss_D: 0.5456 Loss_G: 2.5810 D(x): 0.8329 D(G(z)): 0.2  
836 / 0.0917  
[6/25][110/573] Loss_D: 1.1992 Loss_G: 3.2048 D(x): 0.9130 D(G(z)): 0.6  
396 / 0.0534  
[6/25][120/573] Loss_D: 0.7023 Loss_G: 1.4535 D(x): 0.7407 D(G(z)): 0.2  
996 / 0.2809  
[6/25][130/573] Loss_D: 0.5735 Loss_G: 1.9656 D(x): 0.7834 D(G(z)): 0.2  
561 / 0.1716  
[6/25][140/573] Loss_D: 0.5757 Loss_G: 2.4843 D(x): 0.8704 D(G(z)): 0.3  
301 / 0.1110  
[6/25][150/573] Loss_D: 0.7359 Loss_G: 1.4161 D(x): 0.5448 D(G(z)): 0.0  
814 / 0.3048  
[6/25][160/573] Loss_D: 0.6727 Loss_G: 2.7696 D(x): 0.8982 D(G(z)): 0.3  
968 / 0.0787  
[6/25][170/573] Loss_D: 0.4921 Loss_G: 2.6557 D(x): 0.8387 D(G(z)): 0.2  
538 / 0.0871  
[6/25][180/573] Loss_D: 0.8920 Loss_G: 1.2609 D(x): 0.4925 D(G(z)): 0.0  
761 / 0.3380  
[6/25][190/573] Loss_D: 1.0815 Loss_G: 3.3772 D(x): 0.9062 D(G(z)): 0.5  
880 / 0.0454  
[6/25][200/573] Loss_D: 0.6998 Loss_G: 1.5738 D(x): 0.6507 D(G(z)): 0.1  
944 / 0.2412  
[6/25][210/573] Loss_D: 0.9424 Loss_G: 3.0463 D(x): 0.9004 D(G(z)): 0.5  
133 / 0.0659  
[6/25][220/573] Loss_D: 0.8199 Loss_G: 2.5972 D(x): 0.9101 D(G(z)): 0.4  
841 / 0.0915  
[6/25][230/573] Loss_D: 0.5920 Loss_G: 1.6321 D(x): 0.7510 D(G(z)): 0.2  
391 / 0.2300  
[6/25][240/573] Loss_D: 0.7478 Loss_G: 3.2404 D(x): 0.8615 D(G(z)): 0.4  
226 / 0.0515  
[6/25][250/573] Loss_D: 0.6620 Loss_G: 1.4175 D(x): 0.6964 D(G(z)): 0.2  
281 / 0.2827  
[6/25][260/573] Loss_D: 0.7676 Loss_G: 1.2740 D(x): 0.5994 D(G(z)): 0.1  
802 / 0.3057  
[6/25][270/573] Loss_D: 0.5455 Loss_G: 1.9283 D(x): 0.7734 D(G(z)): 0.2  
291 / 0.1717  
[6/25][280/573] Loss_D: 0.7355 Loss_G: 1.6523 D(x): 0.6775 D(G(z)): 0.2  
553 / 0.2231  
[6/25][290/573] Loss_D: 0.6842 Loss_G: 1.6104 D(x): 0.6623 D(G(z)): 0.2
```

034 / 0.2369
[6/25][300/573] Loss_D: 0.6904 Loss_G: 3.0060 D(x): 0.8572 D(G(z)): 0.3
859 / 0.0599
[6/25][310/573] Loss_D: 1.3991 Loss_G: 2.2094 D(x): 0.7925 D(G(z)): 0.6
158 / 0.2199
[6/25][320/573] Loss_D: 0.4928 Loss_G: 1.5583 D(x): 0.7265 D(G(z)): 0.1
322 / 0.2454
[6/25][330/573] Loss_D: 0.7730 Loss_G: 2.9223 D(x): 0.7747 D(G(z)): 0.3
675 / 0.0743
[6/25][340/573] Loss_D: 0.6306 Loss_G: 2.4779 D(x): 0.8746 D(G(z)): 0.3
618 / 0.1094
[6/25][350/573] Loss_D: 0.7754 Loss_G: 2.1509 D(x): 0.8203 D(G(z)): 0.3
994 / 0.1406
[6/25][360/573] Loss_D: 0.8260 Loss_G: 1.5484 D(x): 0.5048 D(G(z)): 0.0
603 / 0.2573
[6/25][370/573] Loss_D: 0.3376 Loss_G: 2.2247 D(x): 0.8408 D(G(z)): 0.1
435 / 0.1250
[6/25][380/573] Loss_D: 0.4651 Loss_G: 2.2293 D(x): 0.8093 D(G(z)): 0.2
048 / 0.1246
[6/25][390/573] Loss_D: 0.5487 Loss_G: 2.5318 D(x): 0.8958 D(G(z)): 0.3
293 / 0.0983
[6/25][400/573] Loss_D: 0.7680 Loss_G: 1.1573 D(x): 0.6058 D(G(z)): 0.1
709 / 0.3635
[6/25][410/573] Loss_D: 0.5270 Loss_G: 2.0219 D(x): 0.6586 D(G(z)): 0.0
768 / 0.1718
[6/25][420/573] Loss_D: 0.5150 Loss_G: 1.9774 D(x): 0.7010 D(G(z)): 0.1
244 / 0.1632
[6/25][430/573] Loss_D: 0.4994 Loss_G: 2.0059 D(x): 0.7004 D(G(z)): 0.1
048 / 0.1604
[6/25][440/573] Loss_D: 0.6938 Loss_G: 1.6401 D(x): 0.7225 D(G(z)): 0.2
760 / 0.2259
[6/25][450/573] Loss_D: 0.5459 Loss_G: 2.2447 D(x): 0.7995 D(G(z)): 0.2
572 / 0.1331
[6/25][460/573] Loss_D: 0.4246 Loss_G: 2.9443 D(x): 0.9174 D(G(z)): 0.2
701 / 0.0657
[6/25][470/573] Loss_D: 0.6379 Loss_G: 2.7844 D(x): 0.8953 D(G(z)): 0.3
838 / 0.0788
[6/25][480/573] Loss_D: 1.7229 Loss_G: 0.2377 D(x): 0.2347 D(G(z)): 0.0
136 / 0.8226
[6/25][490/573] Loss_D: 1.4508 Loss_G: 1.5662 D(x): 0.4262 D(G(z)): 0.1
667 / 0.2775
[6/25][500/573] Loss_D: 1.0600 Loss_G: 2.8127 D(x): 0.9065 D(G(z)): 0.5
662 / 0.0871
[6/25][510/573] Loss_D: 0.6280 Loss_G: 1.7575 D(x): 0.6766 D(G(z)): 0.1
819 / 0.2081
[6/25][520/573] Loss_D: 0.5037 Loss_G: 2.3027 D(x): 0.8565 D(G(z)): 0.2
772 / 0.1214
[6/25][530/573] Loss_D: 0.4457 Loss_G: 2.4682 D(x): 0.8794 D(G(z)): 0.2
496 / 0.1055
[6/25][540/573] Loss_D: 0.6629 Loss_G: 1.4005 D(x): 0.6351 D(G(z)): 0.1
602 / 0.2822
[6/25][550/573] Loss_D: 0.7038 Loss_G: 2.0347 D(x): 0.8671 D(G(z)): 0.3
979 / 0.1638
[6/25][560/573] Loss_D: 0.6933 Loss_G: 1.9722 D(x): 0.8423 D(G(z)): 0.3
827 / 0.1597
[6/25][570/573] Loss_D: 0.4901 Loss_G: 2.4948 D(x): 0.8127 D(G(z)): 0.2
258 / 0.1064

[7/25] [0/573] Loss_D: 0.9052 Loss_G: 2.8501 D(x): 0.9063 D(G(z)): 0.512
2 / 0.0738



```
[7/25][10/573] Loss_D: 0.6843 Loss_G: 1.6151 D(x): 0.6100 D(G(z)): 0.13  
43 / 0.2517  
[7/25][20/573] Loss_D: 0.6169 Loss_G: 1.6066 D(x): 0.6792 D(G(z)): 0.17  
56 / 0.2353  
[7/25][30/573] Loss_D: 0.4231 Loss_G: 2.4100 D(x): 0.9302 D(G(z)): 0.28  
07 / 0.1088  
[7/25][40/573] Loss_D: 0.4980 Loss_G: 2.3644 D(x): 0.8179 D(G(z)): 0.23  
64 / 0.1208  
[7/25][50/573] Loss_D: 0.6154 Loss_G: 3.1087 D(x): 0.9472 D(G(z)): 0.40  
30 / 0.0546  
[7/25][60/573] Loss_D: 0.5170 Loss_G: 1.9045 D(x): 0.7669 D(G(z)): 0.20  
29 / 0.1916  
[7/25][70/573] Loss_D: 0.3857 Loss_G: 1.7616 D(x): 0.8343 D(G(z)): 0.17  
33 / 0.1960  
[7/25][80/573] Loss_D: 0.5608 Loss_G: 1.8867 D(x): 0.7638 D(G(z)): 0.23  
34 / 0.1812  
[7/25][90/573] Loss_D: 0.4488 Loss_G: 2.0438 D(x): 0.7855 D(G(z)): 0.17  
30 / 0.1514  
[7/25][100/573] Loss_D: 0.4114 Loss_G: 1.8828 D(x): 0.8671 D(G(z)): 0.2  
197 / 0.1858  
[7/25][110/573] Loss_D: 0.5224 Loss_G: 2.9190 D(x): 0.8412 D(G(z)): 0.2  
789 / 0.0671  
[7/25][120/573] Loss_D: 1.6037 Loss_G: 4.2107 D(x): 0.9130 D(G(z)): 0.7  
275 / 0.0262  
[7/25][130/573] Loss_D: 0.5665 Loss_G: 1.7377 D(x): 0.7125 D(G(z)): 0.1  
707 / 0.2107  
[7/25][140/573] Loss_D: 1.0017 Loss_G: 1.4181 D(x): 0.5204 D(G(z)): 0.2  
247 / 0.2839  
[7/25][150/573] Loss_D: 0.7540 Loss_G: 2.6131 D(x): 0.8088 D(G(z)): 0.3  
786 / 0.0961  
[7/25][160/573] Loss_D: 0.5340 Loss_G: 2.2189 D(x): 0.7150 D(G(z)): 0.1  
538 / 0.1410  
[7/25][170/573] Loss_D: 0.7343 Loss_G: 1.0661 D(x): 0.5734 D(G(z)): 0.0  
968 / 0.4054  
[7/25][180/573] Loss_D: 0.6338 Loss_G: 1.8773 D(x): 0.7157 D(G(z)): 0.2  
294 / 0.1805  
[7/25][190/573] Loss_D: 0.4499 Loss_G: 2.1592 D(x): 0.7480 D(G(z)): 0.1  
306 / 0.1477  
[7/25][200/573] Loss_D: 0.4901 Loss_G: 1.9801 D(x): 0.7752 D(G(z)): 0.1  
883 / 0.1723  
[7/25][210/573] Loss_D: 0.5326 Loss_G: 2.6168 D(x): 0.9159 D(G(z)): 0.3  
314 / 0.0959  
[7/25][220/573] Loss_D: 0.5189 Loss_G: 1.8581 D(x): 0.7808 D(G(z)): 0.2  
153 / 0.1819  
[7/25][230/573] Loss_D: 0.5384 Loss_G: 2.1724 D(x): 0.7576 D(G(z)): 0.1  
969 / 0.1408  
[7/25][240/573] Loss_D: 1.5344 Loss_G: 3.6644 D(x): 0.9110 D(G(z)): 0.6  
899 / 0.0500  
[7/25][250/573] Loss_D: 0.6261 Loss_G: 2.6591 D(x): 0.8011 D(G(z)): 0.3  
086 / 0.0930  
[7/25][260/573] Loss_D: 0.8532 Loss_G: 2.4250 D(x): 0.8021 D(G(z)): 0.4  
330 / 0.1109  
[7/25][270/573] Loss_D: 0.4775 Loss_G: 1.9628 D(x): 0.7941 D(G(z)): 0.2  
000 / 0.1658  
[7/25][280/573] Loss_D: 0.6816 Loss_G: 1.6144 D(x): 0.6494 D(G(z)): 0.1  
817 / 0.2451  
[7/25][290/573] Loss_D: 0.9325 Loss_G: 3.5451 D(x): 0.8892 D(G(z)): 0.5
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207 / 0.0392
[7/25][300/573] Loss_D: 0.5889 Loss_G: 1.5476 D(x): 0.6612 D(G(z)): 0.1
294 / 0.2775
[7/25][310/573] Loss_D: 0.4903 Loss_G: 1.6161 D(x): 0.7807 D(G(z)): 0.1
963 / 0.2408
[7/25][320/573] Loss_D: 0.4237 Loss_G: 1.8889 D(x): 0.7752 D(G(z)): 0.1
403 / 0.1879
[7/25][330/573] Loss_D: 0.6259 Loss_G: 1.9823 D(x): 0.7157 D(G(z)): 0.2
166 / 0.1876
[7/25][340/573] Loss_D: 0.3256 Loss_G: 2.6565 D(x): 0.9015 D(G(z)): 0.1
838 / 0.0990
[7/25][350/573] Loss_D: 0.4798 Loss_G: 2.3964 D(x): 0.7292 D(G(z)): 0.1
252 / 0.1143
[7/25][360/573] Loss_D: 0.7802 Loss_G: 1.1647 D(x): 0.5437 D(G(z)): 0.1
029 / 0.3587
[7/25][370/573] Loss_D: 0.5712 Loss_G: 1.5724 D(x): 0.7074 D(G(z)): 0.1
714 / 0.2635
[7/25][380/573] Loss_D: 0.9579 Loss_G: 1.1949 D(x): 0.4874 D(G(z)): 0.1
246 / 0.3627
[7/25][390/573] Loss_D: 0.5753 Loss_G: 2.2693 D(x): 0.8257 D(G(z)): 0.2
951 / 0.1272
[7/25][400/573] Loss_D: 0.7513 Loss_G: 1.3064 D(x): 0.5543 D(G(z)): 0.0
882 / 0.3160
[7/25][410/573] Loss_D: 0.7160 Loss_G: 1.4260 D(x): 0.5691 D(G(z)): 0.1
079 / 0.2712
[7/25][420/573] Loss_D: 0.5540 Loss_G: 3.1729 D(x): 0.8779 D(G(z)): 0.3
259 / 0.0537
[7/25][430/573] Loss_D: 1.4352 Loss_G: 0.6608 D(x): 0.3509 D(G(z)): 0.0
779 / 0.5632
[7/25][440/573] Loss_D: 0.6137 Loss_G: 3.2084 D(x): 0.8066 D(G(z)): 0.3
016 / 0.0582
[7/25][450/573] Loss_D: 0.3493 Loss_G: 2.5849 D(x): 0.8725 D(G(z)): 0.1
791 / 0.1006
[7/25][460/573] Loss_D: 0.5788 Loss_G: 1.5811 D(x): 0.6992 D(G(z)): 0.1
507 / 0.2604
[7/25][470/573] Loss_D: 0.9524 Loss_G: 1.2674 D(x): 0.4682 D(G(z)): 0.0
638 / 0.3219
[7/25][480/573] Loss_D: 0.6082 Loss_G: 1.4656 D(x): 0.6461 D(G(z)): 0.1
262 / 0.2750
[7/25][490/573] Loss_D: 1.5861 Loss_G: 3.0198 D(x): 0.9074 D(G(z)): 0.7
354 / 0.0776
[7/25][500/573] Loss_D: 0.5338 Loss_G: 2.5976 D(x): 0.9301 D(G(z)): 0.3
465 / 0.0918
[7/25][510/573] Loss_D: 1.1892 Loss_G: 2.8531 D(x): 0.9330 D(G(z)): 0.6
326 / 0.0841
[7/25][520/573] Loss_D: 0.4065 Loss_G: 2.6704 D(x): 0.7963 D(G(z)): 0.1
441 / 0.0893
[7/25][530/573] Loss_D: 0.5411 Loss_G: 1.8779 D(x): 0.7446 D(G(z)): 0.1
881 / 0.1887
[7/25][540/573] Loss_D: 0.6419 Loss_G: 1.7441 D(x): 0.6680 D(G(z)): 0.1
785 / 0.2099
[7/25][550/573] Loss_D: 0.3444 Loss_G: 2.2366 D(x): 0.8850 D(G(z)): 0.1
898 / 0.1267
[7/25][560/573] Loss_D: 0.4088 Loss_G: 2.1853 D(x): 0.8302 D(G(z)): 0.1
855 / 0.1422
[7/25][570/573] Loss_D: 0.7052 Loss_G: 2.6981 D(x): 0.8876 D(G(z)): 0.4
144 / 0.0895
```

[8/25] [0/573] Loss_D: 0.4601 Loss_G: 2.0300 D(x): 0.8507 D(G(z)): 0.234
1 / 0.1521



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[8/25][10/573] Loss_D: 0.4936 Loss_G: 2.0850 D(x): 0.7639 D(G(z)): 0.17  
93 / 0.1603  
[8/25][20/573] Loss_D: 0.6062 Loss_G: 1.4084 D(x): 0.6443 D(G(z)): 0.11  
70 / 0.2819  
[8/25][30/573] Loss_D: 0.9710 Loss_G: 2.8270 D(x): 0.8364 D(G(z)): 0.50  
11 / 0.0776  
[8/25][40/573] Loss_D: 2.4723 Loss_G: 0.0580 D(x): 0.1190 D(G(z)): 0.03  
43 / 0.9453  
[8/25][50/573] Loss_D: 1.1911 Loss_G: 1.4237 D(x): 0.3881 D(G(z)): 0.06  
06 / 0.3291  
[8/25][60/573] Loss_D: 0.7118 Loss_G: 1.9835 D(x): 0.7870 D(G(z)): 0.32  
80 / 0.1742  
[8/25][70/573] Loss_D: 0.8525 Loss_G: 1.0051 D(x): 0.5421 D(G(z)): 0.14  
56 / 0.4050  
[8/25][80/573] Loss_D: 0.6729 Loss_G: 2.5901 D(x): 0.8358 D(G(z)): 0.35  
95 / 0.0972  
[8/25][90/573] Loss_D: 0.5099 Loss_G: 1.6889 D(x): 0.7755 D(G(z)): 0.20  
14 / 0.2120  
[8/25][100/573] Loss_D: 0.6406 Loss_G: 1.5922 D(x): 0.6135 D(G(z)): 0.0  
928 / 0.2556  
[8/25][110/573] Loss_D: 0.5899 Loss_G: 1.8916 D(x): 0.7091 D(G(z)): 0.1  
924 / 0.1789  
[8/25][120/573] Loss_D: 0.4315 Loss_G: 2.4476 D(x): 0.7428 D(G(z)): 0.1  
013 / 0.1161  
[8/25][130/573] Loss_D: 0.6155 Loss_G: 1.4435 D(x): 0.6661 D(G(z)): 0.1  
567 / 0.2853  
[8/25][140/573] Loss_D: 0.3106 Loss_G: 2.6147 D(x): 0.8447 D(G(z)): 0.1  
213 / 0.0915  
[8/25][150/573] Loss_D: 0.6578 Loss_G: 1.8159 D(x): 0.6785 D(G(z)): 0.1  
983 / 0.2071  
[8/25][160/573] Loss_D: 0.3480 Loss_G: 2.5535 D(x): 0.8321 D(G(z)): 0.1  
412 / 0.0947  
[8/25][170/573] Loss_D: 0.3511 Loss_G: 2.3011 D(x): 0.7978 D(G(z)): 0.1  
016 / 0.1193  
[8/25][180/573] Loss_D: 0.3408 Loss_G: 2.5243 D(x): 0.8723 D(G(z)): 0.1  
748 / 0.0998  
[8/25][190/573] Loss_D: 0.5639 Loss_G: 2.4446 D(x): 0.8171 D(G(z)): 0.2  
870 / 0.1004  
[8/25][200/573] Loss_D: 0.6226 Loss_G: 2.3921 D(x): 0.7327 D(G(z)): 0.2  
394 / 0.1242  
[8/25][210/573] Loss_D: 0.5136 Loss_G: 1.6385 D(x): 0.7258 D(G(z)): 0.1  
554 / 0.2353  
[8/25][220/573] Loss_D: 0.4754 Loss_G: 1.9687 D(x): 0.7237 D(G(z)): 0.1  
179 / 0.1721  
[8/25][230/573] Loss_D: 1.0661 Loss_G: 2.7041 D(x): 0.8316 D(G(z)): 0.5  
104 / 0.0897  
[8/25][240/573] Loss_D: 0.7916 Loss_G: 3.8030 D(x): 0.8178 D(G(z)): 0.4  
118 / 0.0312  
[8/25][250/573] Loss_D: 0.4477 Loss_G: 2.3700 D(x): 0.8258 D(G(z)): 0.2  
036 / 0.1238  
[8/25][260/573] Loss_D: 0.5270 Loss_G: 1.8842 D(x): 0.7229 D(G(z)): 0.1  
610 / 0.1779  
[8/25][270/573] Loss_D: 0.6639 Loss_G: 2.5954 D(x): 0.8264 D(G(z)): 0.3  
543 / 0.0942  
[8/25][280/573] Loss_D: 0.6471 Loss_G: 1.2177 D(x): 0.6249 D(G(z)): 0.1  
210 / 0.3599  
[8/25][290/573] Loss_D: 0.4875 Loss_G: 2.0223 D(x): 0.7774 D(G(z)): 0.1
```

853 / 0.1692
[8/25][300/573] Loss_D: 0.3249 Loss_G: 2.4640 D(x): 0.8861 D(G(z)): 0.1
731 / 0.1058
[8/25][310/573] Loss_D: 0.5016 Loss_G: 1.9047 D(x): 0.6886 D(G(z)): 0.0
909 / 0.1985
[8/25][320/573] Loss_D: 0.5573 Loss_G: 1.8033 D(x): 0.7494 D(G(z)): 0.2
079 / 0.2113
[8/25][330/573] Loss_D: 0.4739 Loss_G: 2.1530 D(x): 0.7680 D(G(z)): 0.1
634 / 0.1506
[8/25][340/573] Loss_D: 0.4701 Loss_G: 3.1156 D(x): 0.9172 D(G(z)): 0.2
945 / 0.0551
[8/25][350/573] Loss_D: 0.8272 Loss_G: 1.2474 D(x): 0.5405 D(G(z)): 0.1
279 / 0.3504
[8/25][360/573] Loss_D: 1.2110 Loss_G: 0.2112 D(x): 0.3691 D(G(z)): 0.0
282 / 0.8292
[8/25][370/573] Loss_D: 0.9718 Loss_G: 1.9957 D(x): 0.5542 D(G(z)): 0.2
437 / 0.1867
[8/25][380/573] Loss_D: 0.8121 Loss_G: 1.2493 D(x): 0.5473 D(G(z)): 0.1
211 / 0.3427
[8/25][390/573] Loss_D: 0.8181 Loss_G: 1.7108 D(x): 0.7857 D(G(z)): 0.3
922 / 0.2636
[8/25][400/573] Loss_D: 0.6117 Loss_G: 1.9013 D(x): 0.6741 D(G(z)): 0.1
534 / 0.1822
[8/25][410/573] Loss_D: 0.5730 Loss_G: 2.5281 D(x): 0.8386 D(G(z)): 0.3
074 / 0.1039
[8/25][420/573] Loss_D: 0.5473 Loss_G: 2.5405 D(x): 0.8548 D(G(z)): 0.3
026 / 0.0992
[8/25][430/573] Loss_D: 0.5072 Loss_G: 2.1318 D(x): 0.8572 D(G(z)): 0.2
767 / 0.1488
[8/25][440/573] Loss_D: 0.8066 Loss_G: 2.2682 D(x): 0.7785 D(G(z)): 0.3
898 / 0.1421
[8/25][450/573] Loss_D: 0.5727 Loss_G: 2.5136 D(x): 0.8165 D(G(z)): 0.2
858 / 0.1018
[8/25][460/573] Loss_D: 0.6994 Loss_G: 1.0284 D(x): 0.5916 D(G(z)): 0.1
220 / 0.4130
[8/25][470/573] Loss_D: 0.8340 Loss_G: 2.6078 D(x): 0.8994 D(G(z)): 0.4
645 / 0.0891
[8/25][480/573] Loss_D: 0.3078 Loss_G: 2.5022 D(x): 0.8602 D(G(z)): 0.1
335 / 0.1058
[8/25][490/573] Loss_D: 0.3631 Loss_G: 2.1639 D(x): 0.8247 D(G(z)): 0.1
430 / 0.1442
[8/25][500/573] Loss_D: 0.4674 Loss_G: 3.0128 D(x): 0.9126 D(G(z)): 0.2
922 / 0.0646
[8/25][510/573] Loss_D: 1.1123 Loss_G: 1.3657 D(x): 0.4152 D(G(z)): 0.0
876 / 0.3069
[8/25][520/573] Loss_D: 0.6750 Loss_G: 1.5065 D(x): 0.6754 D(G(z)): 0.2
067 / 0.2829
[8/25][530/573] Loss_D: 0.8547 Loss_G: 2.5103 D(x): 0.9091 D(G(z)): 0.4
944 / 0.0973
[8/25][540/573] Loss_D: 0.5799 Loss_G: 2.3335 D(x): 0.8212 D(G(z)): 0.2
899 / 0.1305
[8/25][550/573] Loss_D: 0.6151 Loss_G: 3.3006 D(x): 0.8394 D(G(z)): 0.3
309 / 0.0553
[8/25][560/573] Loss_D: 0.4910 Loss_G: 2.4189 D(x): 0.7078 D(G(z)): 0.1
061 / 0.1181
[8/25][570/573] Loss_D: 0.5314 Loss_G: 2.7464 D(x): 0.8575 D(G(z)): 0.2
907 / 0.0881

[9/25] [0/573] Loss_D: 0.4996 Loss_G: 2.4994 D(x): 0.8572 D(G(z)): 0.273
1 / 0.0991



```
[9/25][10/573] Loss_D: 0.4797 Loss_G: 2.3677 D(x): 0.7348 D(G(z)): 0.13  
58 / 0.1239  
[9/25][20/573] Loss_D: 0.6442 Loss_G: 2.0236 D(x): 0.7123 D(G(z)): 0.22  
81 / 0.1686  
[9/25][30/573] Loss_D: 0.5210 Loss_G: 1.9492 D(x): 0.7434 D(G(z)): 0.17  
69 / 0.1918  
[9/25][40/573] Loss_D: 0.5003 Loss_G: 2.0535 D(x): 0.8159 D(G(z)): 0.22  
73 / 0.1590  
[9/25][50/573] Loss_D: 0.8879 Loss_G: 4.3458 D(x): 0.8601 D(G(z)): 0.48  
38 / 0.0246  
[9/25][60/573] Loss_D: 0.6019 Loss_G: 1.8493 D(x): 0.8369 D(G(z)): 0.32  
28 / 0.1985  
[9/25][70/573] Loss_D: 0.4446 Loss_G: 2.5396 D(x): 0.8019 D(G(z)): 0.17  
93 / 0.0997  
[9/25][80/573] Loss_D: 0.4716 Loss_G: 2.4562 D(x): 0.7596 D(G(z)): 0.15  
47 / 0.1221  
[9/25][90/573] Loss_D: 0.9030 Loss_G: 2.1514 D(x): 0.7196 D(G(z)): 0.38  
96 / 0.1643  
[9/25][100/573] Loss_D: 0.3729 Loss_G: 2.5636 D(x): 0.8905 D(G(z)): 0.2  
134 / 0.1034  
[9/25][110/573] Loss_D: 0.4701 Loss_G: 2.2037 D(x): 0.7432 D(G(z)): 0.1  
333 / 0.1383  
[9/25][120/573] Loss_D: 0.5926 Loss_G: 1.8972 D(x): 0.7362 D(G(z)): 0.2  
254 / 0.1858  
[9/25][130/573] Loss_D: 0.4639 Loss_G: 2.7747 D(x): 0.8028 D(G(z)): 0.1  
962 / 0.0791  
[9/25][140/573] Loss_D: 0.6131 Loss_G: 1.6630 D(x): 0.7051 D(G(z)): 0.1  
991 / 0.2475  
[9/25][150/573] Loss_D: 0.5528 Loss_G: 1.8985 D(x): 0.6363 D(G(z)): 0.0  
577 / 0.2072  
[9/25][160/573] Loss_D: 0.6154 Loss_G: 2.4722 D(x): 0.9104 D(G(z)): 0.3  
770 / 0.1034  
[9/25][170/573] Loss_D: 0.7301 Loss_G: 2.1693 D(x): 0.8222 D(G(z)): 0.3  
792 / 0.1442  
[9/25][180/573] Loss_D: 0.4499 Loss_G: 3.1027 D(x): 0.8765 D(G(z)): 0.2  
450 / 0.0561  
[9/25][190/573] Loss_D: 0.6344 Loss_G: 1.8093 D(x): 0.8269 D(G(z)): 0.3  
319 / 0.1968  
[9/25][200/573] Loss_D: 0.5364 Loss_G: 1.5097 D(x): 0.7163 D(G(z)): 0.1  
557 / 0.2649  
[9/25][210/573] Loss_D: 0.4194 Loss_G: 1.9402 D(x): 0.8317 D(G(z)): 0.1  
933 / 0.1845  
[9/25][220/573] Loss_D: 0.3964 Loss_G: 2.4455 D(x): 0.8678 D(G(z)): 0.2  
114 / 0.1069  
[9/25][230/573] Loss_D: 0.4390 Loss_G: 2.5856 D(x): 0.8757 D(G(z)): 0.2  
475 / 0.1011  
[9/25][240/573] Loss_D: 0.6889 Loss_G: 3.3384 D(x): 0.9242 D(G(z)): 0.4  
254 / 0.0492  
[9/25][250/573] Loss_D: 0.3797 Loss_G: 2.5864 D(x): 0.8482 D(G(z)): 0.1  
790 / 0.0894  
[9/25][260/573] Loss_D: 0.6387 Loss_G: 1.4425 D(x): 0.6203 D(G(z)): 0.1  
011 / 0.2866  
[9/25][270/573] Loss_D: 0.5306 Loss_G: 1.9993 D(x): 0.6628 D(G(z)): 0.0  
734 / 0.1625  
[9/25][280/573] Loss_D: 1.4315 Loss_G: 4.2959 D(x): 0.9757 D(G(z)): 0.7  
164 / 0.0238  
[9/25][290/573] Loss_D: 1.0397 Loss_G: 3.1814 D(x): 0.9426 D(G(z)): 0.5
```

784 / 0.0554
[9/25][300/573] Loss_D: 0.5620 Loss_G: 2.1406 D(x): 0.6623 D(G(z)): 0.1
021 / 0.1491
[9/25][310/573] Loss_D: 0.7252 Loss_G: 1.1491 D(x): 0.5668 D(G(z)): 0.1
057 / 0.3597
[9/25][320/573] Loss_D: 0.5169 Loss_G: 1.9742 D(x): 0.7319 D(G(z)): 0.1
495 / 0.1770
[9/25][330/573] Loss_D: 0.4267 Loss_G: 2.2300 D(x): 0.7977 D(G(z)): 0.1
615 / 0.1367
[9/25][340/573] Loss_D: 0.6596 Loss_G: 1.9676 D(x): 0.7736 D(G(z)): 0.3
023 / 0.1831
[9/25][350/573] Loss_D: 0.5490 Loss_G: 2.5685 D(x): 0.8943 D(G(z)): 0.3
334 / 0.0928
[9/25][360/573] Loss_D: 0.5421 Loss_G: 2.1139 D(x): 0.8547 D(G(z)): 0.3
013 / 0.1419
[9/25][370/573] Loss_D: 0.8352 Loss_G: 3.9785 D(x): 0.8871 D(G(z)): 0.4
860 / 0.0261
[9/25][380/573] Loss_D: 0.6994 Loss_G: 1.7992 D(x): 0.7253 D(G(z)): 0.2
702 / 0.2088
[9/25][390/573] Loss_D: 0.5335 Loss_G: 2.1256 D(x): 0.7630 D(G(z)): 0.2
028 / 0.1497
[9/25][400/573] Loss_D: 0.5545 Loss_G: 1.5478 D(x): 0.6489 D(G(z)): 0.0
757 / 0.2710
[9/25][410/573] Loss_D: 0.5755 Loss_G: 2.6882 D(x): 0.8762 D(G(z)): 0.3
354 / 0.0828
[9/25][420/573] Loss_D: 0.6331 Loss_G: 2.7034 D(x): 0.8994 D(G(z)): 0.3
874 / 0.0821
[9/25][430/573] Loss_D: 2.0599 Loss_G: 4.6152 D(x): 0.8924 D(G(z)): 0.8
039 / 0.0225
[9/25][440/573] Loss_D: 0.6830 Loss_G: 2.5418 D(x): 0.7919 D(G(z)): 0.3
300 / 0.1241
[9/25][450/573] Loss_D: 0.4044 Loss_G: 2.1437 D(x): 0.8387 D(G(z)): 0.1
827 / 0.1502
[9/25][460/573] Loss_D: 0.7924 Loss_G: 2.2859 D(x): 0.8310 D(G(z)): 0.4
126 / 0.1285
[9/25][470/573] Loss_D: 0.5129 Loss_G: 2.0857 D(x): 0.8165 D(G(z)): 0.2
407 / 0.1521
[9/25][480/573] Loss_D: 0.5857 Loss_G: 2.0142 D(x): 0.6558 D(G(z)): 0.1
139 / 0.1669
[9/25][490/573] Loss_D: 0.6300 Loss_G: 1.4522 D(x): 0.6983 D(G(z)): 0.2
035 / 0.2887
[9/25][500/573] Loss_D: 0.4249 Loss_G: 2.3016 D(x): 0.7997 D(G(z)): 0.1
663 / 0.1290
[9/25][510/573] Loss_D: 0.3836 Loss_G: 2.2921 D(x): 0.8476 D(G(z)): 0.1
807 / 0.1280
[9/25][520/573] Loss_D: 0.4807 Loss_G: 2.7058 D(x): 0.7322 D(G(z)): 0.1
233 / 0.0931
[9/25][530/573] Loss_D: 0.6851 Loss_G: 2.9063 D(x): 0.9682 D(G(z)): 0.4
444 / 0.0721
[9/25][540/573] Loss_D: 0.4881 Loss_G: 2.3234 D(x): 0.7850 D(G(z)): 0.1
931 / 0.1317
[9/25][550/573] Loss_D: 0.6112 Loss_G: 1.0502 D(x): 0.6757 D(G(z)): 0.1
615 / 0.3904
[9/25][560/573] Loss_D: 0.4144 Loss_G: 2.3559 D(x): 0.8004 D(G(z)): 0.1
561 / 0.1222
[9/25][570/573] Loss_D: 0.6307 Loss_G: 2.9422 D(x): 0.8132 D(G(z)): 0.3
216 / 0.0695

[10 / 25] [0 / 573] Loss_D: 1.7067 Loss_G: 4.6054 D(x): 0.9486 D(G(z)): 0.75
96 / 0.0173



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[10/25][10/573] Loss_D: 0.5869 Loss_G: 2.3306 D(x): 0.8376 D(G(z)): 0.3072 / 0.1332
[10/25][20/573] Loss_D: 0.6402 Loss_G: 2.3634 D(x): 0.9027 D(G(z)): 0.3484 / 0.1407
[10/25][30/573] Loss_D: 0.2952 Loss_G: 2.7648 D(x): 0.8956 D(G(z)): 0.1606 / 0.0797
[10/25][40/573] Loss_D: 0.4940 Loss_G: 2.0675 D(x): 0.8473 D(G(z)): 0.2614 / 0.1483
[10/25][50/573] Loss_D: 0.5797 Loss_G: 2.4151 D(x): 0.6282 D(G(z)): 0.0707 / 0.1300
[10/25][60/573] Loss_D: 0.4636 Loss_G: 2.0237 D(x): 0.7676 D(G(z)): 0.1626 / 0.1633
[10/25][70/573] Loss_D: 0.3312 Loss_G: 2.2528 D(x): 0.8328 D(G(z)): 0.1252 / 0.1336
[10/25][80/573] Loss_D: 0.7314 Loss_G: 2.7215 D(x): 0.8814 D(G(z)): 0.4248 / 0.0922
[10/25][90/573] Loss_D: 0.6423 Loss_G: 1.5528 D(x): 0.6257 D(G(z)): 0.1192 / 0.2715
[10/25][100/573] Loss_D: 0.6934 Loss_G: 2.9901 D(x): 0.8560 D(G(z)): 0.3817 / 0.0709
[10/25][110/573] Loss_D: 0.3639 Loss_G: 2.4147 D(x): 0.8404 D(G(z)): 0.1622 / 0.1072
[10/25][120/573] Loss_D: 0.6349 Loss_G: 2.4788 D(x): 0.8452 D(G(z)): 0.3443 / 0.1075
[10/25][130/573] Loss_D: 0.5331 Loss_G: 1.7224 D(x): 0.7371 D(G(z)): 0.1819 / 0.2182
[10/25][140/573] Loss_D: 0.7635 Loss_G: 2.0987 D(x): 0.7102 D(G(z)): 0.3018 / 0.1704
[10/25][150/573] Loss_D: 0.7447 Loss_G: 1.5924 D(x): 0.5631 D(G(z)): 0.1060 / 0.2614
[10/25][160/573] Loss_D: 0.8588 Loss_G: 0.9908 D(x): 0.5134 D(G(z)): 0.1001 / 0.4092
[10/25][170/573] Loss_D: 0.4737 Loss_G: 2.7157 D(x): 0.9056 D(G(z)): 0.2915 / 0.0861
[10/25][180/573] Loss_D: 0.3892 Loss_G: 2.1561 D(x): 0.8118 D(G(z)): 0.1522 / 0.1519
[10/25][190/573] Loss_D: 0.9678 Loss_G: 0.7609 D(x): 0.5184 D(G(z)): 0.2066 / 0.5128
[10/25][200/573] Loss_D: 0.7434 Loss_G: 2.1953 D(x): 0.7540 D(G(z)): 0.3362 / 0.1422
[10/25][210/573] Loss_D: 0.6520 Loss_G: 1.1514 D(x): 0.6302 D(G(z)): 0.1352 / 0.3688
[10/25][220/573] Loss_D: 0.6276 Loss_G: 1.5995 D(x): 0.6301 D(G(z)): 0.1076 / 0.2425
[10/25][230/573] Loss_D: 0.5070 Loss_G: 1.8444 D(x): 0.6886 D(G(z)): 0.0923 / 0.2041
[10/25][240/573] Loss_D: 0.5359 Loss_G: 2.1268 D(x): 0.8445 D(G(z)): 0.2874 / 0.1542
[10/25][250/573] Loss_D: 0.4809 Loss_G: 2.3643 D(x): 0.8426 D(G(z)): 0.2434 / 0.1200
[10/25][260/573] Loss_D: 0.5448 Loss_G: 1.9106 D(x): 0.6738 D(G(z)): 0.1080 / 0.1843
[10/25][270/573] Loss_D: 0.4999 Loss_G: 3.1148 D(x): 0.8868 D(G(z)): 0.2949 / 0.0674
[10/25][280/573] Loss_D: 0.3907 Loss_G: 2.6035 D(x): 0.8058 D(G(z)): 0.1448 / 0.0969
[10/25][290/573] Loss_D: 0.4576 Loss_G: 2.1473 D(x): 0.7273 D(G(z)): 0.
```

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1082 / 0.1581
[10/25][300/573] Loss_D: 0.3825 Loss_G: 2.1503 D(x): 0.8992 D(G(z)): 0.
2218 / 0.1440
[10/25][310/573] Loss_D: 0.5714 Loss_G: 2.4604 D(x): 0.8283 D(G(z)): 0.
2901 / 0.1155
[10/25][320/573] Loss_D: 0.5524 Loss_G: 1.8267 D(x): 0.6649 D(G(z)): 0.
0927 / 0.1832
[10/25][330/573] Loss_D: 0.4343 Loss_G: 2.5662 D(x): 0.8514 D(G(z)): 0.
2214 / 0.1018
[10/25][340/573] Loss_D: 0.6402 Loss_G: 2.6643 D(x): 0.7255 D(G(z)): 0.
2318 / 0.1011
[10/25][350/573] Loss_D: 0.9208 Loss_G: 1.2811 D(x): 0.4813 D(G(z)): 0.
0660 / 0.3714
[10/25][360/573] Loss_D: 0.4079 Loss_G: 2.8749 D(x): 0.9364 D(G(z)): 0.
2729 / 0.0739
[10/25][370/573] Loss_D: 1.6104 Loss_G: 1.9017 D(x): 0.4417 D(G(z)): 0.
3305 / 0.3232
[10/25][380/573] Loss_D: 0.7884 Loss_G: 1.7085 D(x): 0.5897 D(G(z)): 0.
1490 / 0.2384
[10/25][390/573] Loss_D: 0.7433 Loss_G: 1.7246 D(x): 0.5793 D(G(z)): 0.
1263 / 0.2092
[10/25][400/573] Loss_D: 0.7025 Loss_G: 1.6890 D(x): 0.5826 D(G(z)): 0.
0896 / 0.2461
[10/25][410/573] Loss_D: 0.5972 Loss_G: 2.9322 D(x): 0.8489 D(G(z)): 0.
3185 / 0.0710
[10/25][420/573] Loss_D: 0.3691 Loss_G: 2.6487 D(x): 0.8357 D(G(z)): 0.
1567 / 0.0910
[10/25][430/573] Loss_D: 0.6490 Loss_G: 1.8844 D(x): 0.6132 D(G(z)): 0.
1044 / 0.1913
[10/25][440/573] Loss_D: 0.4457 Loss_G: 2.0726 D(x): 0.7558 D(G(z)): 0.
1334 / 0.1676
[10/25][450/573] Loss_D: 0.4653 Loss_G: 2.7792 D(x): 0.8915 D(G(z)): 0.
2765 / 0.0744
[10/25][460/573] Loss_D: 0.7247 Loss_G: 1.6849 D(x): 0.7340 D(G(z)): 0.
3041 / 0.2331
[10/25][470/573] Loss_D: 0.6389 Loss_G: 1.5702 D(x): 0.6977 D(G(z)): 0.
2125 / 0.2464
[10/25][480/573] Loss_D: 0.3518 Loss_G: 2.3799 D(x): 0.8308 D(G(z)): 0.
1377 / 0.1213
[10/25][490/573] Loss_D: 0.7726 Loss_G: 2.6484 D(x): 0.8699 D(G(z)): 0.
4197 / 0.0878
[10/25][500/573] Loss_D: 0.6263 Loss_G: 0.9635 D(x): 0.5978 D(G(z)): 0.
0585 / 0.4340
[10/25][510/573] Loss_D: 0.9614 Loss_G: 2.6587 D(x): 0.8432 D(G(z)): 0.
5041 / 0.0955
[10/25][520/573] Loss_D: 0.6885 Loss_G: 1.5250 D(x): 0.6119 D(G(z)): 0.
1283 / 0.2686
[10/25][530/573] Loss_D: 0.3038 Loss_G: 2.3148 D(x): 0.8471 D(G(z)): 0.
1198 / 0.1358
[10/25][540/573] Loss_D: 0.3618 Loss_G: 2.7298 D(x): 0.8058 D(G(z)): 0.
1210 / 0.0941
[10/25][550/573] Loss_D: 0.4414 Loss_G: 2.3143 D(x): 0.7074 D(G(z)): 0.
0655 / 0.1372
[10/25][560/573] Loss_D: 0.5760 Loss_G: 1.8171 D(x): 0.7905 D(G(z)): 0.
2600 / 0.1966
[10/25][570/573] Loss_D: 0.3478 Loss_G: 2.5128 D(x): 0.8193 D(G(z)): 0.
1246 / 0.1065
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[11/25] [0/573] Loss_D: 0.6213 Loss_G: 1.4598 D(x): 0.6825 D(G(z)): 0.17
49 / 0.2812



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[11/25][10/573] Loss_D: 0.3993 Loss_G: 2.0508 D(x): 0.8000 D(G(z)): 0.1  
462 / 0.1585  
[11/25][20/573] Loss_D: 0.5475 Loss_G: 2.9444 D(x): 0.9159 D(G(z)): 0.3  
440 / 0.0680  
[11/25][30/573] Loss_D: 0.4255 Loss_G: 1.9962 D(x): 0.7940 D(G(z)): 0.1  
616 / 0.1637  
[11/25][40/573] Loss_D: 0.6899 Loss_G: 1.2029 D(x): 0.6203 D(G(z)): 0.1  
418 / 0.3533  
[11/25][50/573] Loss_D: 1.0512 Loss_G: 1.7674 D(x): 0.5785 D(G(z)): 0.3  
091 / 0.2328  
[11/25][60/573] Loss_D: 1.1647 Loss_G: 1.3585 D(x): 0.4367 D(G(z)): 0.1  
402 / 0.3121  
[11/25][70/573] Loss_D: 0.8947 Loss_G: 1.9058 D(x): 0.6476 D(G(z)): 0.3  
097 / 0.1866  
[11/25][80/573] Loss_D: 0.5359 Loss_G: 1.9958 D(x): 0.8415 D(G(z)): 0.2  
806 / 0.1634  
[11/25][90/573] Loss_D: 0.3523 Loss_G: 2.2976 D(x): 0.8361 D(G(z)): 0.1  
437 / 0.1374  
[11/25][100/573] Loss_D: 0.5022 Loss_G: 2.1662 D(x): 0.8580 D(G(z)): 0.  
2724 / 0.1443  
[11/25][110/573] Loss_D: 0.6881 Loss_G: 2.5808 D(x): 0.9151 D(G(z)): 0.  
4191 / 0.0991  
[11/25][120/573] Loss_D: 0.8618 Loss_G: 1.0152 D(x): 0.4889 D(G(z)): 0.  
0641 / 0.4147  
[11/25][130/573] Loss_D: 0.5336 Loss_G: 1.9479 D(x): 0.7651 D(G(z)): 0.  
2048 / 0.1884  
[11/25][140/573] Loss_D: 0.5005 Loss_G: 1.5647 D(x): 0.7285 D(G(z)): 0.  
1393 / 0.2636  
[11/25][150/573] Loss_D: 0.5854 Loss_G: 2.9738 D(x): 0.8129 D(G(z)): 0.  
2811 / 0.0683  
[11/25][160/573] Loss_D: 0.5346 Loss_G: 2.4428 D(x): 0.8386 D(G(z)): 0.  
2815 / 0.1100  
[11/25][170/573] Loss_D: 0.3650 Loss_G: 3.2026 D(x): 0.8455 D(G(z)): 0.  
1613 / 0.0558  
[11/25][180/573] Loss_D: 0.6526 Loss_G: 2.8073 D(x): 0.9218 D(G(z)): 0.  
4023 / 0.0798  
[11/25][190/573] Loss_D: 0.5169 Loss_G: 2.2069 D(x): 0.8610 D(G(z)): 0.  
2890 / 0.1387  
[11/25][200/573] Loss_D: 0.6206 Loss_G: 1.4687 D(x): 0.7323 D(G(z)): 0.  
2350 / 0.2785  
[11/25][210/573] Loss_D: 0.6310 Loss_G: 2.0844 D(x): 0.6320 D(G(z)): 0.  
1085 / 0.1542  
[11/25][220/573] Loss_D: 0.7216 Loss_G: 1.5319 D(x): 0.5874 D(G(z)): 0.  
1266 / 0.2681  
[11/25][230/573] Loss_D: 1.1541 Loss_G: 0.6792 D(x): 0.4270 D(G(z)): 0.  
0976 / 0.5601  
[11/25][240/573] Loss_D: 0.7356 Loss_G: 2.0745 D(x): 0.5678 D(G(z)): 0.  
0902 / 0.1936  
[11/25][250/573] Loss_D: 0.4441 Loss_G: 3.0413 D(x): 0.7951 D(G(z)): 0.  
1674 / 0.0685  
[11/25][260/573] Loss_D: 0.4161 Loss_G: 2.3527 D(x): 0.8947 D(G(z)): 0.  
2487 / 0.1138  
[11/25][270/573] Loss_D: 0.4121 Loss_G: 2.2694 D(x): 0.8345 D(G(z)): 0.  
1913 / 0.1237  
[11/25][280/573] Loss_D: 0.6788 Loss_G: 2.9714 D(x): 0.8954 D(G(z)): 0.  
4012 / 0.0726  
[11/25][290/573] Loss_D: 0.5646 Loss_G: 2.0329 D(x): 0.7276 D(G(z)): 0.
```

```
1906 / 0.1669
[11/25][300/573] Loss_D: 0.3168 Loss_G: 2.6821 D(x): 0.8915 D(G(z)): 0.
1713 / 0.0882
[11/25][310/573] Loss_D: 0.4758 Loss_G: 2.1716 D(x): 0.7316 D(G(z)): 0.
1252 / 0.1490
[11/25][320/573] Loss_D: 0.6289 Loss_G: 1.5808 D(x): 0.7073 D(G(z)): 0.
2033 / 0.2460
[11/25][330/573] Loss_D: 0.5229 Loss_G: 1.4793 D(x): 0.7121 D(G(z)): 0.
1365 / 0.2928
[11/25][340/573] Loss_D: 0.6645 Loss_G: 2.3303 D(x): 0.8121 D(G(z)): 0.
3320 / 0.1190
[11/25][350/573] Loss_D: 0.5428 Loss_G: 3.1491 D(x): 0.8740 D(G(z)): 0.
3087 / 0.0626
[11/25][360/573] Loss_D: 1.0434 Loss_G: 2.9789 D(x): 0.8311 D(G(z)): 0.
4955 / 0.0724
[11/25][370/573] Loss_D: 0.4770 Loss_G: 2.7845 D(x): 0.7952 D(G(z)): 0.
1892 / 0.0899
[11/25][380/573] Loss_D: 0.4521 Loss_G: 2.2626 D(x): 0.7975 D(G(z)): 0.
1832 / 0.1337
[11/25][390/573] Loss_D: 0.8063 Loss_G: 2.9605 D(x): 0.8659 D(G(z)): 0.
4435 / 0.0698
[11/25][400/573] Loss_D: 0.4014 Loss_G: 3.0480 D(x): 0.8457 D(G(z)): 0.
1822 / 0.0664
[11/25][410/573] Loss_D: 0.5987 Loss_G: 2.6333 D(x): 0.8451 D(G(z)): 0.
3187 / 0.0990
[11/25][420/573] Loss_D: 0.4536 Loss_G: 2.0002 D(x): 0.8279 D(G(z)): 0.
2151 / 0.1599
[11/25][430/573] Loss_D: 0.4533 Loss_G: 2.3543 D(x): 0.8456 D(G(z)): 0.
2264 / 0.1192
[11/25][440/573] Loss_D: 0.4274 Loss_G: 2.3216 D(x): 0.8230 D(G(z)): 0.
1854 / 0.1356
[11/25][450/573] Loss_D: 1.0544 Loss_G: 3.8720 D(x): 0.9263 D(G(z)): 0.
5753 / 0.0321
[11/25][460/573] Loss_D: 0.6959 Loss_G: 1.4717 D(x): 0.6400 D(G(z)): 0.
1691 / 0.2695
[11/25][470/573] Loss_D: 0.3702 Loss_G: 2.3550 D(x): 0.8045 D(G(z)): 0.
1206 / 0.1275
[11/25][480/573] Loss_D: 0.7543 Loss_G: 1.3685 D(x): 0.5358 D(G(z)): 0.
0519 / 0.2919
[11/25][490/573] Loss_D: 0.7175 Loss_G: 2.3444 D(x): 0.7440 D(G(z)): 0.
3123 / 0.1168
[11/25][500/573] Loss_D: 0.3542 Loss_G: 2.4489 D(x): 0.7726 D(G(z)): 0.
0757 / 0.1159
[11/25][510/573] Loss_D: 0.3518 Loss_G: 2.4834 D(x): 0.8067 D(G(z)): 0.
1141 / 0.1174
[11/25][520/573] Loss_D: 0.4813 Loss_G: 2.0981 D(x): 0.8463 D(G(z)): 0.
2529 / 0.1538
[11/25][530/573] Loss_D: 0.4612 Loss_G: 2.2582 D(x): 0.7358 D(G(z)): 0.
1191 / 0.1407
[11/25][540/573] Loss_D: 0.3222 Loss_G: 2.9746 D(x): 0.9589 D(G(z)): 0.
2313 / 0.0708
[11/25][550/573] Loss_D: 0.5714 Loss_G: 2.6307 D(x): 0.8442 D(G(z)): 0.
2970 / 0.1019
[11/25][560/573] Loss_D: 0.6922 Loss_G: 2.3402 D(x): 0.7714 D(G(z)): 0.
3186 / 0.1155
[11/25][570/573] Loss_D: 0.6459 Loss_G: 2.6071 D(x): 0.8000 D(G(z)): 0.
3130 / 0.0988
```

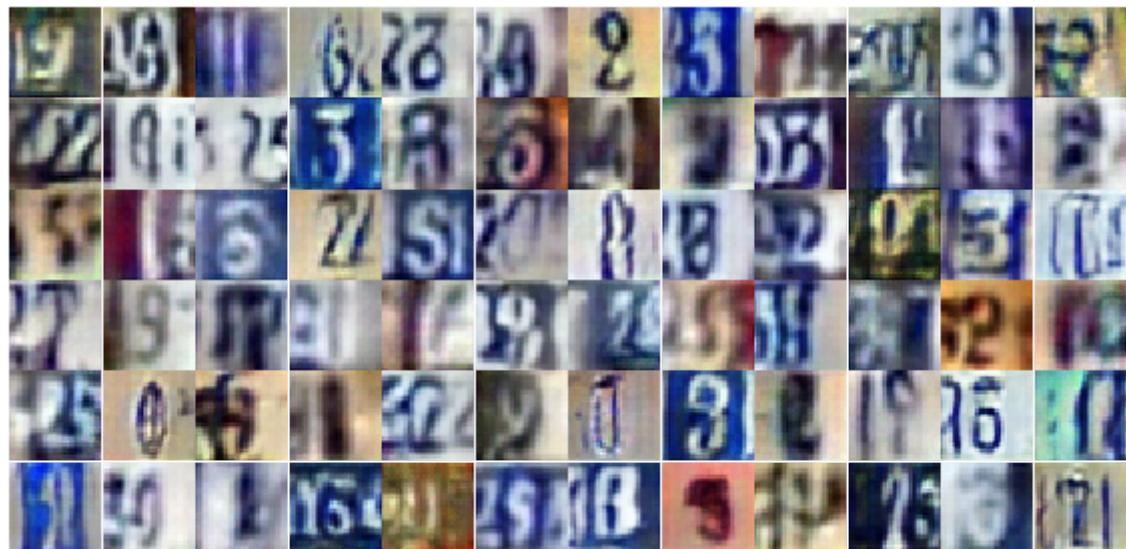
[12 / 25] [0 / 573] Loss_D: 0.7746 Loss_G: 1.8869 D(x): 0.7047 D(G(z)): 0.30
41 / 0.2041



```
[12/25][10/573] Loss_D: 0.5500 Loss_G: 3.4423 D(x): 0.8604 D(G(z)): 0.2  
872 / 0.0459  
[12/25][20/573] Loss_D: 0.4568 Loss_G: 2.5499 D(x): 0.9030 D(G(z)): 0.2  
754 / 0.1009  
[12/25][30/573] Loss_D: 0.5291 Loss_G: 2.4549 D(x): 0.6829 D(G(z)): 0.0  
931 / 0.1262  
[12/25][40/573] Loss_D: 0.8187 Loss_G: 2.3549 D(x): 0.6958 D(G(z)): 0.3  
064 / 0.1389  
[12/25][50/573] Loss_D: 0.4281 Loss_G: 2.5387 D(x): 0.8785 D(G(z)): 0.2  
388 / 0.1122  
[12/25][60/573] Loss_D: 1.4866 Loss_G: 0.3966 D(x): 0.2999 D(G(z)): 0.0  
377 / 0.7087  
[12/25][70/573] Loss_D: 1.2313 Loss_G: 3.5743 D(x): 0.9070 D(G(z)): 0.6  
167 / 0.0415  
[12/25][80/573] Loss_D: 0.3186 Loss_G: 2.9691 D(x): 0.8777 D(G(z)): 0.1  
537 / 0.0729  
[12/25][90/573] Loss_D: 0.8003 Loss_G: 1.0218 D(x): 0.5943 D(G(z)): 0.1  
906 / 0.4091  
[12/25][100/573] Loss_D: 0.4954 Loss_G: 2.0393 D(x): 0.7448 D(G(z)): 0.  
1557 / 0.1716  
[12/25][110/573] Loss_D: 0.6666 Loss_G: 3.3377 D(x): 0.9323 D(G(z)): 0.  
4176 / 0.0463  
[12/25][120/573] Loss_D: 0.4348 Loss_G: 2.6272 D(x): 0.8523 D(G(z)): 0.  
2121 / 0.1045  
[12/25][130/573] Loss_D: 0.6778 Loss_G: 3.1126 D(x): 0.9602 D(G(z)): 0.  
4392 / 0.0592  
[12/25][140/573] Loss_D: 0.7234 Loss_G: 2.2640 D(x): 0.8867 D(G(z)): 0.  
4090 / 0.1451  
[12/25][150/573] Loss_D: 0.6605 Loss_G: 1.5678 D(x): 0.6485 D(G(z)): 0.  
1506 / 0.2493  
[12/25][160/573] Loss_D: 0.3524 Loss_G: 2.4295 D(x): 0.8276 D(G(z)): 0.  
1358 / 0.1096  
[12/25][170/573] Loss_D: 0.4057 Loss_G: 2.4281 D(x): 0.7815 D(G(z)): 0.  
1288 / 0.1254  
[12/25][180/573] Loss_D: 0.5367 Loss_G: 1.6454 D(x): 0.7028 D(G(z)): 0.  
1325 / 0.2301  
[12/25][190/573] Loss_D: 0.6500 Loss_G: 1.7762 D(x): 0.7281 D(G(z)): 0.  
2513 / 0.2106  
[12/25][200/573] Loss_D: 0.4603 Loss_G: 2.5771 D(x): 0.7507 D(G(z)): 0.  
1366 / 0.1081  
[12/25][210/573] Loss_D: 0.8280 Loss_G: 1.0303 D(x): 0.5212 D(G(z)): 0.  
0857 / 0.4190  
[12/25][220/573] Loss_D: 0.3912 Loss_G: 2.4911 D(x): 0.8377 D(G(z)): 0.  
1781 / 0.1112  
[12/25][230/573] Loss_D: 1.0433 Loss_G: 0.6102 D(x): 0.4927 D(G(z)): 0.  
2213 / 0.5797  
[12/25][240/573] Loss_D: 0.8564 Loss_G: 3.1137 D(x): 0.9091 D(G(z)): 0.  
4975 / 0.0595  
[12/25][250/573] Loss_D: 0.6185 Loss_G: 1.7377 D(x): 0.6204 D(G(z)): 0.  
0886 / 0.2246  
[12/25][260/573] Loss_D: 0.5085 Loss_G: 2.0700 D(x): 0.6984 D(G(z)): 0.  
1014 / 0.1648  
[12/25][270/573] Loss_D: 0.4787 Loss_G: 2.4134 D(x): 0.7318 D(G(z)): 0.  
1271 / 0.1309  
[12/25][280/573] Loss_D: 0.7879 Loss_G: 3.1941 D(x): 0.9516 D(G(z)): 0.  
4804 / 0.0600  
[12/25][290/573] Loss_D: 2.1450 Loss_G: 0.0613 D(x): 0.1610 D(G(z)): 0.
```

0337 / 0.9436
[12/25][300/573] Loss_D: 0.7510 Loss_G: 1.2849 D(x): 0.7265 D(G(z)): 0.
3034 / 0.3310
[12/25][310/573] Loss_D: 0.6068 Loss_G: 2.0677 D(x): 0.7340 D(G(z)): 0.
2140 / 0.1697
[12/25][320/573] Loss_D: 0.4525 Loss_G: 2.2828 D(x): 0.8141 D(G(z)): 0.
1987 / 0.1426
[12/25][330/573] Loss_D: 0.4189 Loss_G: 2.3845 D(x): 0.7850 D(G(z)): 0.
1391 / 0.1181
[12/25][340/573] Loss_D: 0.4373 Loss_G: 2.4260 D(x): 0.8647 D(G(z)): 0.
2334 / 0.1168
[12/25][350/573] Loss_D: 0.4758 Loss_G: 1.7103 D(x): 0.7081 D(G(z)): 0.
0948 / 0.2406
[12/25][360/573] Loss_D: 0.5520 Loss_G: 2.5496 D(x): 0.7410 D(G(z)): 0.
1978 / 0.0955
[12/25][370/573] Loss_D: 0.4879 Loss_G: 1.8366 D(x): 0.7353 D(G(z)): 0.
1291 / 0.2098
[12/25][380/573] Loss_D: 0.5552 Loss_G: 2.3835 D(x): 0.8539 D(G(z)): 0.
3057 / 0.1157
[12/25][390/573] Loss_D: 0.6056 Loss_G: 2.7896 D(x): 0.8215 D(G(z)): 0.
3006 / 0.0901
[12/25][400/573] Loss_D: 0.4730 Loss_G: 2.9834 D(x): 0.9251 D(G(z)): 0.
3008 / 0.0727
[12/25][410/573] Loss_D: 1.1034 Loss_G: 3.4307 D(x): 0.9736 D(G(z)): 0.
6092 / 0.0437
[12/25][420/573] Loss_D: 0.6331 Loss_G: 1.7540 D(x): 0.6499 D(G(z)): 0.
1357 / 0.2365
[12/25][430/573] Loss_D: 0.5158 Loss_G: 1.7639 D(x): 0.6669 D(G(z)): 0.
0730 / 0.2217
[12/25][440/573] Loss_D: 1.1097 Loss_G: 0.6235 D(x): 0.4124 D(G(z)): 0.
0933 / 0.5676
[12/25][450/573] Loss_D: 0.6623 Loss_G: 2.3265 D(x): 0.7858 D(G(z)): 0.
3091 / 0.1253
[12/25][460/573] Loss_D: 0.3969 Loss_G: 2.2837 D(x): 0.8271 D(G(z)): 0.
1717 / 0.1286
[12/25][470/573] Loss_D: 0.4022 Loss_G: 2.6610 D(x): 0.8777 D(G(z)): 0.
2228 / 0.0861
[12/25][480/573] Loss_D: 0.5624 Loss_G: 2.5993 D(x): 0.9085 D(G(z)): 0.
3405 / 0.0936
[12/25][490/573] Loss_D: 0.4113 Loss_G: 3.1797 D(x): 0.9415 D(G(z)): 0.
2758 / 0.0544
[12/25][500/573] Loss_D: 0.6886 Loss_G: 1.5382 D(x): 0.5849 D(G(z)): 0.
0772 / 0.3069
[12/25][510/573] Loss_D: 0.7341 Loss_G: 2.5521 D(x): 0.9239 D(G(z)): 0.
4412 / 0.1021
[12/25][520/573] Loss_D: 0.6295 Loss_G: 1.3758 D(x): 0.6808 D(G(z)): 0.
1813 / 0.2968
[12/25][530/573] Loss_D: 0.4537 Loss_G: 2.3939 D(x): 0.7798 D(G(z)): 0.
1600 / 0.1300
[12/25][540/573] Loss_D: 0.6419 Loss_G: 2.1945 D(x): 0.7832 D(G(z)): 0.
2786 / 0.1493
[12/25][550/573] Loss_D: 0.4169 Loss_G: 2.2931 D(x): 0.7915 D(G(z)): 0.
1468 / 0.1414
[12/25][560/573] Loss_D: 0.3547 Loss_G: 2.0902 D(x): 0.8206 D(G(z)): 0.
1293 / 0.1616
[12/25][570/573] Loss_D: 0.4344 Loss_G: 2.2616 D(x): 0.7623 D(G(z)): 0.
1358 / 0.1477

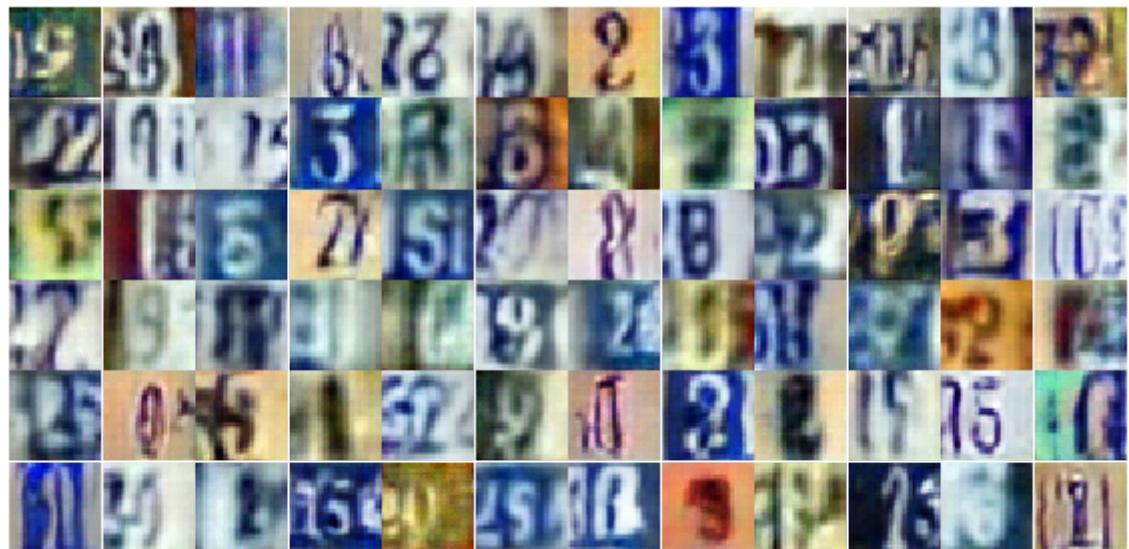
[13/25] [0/573] Loss_D: 0.3076 Loss_G: 2.5282 D(x): 0.8352 D(G(z)): 0.10
37 / 0.1051



```
[13/25][10/573] Loss_D: 1.1140 Loss_G: 0.2857 D(x): 0.4031 D(G(z)): 0.0  
545 / 0.7744  
[13/25][20/573] Loss_D: 2.2151 Loss_G: 0.4389 D(x): 0.2257 D(G(z)): 0.1  
957 / 0.6754  
[13/25][30/573] Loss_D: 1.5775 Loss_G: 1.3507 D(x): 0.5414 D(G(z)): 0.4  
006 / 0.3879  
[13/25][40/573] Loss_D: 0.7439 Loss_G: 3.0815 D(x): 0.8443 D(G(z)): 0.3  
854 / 0.0745  
[13/25][50/573] Loss_D: 0.8978 Loss_G: 3.4096 D(x): 0.8152 D(G(z)): 0.4  
302 / 0.0518  
[13/25][60/573] Loss_D: 0.7091 Loss_G: 1.4680 D(x): 0.6174 D(G(z)): 0.1  
587 / 0.3174  
[13/25][70/573] Loss_D: 0.9655 Loss_G: 2.2884 D(x): 0.9128 D(G(z)): 0.5  
401 / 0.1308  
[13/25][80/573] Loss_D: 0.4014 Loss_G: 2.3919 D(x): 0.8387 D(G(z)): 0.1  
861 / 0.1233  
[13/25][90/573] Loss_D: 0.6045 Loss_G: 1.6641 D(x): 0.6793 D(G(z)): 0.1  
623 / 0.2418  
[13/25][100/573] Loss_D: 0.5824 Loss_G: 1.9917 D(x): 0.7001 D(G(z)): 0.  
1689 / 0.1853  
[13/25][110/573] Loss_D: 0.4790 Loss_G: 2.2330 D(x): 0.7746 D(G(z)): 0.  
1791 / 0.1293  
[13/25][120/573] Loss_D: 0.4314 Loss_G: 2.3172 D(x): 0.8328 D(G(z)): 0.  
2031 / 0.1239  
[13/25][130/573] Loss_D: 0.4296 Loss_G: 1.7746 D(x): 0.7950 D(G(z)): 0.  
1601 / 0.2164  
[13/25][140/573] Loss_D: 0.4033 Loss_G: 2.3410 D(x): 0.8252 D(G(z)): 0.  
1713 / 0.1253  
[13/25][150/573] Loss_D: 0.3229 Loss_G: 2.8191 D(x): 0.8449 D(G(z)): 0.  
1321 / 0.0785  
[13/25][160/573] Loss_D: 0.5278 Loss_G: 1.6755 D(x): 0.6741 D(G(z)): 0.  
1000 / 0.2428  
[13/25][170/573] Loss_D: 0.4496 Loss_G: 2.8294 D(x): 0.9091 D(G(z)): 0.  
2787 / 0.0739  
[13/25][180/573] Loss_D: 0.3060 Loss_G: 2.5794 D(x): 0.8134 D(G(z)): 0.  
0848 / 0.0975  
[13/25][190/573] Loss_D: 0.5135 Loss_G: 3.7402 D(x): 0.9374 D(G(z)): 0.  
3294 / 0.0332  
[13/25][200/573] Loss_D: 0.6200 Loss_G: 2.3858 D(x): 0.8081 D(G(z)): 0.  
2920 / 0.1268  
[13/25][210/573] Loss_D: 0.3630 Loss_G: 2.7092 D(x): 0.9165 D(G(z)): 0.  
2223 / 0.0852  
[13/25][220/573] Loss_D: 0.3237 Loss_G: 2.7880 D(x): 0.8590 D(G(z)): 0.  
1425 / 0.0776  
[13/25][230/573] Loss_D: 0.5554 Loss_G: 2.6500 D(x): 0.8690 D(G(z)): 0.  
3140 / 0.0918  
[13/25][240/573] Loss_D: 0.6351 Loss_G: 3.1610 D(x): 0.9319 D(G(z)): 0.  
3979 / 0.0592  
[13/25][250/573] Loss_D: 1.6757 Loss_G: 2.6234 D(x): 0.7799 D(G(z)): 0.  
6798 / 0.1706  
[13/25][260/573] Loss_D: 1.1076 Loss_G: 2.9363 D(x): 0.7766 D(G(z)): 0.  
5173 / 0.0774  
[13/25][270/573] Loss_D: 0.8191 Loss_G: 2.9141 D(x): 0.8766 D(G(z)): 0.  
4582 / 0.0827  
[13/25][280/573] Loss_D: 0.6154 Loss_G: 2.2585 D(x): 0.8460 D(G(z)): 0.  
3294 / 0.1344  
[13/25][290/573] Loss_D: 0.6355 Loss_G: 1.7493 D(x): 0.7540 D(G(z)): 0.
```

```
2717 / 0.2158
[13/25][300/573] Loss_D: 0.5562 Loss_G: 1.9107 D(x): 0.7629 D(G(z)): 0.
2245 / 0.1980
[13/25][310/573] Loss_D: 1.1078 Loss_G: 3.6977 D(x): 0.9671 D(G(z)): 0.
6125 / 0.0330
[13/25][320/573] Loss_D: 0.4805 Loss_G: 2.1052 D(x): 0.7593 D(G(z)): 0.
1678 / 0.1675
[13/25][330/573] Loss_D: 0.4931 Loss_G: 2.4028 D(x): 0.8230 D(G(z)): 0.
2379 / 0.1136
[13/25][340/573] Loss_D: 0.5494 Loss_G: 2.8105 D(x): 0.8927 D(G(z)): 0.
3288 / 0.0819
[13/25][350/573] Loss_D: 0.5586 Loss_G: 1.9613 D(x): 0.7196 D(G(z)): 0.
1768 / 0.1847
[13/25][360/573] Loss_D: 0.7811 Loss_G: 1.3020 D(x): 0.5891 D(G(z)): 0.
1736 / 0.3133
[13/25][370/573] Loss_D: 0.5963 Loss_G: 2.8499 D(x): 0.8922 D(G(z)): 0.
3477 / 0.0761
[13/25][380/573] Loss_D: 0.5012 Loss_G: 2.2264 D(x): 0.7050 D(G(z)): 0.
1098 / 0.1428
[13/25][390/573] Loss_D: 0.6210 Loss_G: 2.6143 D(x): 0.9402 D(G(z)): 0.
3973 / 0.0948
[13/25][400/573] Loss_D: 0.6104 Loss_G: 2.4235 D(x): 0.8998 D(G(z)): 0.
3661 / 0.1111
[13/25][410/573] Loss_D: 0.4405 Loss_G: 2.8011 D(x): 0.8593 D(G(z)): 0.
2349 / 0.0774
[13/25][420/573] Loss_D: 0.4547 Loss_G: 2.2523 D(x): 0.7354 D(G(z)): 0.
1128 / 0.1443
[13/25][430/573] Loss_D: 0.4837 Loss_G: 1.9721 D(x): 0.7574 D(G(z)): 0.
1639 / 0.1822
[13/25][440/573] Loss_D: 0.8492 Loss_G: 2.5920 D(x): 0.7665 D(G(z)): 0.
3886 / 0.1083
[13/25][450/573] Loss_D: 0.6305 Loss_G: 1.6049 D(x): 0.6410 D(G(z)): 0.
0981 / 0.2765
[13/25][460/573] Loss_D: 0.4496 Loss_G: 2.1267 D(x): 0.7731 D(G(z)): 0.
1520 / 0.1656
[13/25][470/573] Loss_D: 1.1526 Loss_G: 2.0534 D(x): 0.7664 D(G(z)): 0.
5291 / 0.1923
[13/25][480/573] Loss_D: 0.5772 Loss_G: 2.2913 D(x): 0.8330 D(G(z)): 0.
2993 / 0.1279
[13/25][490/573] Loss_D: 0.3548 Loss_G: 2.2889 D(x): 0.8163 D(G(z)): 0.
1185 / 0.1324
[13/25][500/573] Loss_D: 0.7366 Loss_G: 2.4422 D(x): 0.8069 D(G(z)): 0.
3676 / 0.1079
[13/25][510/573] Loss_D: 0.5859 Loss_G: 2.5945 D(x): 0.8218 D(G(z)): 0.
3017 / 0.0944
[13/25][520/573] Loss_D: 0.5064 Loss_G: 2.6280 D(x): 0.8473 D(G(z)): 0.
2647 / 0.0942
[13/25][530/573] Loss_D: 0.7402 Loss_G: 1.6512 D(x): 0.5716 D(G(z)): 0.
1035 / 0.2314
[13/25][540/573] Loss_D: 0.5583 Loss_G: 2.4628 D(x): 0.8397 D(G(z)): 0.
2953 / 0.1089
[13/25][550/573] Loss_D: 0.3495 Loss_G: 2.5670 D(x): 0.9171 D(G(z)): 0.
2181 / 0.0997
[13/25][560/573] Loss_D: 0.6498 Loss_G: 2.2370 D(x): 0.6799 D(G(z)): 0.
1926 / 0.1398
[13/25][570/573] Loss_D: 0.7599 Loss_G: 2.8034 D(x): 0.8679 D(G(z)): 0.
4065 / 0.0923
```

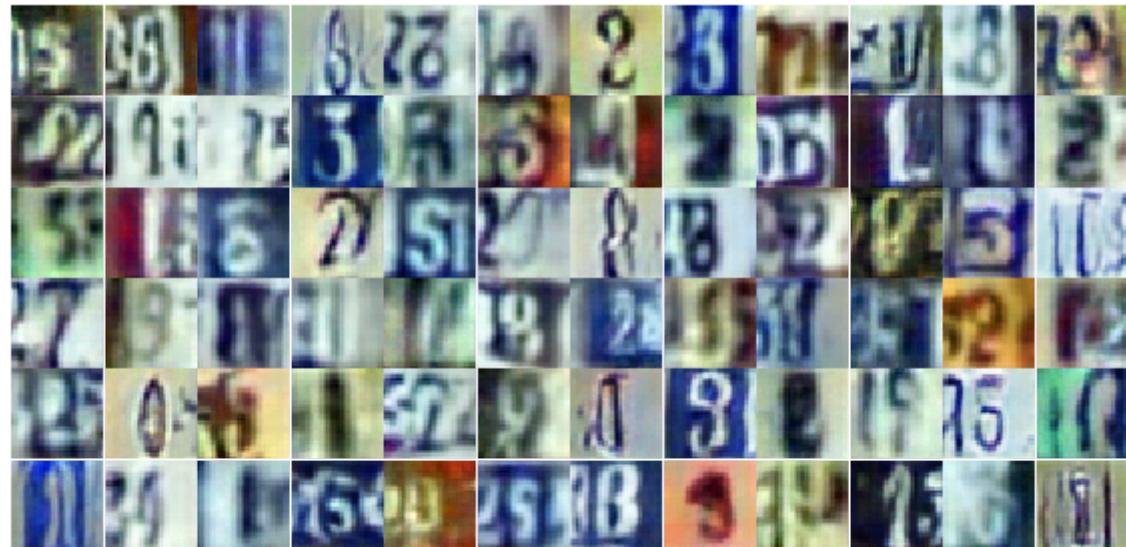
[14 / 25] [0 / 573] Loss_D: 0.4473 Loss_G: 2.3665 D(x): 0.8693 D(G(z)): 0.23
74 / 0.1210



```
[14/25][10/573] Loss_D: 0.5648 Loss_G: 2.1884 D(x): 0.7916 D(G(z)): 0.2  
565 / 0.1403  
[14/25][20/573] Loss_D: 0.4089 Loss_G: 2.5834 D(x): 0.7441 D(G(z)): 0.0  
845 / 0.1060  
[14/25][30/573] Loss_D: 0.6742 Loss_G: 2.2754 D(x): 0.8494 D(G(z)): 0.3  
698 / 0.1329  
[14/25][40/573] Loss_D: 0.5563 Loss_G: 1.7320 D(x): 0.7333 D(G(z)): 0.1  
885 / 0.2352  
[14/25][50/573] Loss_D: 0.3840 Loss_G: 3.5393 D(x): 0.9585 D(G(z)): 0.2  
674 / 0.0419  
[14/25][60/573] Loss_D: 0.6314 Loss_G: 1.6050 D(x): 0.6211 D(G(z)): 0.1  
034 / 0.2766  
[14/25][70/573] Loss_D: 0.4852 Loss_G: 2.4698 D(x): 0.8566 D(G(z)): 0.2  
606 / 0.1031  
[14/25][80/573] Loss_D: 0.3946 Loss_G: 1.7884 D(x): 0.7811 D(G(z)): 0.1  
196 / 0.2053  
[14/25][90/573] Loss_D: 0.3552 Loss_G: 2.3653 D(x): 0.7601 D(G(z)): 0.0  
624 / 0.1252  
[14/25][100/573] Loss_D: 0.5198 Loss_G: 3.3363 D(x): 0.9396 D(G(z)): 0.  
3358 / 0.0518  
[14/25][110/573] Loss_D: 0.3448 Loss_G: 3.1151 D(x): 0.8681 D(G(z)): 0.  
1735 / 0.0568  
[14/25][120/573] Loss_D: 0.3106 Loss_G: 3.2703 D(x): 0.9392 D(G(z)): 0.  
2060 / 0.0532  
[14/25][130/573] Loss_D: 1.2653 Loss_G: 3.3785 D(x): 0.9509 D(G(z)): 0.  
6281 / 0.0468  
[14/25][140/573] Loss_D: 0.6852 Loss_G: 1.2421 D(x): 0.6270 D(G(z)): 0.  
1420 / 0.3366  
[14/25][150/573] Loss_D: 0.4643 Loss_G: 2.2773 D(x): 0.7097 D(G(z)): 0.  
0864 / 0.1330  
[14/25][160/573] Loss_D: 1.1955 Loss_G: 3.8051 D(x): 0.9135 D(G(z)): 0.  
6019 / 0.0362  
[14/25][170/573] Loss_D: 2.1473 Loss_G: 5.9239 D(x): 0.9737 D(G(z)): 0.  
8252 / 0.0085  
[14/25][180/573] Loss_D: 2.3479 Loss_G: 4.2254 D(x): 0.9757 D(G(z)): 0.  
8435 / 0.0262  
[14/25][190/573] Loss_D: 0.5134 Loss_G: 2.9195 D(x): 0.7003 D(G(z)): 0.  
1026 / 0.0815  
[14/25][200/573] Loss_D: 0.5759 Loss_G: 1.9819 D(x): 0.6577 D(G(z)): 0.  
1118 / 0.1788  
[14/25][210/573] Loss_D: 0.4961 Loss_G: 2.2783 D(x): 0.7798 D(G(z)): 0.  
1927 / 0.1389  
[14/25][220/573] Loss_D: 0.6151 Loss_G: 2.0566 D(x): 0.7615 D(G(z)): 0.  
2603 / 0.1642  
[14/25][230/573] Loss_D: 0.5767 Loss_G: 1.5109 D(x): 0.6407 D(G(z)): 0.  
0830 / 0.2781  
[14/25][240/573] Loss_D: 0.4606 Loss_G: 2.3122 D(x): 0.8278 D(G(z)): 0.  
2149 / 0.1242  
[14/25][250/573] Loss_D: 0.8029 Loss_G: 2.7139 D(x): 0.9191 D(G(z)): 0.  
4660 / 0.0955  
[14/25][260/573] Loss_D: 0.4912 Loss_G: 2.3450 D(x): 0.7942 D(G(z)): 0.  
2109 / 0.1312  
[14/25][270/573] Loss_D: 0.2747 Loss_G: 2.7483 D(x): 0.9101 D(G(z)): 0.  
1575 / 0.0887  
[14/25][280/573] Loss_D: 0.4696 Loss_G: 2.1746 D(x): 0.7943 D(G(z)): 0.  
1942 / 0.1441  
[14/25][290/573] Loss_D: 0.4129 Loss_G: 2.3118 D(x): 0.8456 D(G(z)): 0.
```

```
1999 / 0.1322
[14/25][300/573] Loss_D: 0.3502 Loss_G: 2.2257 D(x): 0.9017 D(G(z)): 0.
2064 / 0.1361
[14/25][310/573] Loss_D: 0.5028 Loss_G: 2.5652 D(x): 0.8444 D(G(z)): 0.
2633 / 0.1028
[14/25][320/573] Loss_D: 0.3889 Loss_G: 2.9258 D(x): 0.8193 D(G(z)): 0.
1557 / 0.0713
[14/25][330/573] Loss_D: 0.5414 Loss_G: 2.5621 D(x): 0.8178 D(G(z)): 0.
2617 / 0.1090
[14/25][340/573] Loss_D: 0.6665 Loss_G: 2.2412 D(x): 0.8112 D(G(z)): 0.
3230 / 0.1656
[14/25][350/573] Loss_D: 0.6393 Loss_G: 2.0357 D(x): 0.7498 D(G(z)): 0.
2697 / 0.1666
[14/25][360/573] Loss_D: 0.5649 Loss_G: 2.7552 D(x): 0.8848 D(G(z)): 0.
3272 / 0.0853
[14/25][370/573] Loss_D: 0.5087 Loss_G: 2.3994 D(x): 0.6987 D(G(z)): 0.
0964 / 0.1250
[14/25][380/573] Loss_D: 0.6296 Loss_G: 3.2213 D(x): 0.9495 D(G(z)): 0.
4009 / 0.0524
[14/25][390/573] Loss_D: 0.8708 Loss_G: 3.0529 D(x): 0.9652 D(G(z)): 0.
5183 / 0.0608
[14/25][400/573] Loss_D: 0.5421 Loss_G: 1.9252 D(x): 0.6906 D(G(z)): 0.
1168 / 0.2299
[14/25][410/573] Loss_D: 0.4390 Loss_G: 2.2620 D(x): 0.7612 D(G(z)): 0.
1356 / 0.1315
[14/25][420/573] Loss_D: 0.4005 Loss_G: 1.6942 D(x): 0.8077 D(G(z)): 0.
1497 / 0.2299
[14/25][430/573] Loss_D: 0.4758 Loss_G: 2.1914 D(x): 0.8465 D(G(z)): 0.
2471 / 0.1353
[14/25][440/573] Loss_D: 0.5004 Loss_G: 1.8918 D(x): 0.7703 D(G(z)): 0.
1889 / 0.1970
[14/25][450/573] Loss_D: 0.5119 Loss_G: 1.8792 D(x): 0.7994 D(G(z)): 0.
2179 / 0.2006
[14/25][460/573] Loss_D: 0.6853 Loss_G: 1.4843 D(x): 0.6781 D(G(z)): 0.
2157 / 0.2798
[14/25][470/573] Loss_D: 0.3887 Loss_G: 2.8860 D(x): 0.8522 D(G(z)): 0.
1897 / 0.0746
[14/25][480/573] Loss_D: 0.5895 Loss_G: 2.1601 D(x): 0.7328 D(G(z)): 0.
2111 / 0.1443
[14/25][490/573] Loss_D: 0.4750 Loss_G: 2.8622 D(x): 0.9525 D(G(z)): 0.
3136 / 0.0749
[14/25][500/573] Loss_D: 0.4508 Loss_G: 2.5942 D(x): 0.8067 D(G(z)): 0.
1872 / 0.1046
[14/25][510/573] Loss_D: 0.5250 Loss_G: 1.7443 D(x): 0.7645 D(G(z)): 0.
1998 / 0.2244
[14/25][520/573] Loss_D: 0.7861 Loss_G: 0.7227 D(x): 0.5682 D(G(z)): 0.
1387 / 0.5474
[14/25][530/573] Loss_D: 2.2286 Loss_G: 0.0619 D(x): 0.1953 D(G(z)): 0.
1291 / 0.9454
[14/25][540/573] Loss_D: 0.5301 Loss_G: 2.6645 D(x): 0.8262 D(G(z)): 0.
2600 / 0.0951
[14/25][550/573] Loss_D: 0.6377 Loss_G: 2.4133 D(x): 0.7149 D(G(z)): 0.
2104 / 0.1181
[14/25][560/573] Loss_D: 0.5393 Loss_G: 2.0248 D(x): 0.7075 D(G(z)): 0.
1411 / 0.1686
[14/25][570/573] Loss_D: 0.6237 Loss_G: 1.8141 D(x): 0.6599 D(G(z)): 0.
1500 / 0.2011
```

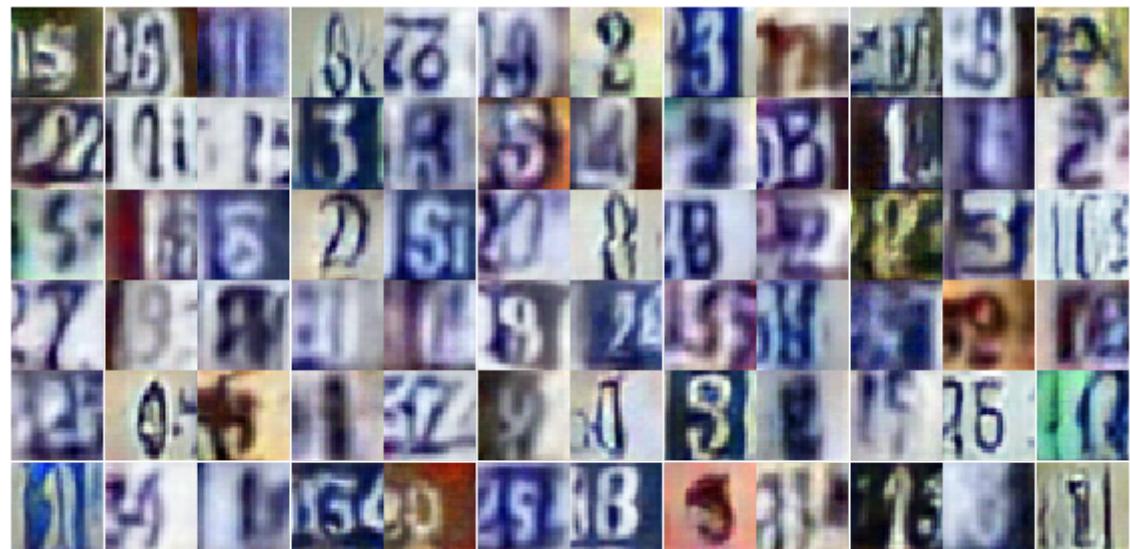
[15 / 25] [0 / 573] Loss_D: 0.6458 Loss_G: 1.6580 D(x): 0.6276 D(G(z)): 0.11
14 / 0.2429



```
[15/25][10/573] Loss_D: 0.3547 Loss_G: 2.6089 D(x): 0.8905 D(G(z)): 0.2  
016 / 0.0922  
[15/25][20/573] Loss_D: 0.3373 Loss_G: 2.3532 D(x): 0.8688 D(G(z)): 0.1  
666 / 0.1228  
[15/25][30/573] Loss_D: 0.3143 Loss_G: 2.7035 D(x): 0.8455 D(G(z)): 0.1  
242 / 0.0926  
[15/25][40/573] Loss_D: 0.8759 Loss_G: 1.0678 D(x): 0.5054 D(G(z)): 0.0  
885 / 0.3953  
[15/25][50/573] Loss_D: 0.7212 Loss_G: 1.9613 D(x): 0.6546 D(G(z)): 0.1  
943 / 0.2062  
[15/25][60/573] Loss_D: 0.7091 Loss_G: 2.0015 D(x): 0.8154 D(G(z)): 0.3  
591 / 0.1598  
[15/25][70/573] Loss_D: 0.3372 Loss_G: 3.1381 D(x): 0.8781 D(G(z)): 0.1  
685 / 0.0592  
[15/25][80/573] Loss_D: 0.9749 Loss_G: 3.0073 D(x): 0.9498 D(G(z)): 0.5  
728 / 0.0644  
[15/25][90/573] Loss_D: 0.6286 Loss_G: 2.3788 D(x): 0.8047 D(G(z)): 0.3  
079 / 0.1121  
[15/25][100/573] Loss_D: 0.4128 Loss_G: 2.6829 D(x): 0.8982 D(G(z)): 0.  
2482 / 0.0933  
[15/25][110/573] Loss_D: 0.3601 Loss_G: 2.5017 D(x): 0.9195 D(G(z)): 0.  
2201 / 0.1144  
[15/25][120/573] Loss_D: 0.5117 Loss_G: 1.8513 D(x): 0.7242 D(G(z)): 0.  
1317 / 0.2027  
[15/25][130/573] Loss_D: 0.5808 Loss_G: 3.1279 D(x): 0.9650 D(G(z)): 0.  
3939 / 0.0627  
[15/25][140/573] Loss_D: 0.4969 Loss_G: 2.2234 D(x): 0.7660 D(G(z)): 0.  
1833 / 0.1435  
[15/25][150/573] Loss_D: 1.2819 Loss_G: 0.9807 D(x): 0.4672 D(G(z)): 0.  
2577 / 0.4246  
[15/25][160/573] Loss_D: 0.4355 Loss_G: 2.3657 D(x): 0.7917 D(G(z)): 0.  
1651 / 0.1175  
[15/25][170/573] Loss_D: 0.3795 Loss_G: 2.9873 D(x): 0.8596 D(G(z)): 0.  
1771 / 0.0748  
[15/25][180/573] Loss_D: 0.6666 Loss_G: 2.0665 D(x): 0.6829 D(G(z)): 0.  
1968 / 0.1620  
[15/25][190/573] Loss_D: 0.9744 Loss_G: 0.9361 D(x): 0.4530 D(G(z)): 0.  
0629 / 0.4363  
[15/25][200/573] Loss_D: 0.4483 Loss_G: 1.8482 D(x): 0.7943 D(G(z)): 0.  
1722 / 0.1972  
[15/25][210/573] Loss_D: 0.3922 Loss_G: 2.6932 D(x): 0.8850 D(G(z)): 0.  
2228 / 0.0920  
[15/25][220/573] Loss_D: 0.3531 Loss_G: 2.4659 D(x): 0.8172 D(G(z)): 0.  
1267 / 0.1154  
[15/25][230/573] Loss_D: 0.3764 Loss_G: 2.2485 D(x): 0.7479 D(G(z)): 0.  
0600 / 0.1624  
[15/25][240/573] Loss_D: 0.3966 Loss_G: 2.8782 D(x): 0.8043 D(G(z)): 0.  
1415 / 0.0815  
[15/25][250/573] Loss_D: 2.7541 Loss_G: 6.5118 D(x): 0.9828 D(G(z)): 0.  
9025 / 0.0042  
[15/25][260/573] Loss_D: 1.1639 Loss_G: 3.2829 D(x): 0.8261 D(G(z)): 0.  
5134 / 0.0651  
[15/25][270/573] Loss_D: 0.5948 Loss_G: 1.5757 D(x): 0.6856 D(G(z)): 0.  
1537 / 0.2823  
[15/25][280/573] Loss_D: 0.8428 Loss_G: 2.7081 D(x): 0.7859 D(G(z)): 0.  
4088 / 0.0886  
[15/25][290/573] Loss_D: 0.6248 Loss_G: 2.3226 D(x): 0.7936 D(G(z)): 0.
```

```
2950 / 0.1304
[15/25][300/573] Loss_D: 0.5063 Loss_G: 2.0665 D(x): 0.7352 D(G(z)): 0.
1509 / 0.1662
[15/25][310/573] Loss_D: 0.4965 Loss_G: 2.4437 D(x): 0.8312 D(G(z)): 0.
2462 / 0.1142
[15/25][320/573] Loss_D: 0.4747 Loss_G: 1.3974 D(x): 0.7104 D(G(z)): 0.
0927 / 0.3100
[15/25][330/573] Loss_D: 0.5372 Loss_G: 3.2626 D(x): 0.9290 D(G(z)): 0.
3493 / 0.0506
[15/25][340/573] Loss_D: 0.6258 Loss_G: 1.9676 D(x): 0.6356 D(G(z)): 0.
1121 / 0.1811
[15/25][350/573] Loss_D: 0.3360 Loss_G: 3.1216 D(x): 0.8362 D(G(z)): 0.
1300 / 0.0662
[15/25][360/573] Loss_D: 0.4671 Loss_G: 2.0497 D(x): 0.7152 D(G(z)): 0.
0965 / 0.1744
[15/25][370/573] Loss_D: 0.6327 Loss_G: 3.5027 D(x): 0.9116 D(G(z)): 0.
3745 / 0.0421
[15/25][380/573] Loss_D: 0.7911 Loss_G: 1.5173 D(x): 0.5336 D(G(z)): 0.
0887 / 0.2650
[15/25][390/573] Loss_D: 0.4317 Loss_G: 2.7078 D(x): 0.8120 D(G(z)): 0.
1711 / 0.0971
[15/25][400/573] Loss_D: 0.5745 Loss_G: 1.7664 D(x): 0.6510 D(G(z)): 0.
1050 / 0.2302
[15/25][410/573] Loss_D: 0.7595 Loss_G: 2.0482 D(x): 0.5303 D(G(z)): 0.
0431 / 0.1829
[15/25][420/573] Loss_D: 0.8032 Loss_G: 2.0900 D(x): 0.7172 D(G(z)): 0.
3189 / 0.1684
[15/25][430/573] Loss_D: 0.4831 Loss_G: 1.9290 D(x): 0.7257 D(G(z)): 0.
1231 / 0.1845
[15/25][440/573] Loss_D: 0.4587 Loss_G: 1.9565 D(x): 0.7028 D(G(z)): 0.
0676 / 0.1816
[15/25][450/573] Loss_D: 0.4890 Loss_G: 1.4973 D(x): 0.7650 D(G(z)): 0.
1737 / 0.2682
[15/25][460/573] Loss_D: 0.7440 Loss_G: 1.1533 D(x): 0.5589 D(G(z)): 0.
0856 / 0.3679
[15/25][470/573] Loss_D: 0.3656 Loss_G: 2.8149 D(x): 0.9322 D(G(z)): 0.
2407 / 0.0816
[15/25][480/573] Loss_D: 0.3082 Loss_G: 2.1026 D(x): 0.8334 D(G(z)): 0.
1047 / 0.1667
[15/25][490/573] Loss_D: 0.5900 Loss_G: 1.7289 D(x): 0.7260 D(G(z)): 0.
2057 / 0.2319
[15/25][500/573] Loss_D: 0.6020 Loss_G: 1.6136 D(x): 0.6974 D(G(z)): 0.
1778 / 0.2314
[15/25][510/573] Loss_D: 0.3918 Loss_G: 2.3450 D(x): 0.8209 D(G(z)): 0.
1572 / 0.1368
[15/25][520/573] Loss_D: 0.6186 Loss_G: 1.8920 D(x): 0.6505 D(G(z)): 0.
1260 / 0.2105
[15/25][530/573] Loss_D: 0.5504 Loss_G: 2.1123 D(x): 0.7642 D(G(z)): 0.
2149 / 0.1514
[15/25][540/573] Loss_D: 0.4486 Loss_G: 2.1636 D(x): 0.7332 D(G(z)): 0.
1019 / 0.1508
[15/25][550/573] Loss_D: 0.4447 Loss_G: 2.6520 D(x): 0.9114 D(G(z)): 0.
2721 / 0.0987
[15/25][560/573] Loss_D: 0.4606 Loss_G: 1.7222 D(x): 0.7802 D(G(z)): 0.
1614 / 0.2271
[15/25][570/573] Loss_D: 0.7746 Loss_G: 1.8422 D(x): 0.7560 D(G(z)): 0.
3445 / 0.2079
```

[16 / 25] [0 / 573] Loss_D: 0.8030 Loss_G: 1.2463 D(x): 0.5510 D(G(z)): 0.11
56 / 0.3722



```
[16/25][10/573] Loss_D: 0.7064 Loss_G: 1.5951 D(x): 0.5678 D(G(z)): 0.0  
687 / 0.2624  
[16/25][20/573] Loss_D: 1.0832 Loss_G: 2.9566 D(x): 0.8963 D(G(z)): 0.5  
646 / 0.0799  
[16/25][30/573] Loss_D: 0.4584 Loss_G: 1.7541 D(x): 0.8317 D(G(z)): 0.1  
887 / 0.2147  
[16/25][40/573] Loss_D: 0.5163 Loss_G: 2.1605 D(x): 0.6870 D(G(z)): 0.0  
893 / 0.1531  
[16/25][50/573] Loss_D: 0.2858 Loss_G: 3.0183 D(x): 0.8650 D(G(z)): 0.1  
213 / 0.0642  
[16/25][60/573] Loss_D: 0.6105 Loss_G: 3.1688 D(x): 0.8331 D(G(z)): 0.3  
101 / 0.0614  
[16/25][70/573] Loss_D: 0.5389 Loss_G: 3.1056 D(x): 0.8687 D(G(z)): 0.3  
023 / 0.0585  
[16/25][80/573] Loss_D: 0.3476 Loss_G: 2.3015 D(x): 0.7944 D(G(z)): 0.0  
970 / 0.1375  
[16/25][90/573] Loss_D: 0.4402 Loss_G: 2.4702 D(x): 0.7560 D(G(z)): 0.1  
227 / 0.1239  
[16/25][100/573] Loss_D: 0.6606 Loss_G: 1.1134 D(x): 0.6876 D(G(z)): 0.  
1934 / 0.3878  
[16/25][110/573] Loss_D: 0.5378 Loss_G: 1.3753 D(x): 0.7403 D(G(z)): 0.  
1727 / 0.3281  
[16/25][120/573] Loss_D: 0.3868 Loss_G: 2.6723 D(x): 0.8654 D(G(z)): 0.  
1978 / 0.0991  
[16/25][130/573] Loss_D: 0.3371 Loss_G: 2.6718 D(x): 0.8199 D(G(z)): 0.  
1124 / 0.0988  
[16/25][140/573] Loss_D: 0.3177 Loss_G: 2.6251 D(x): 0.8545 D(G(z)): 0.  
1364 / 0.1038  
[16/25][150/573] Loss_D: 0.3397 Loss_G: 2.5477 D(x): 0.9523 D(G(z)): 0.  
2387 / 0.0965  
[16/25][160/573] Loss_D: 0.6310 Loss_G: 1.7356 D(x): 0.7185 D(G(z)): 0.  
2249 / 0.2120  
[16/25][170/573] Loss_D: 0.4471 Loss_G: 2.8973 D(x): 0.9379 D(G(z)): 0.  
2934 / 0.0745  
[16/25][180/573] Loss_D: 0.4024 Loss_G: 2.6000 D(x): 0.8620 D(G(z)): 0.  
2101 / 0.0966  
[16/25][190/573] Loss_D: 0.6928 Loss_G: 1.2468 D(x): 0.6203 D(G(z)): 0.  
1374 / 0.3382  
[16/25][200/573] Loss_D: 1.9750 Loss_G: 0.2638 D(x): 0.2180 D(G(z)): 0.  
0089 / 0.8237  
[16/25][210/573] Loss_D: 0.4895 Loss_G: 2.2593 D(x): 0.7418 D(G(z)): 0.  
1270 / 0.1765  
[16/25][220/573] Loss_D: 0.4965 Loss_G: 1.7868 D(x): 0.7491 D(G(z)): 0.  
1478 / 0.2389  
[16/25][230/573] Loss_D: 0.5822 Loss_G: 2.2424 D(x): 0.8156 D(G(z)): 0.  
2851 / 0.1393  
[16/25][240/573] Loss_D: 0.6475 Loss_G: 1.9847 D(x): 0.7039 D(G(z)): 0.  
2182 / 0.1694  
[16/25][250/573] Loss_D: 0.7629 Loss_G: 1.1005 D(x): 0.6267 D(G(z)): 0.  
1990 / 0.3814  
[16/25][260/573] Loss_D: 1.1004 Loss_G: 1.1894 D(x): 0.4376 D(G(z)): 0.  
1380 / 0.3922  
[16/25][270/573] Loss_D: 0.4482 Loss_G: 2.5794 D(x): 0.8811 D(G(z)): 0.  
2534 / 0.1047  
[16/25][280/573] Loss_D: 0.6355 Loss_G: 1.0471 D(x): 0.6756 D(G(z)): 0.  
1759 / 0.4247  
[16/25][290/573] Loss_D: 0.5490 Loss_G: 2.1237 D(x): 0.7278 D(G(z)): 0.
```

```
1730 / 0.1569
[16/25][300/573] Loss_D: 0.5116 Loss_G: 2.2250 D(x): 0.7676 D(G(z)): 0.
1871 / 0.1481
[16/25][310/573] Loss_D: 0.6791 Loss_G: 2.5495 D(x): 0.7025 D(G(z)): 0.
2225 / 0.1102
[16/25][320/573] Loss_D: 0.5582 Loss_G: 1.4462 D(x): 0.6880 D(G(z)): 0.
1289 / 0.2880
[16/25][330/573] Loss_D: 0.4646 Loss_G: 2.3644 D(x): 0.7622 D(G(z)): 0.
1526 / 0.1261
[16/25][340/573] Loss_D: 0.2978 Loss_G: 2.7544 D(x): 0.8534 D(G(z)): 0.
1184 / 0.0878
[16/25][350/573] Loss_D: 0.4550 Loss_G: 2.1018 D(x): 0.7609 D(G(z)): 0.
1413 / 0.1760
[16/25][360/573] Loss_D: 0.4773 Loss_G: 2.4252 D(x): 0.7977 D(G(z)): 0.
1984 / 0.1204
[16/25][370/573] Loss_D: 0.4932 Loss_G: 1.9333 D(x): 0.7041 D(G(z)): 0.
0992 / 0.1952
[16/25][380/573] Loss_D: 0.5432 Loss_G: 1.8405 D(x): 0.7210 D(G(z)): 0.
1569 / 0.2025
[16/25][390/573] Loss_D: 0.9125 Loss_G: 3.5186 D(x): 0.9565 D(G(z)): 0.
5322 / 0.0438
[16/25][400/573] Loss_D: 0.4831 Loss_G: 1.7016 D(x): 0.7139 D(G(z)): 0.
1047 / 0.2214
[16/25][410/573] Loss_D: 0.2764 Loss_G: 2.7464 D(x): 0.9167 D(G(z)): 0.
1621 / 0.0944
[16/25][420/573] Loss_D: 0.2410 Loss_G: 3.7226 D(x): 0.8661 D(G(z)): 0.
0846 / 0.0359
[16/25][430/573] Loss_D: 2.6704 Loss_G: 5.0751 D(x): 0.9948 D(G(z)): 0.
8785 / 0.0130
[16/25][440/573] Loss_D: 0.6812 Loss_G: 2.2719 D(x): 0.8948 D(G(z)): 0.
3956 / 0.1310
[16/25][450/573] Loss_D: 0.5021 Loss_G: 1.8199 D(x): 0.7834 D(G(z)): 0.
1949 / 0.1963
[16/25][460/573] Loss_D: 0.4711 Loss_G: 2.0304 D(x): 0.7418 D(G(z)): 0.
1283 / 0.1641
[16/25][470/573] Loss_D: 0.7351 Loss_G: 2.3097 D(x): 0.5552 D(G(z)): 0.
0701 / 0.1437
[16/25][480/573] Loss_D: 0.9004 Loss_G: 1.8337 D(x): 0.6779 D(G(z)): 0.
3330 / 0.2494
[16/25][490/573] Loss_D: 0.4374 Loss_G: 2.8788 D(x): 0.8335 D(G(z)): 0.
2069 / 0.0810
[16/25][500/573] Loss_D: 0.3183 Loss_G: 3.0468 D(x): 0.8907 D(G(z)): 0.
1699 / 0.0650
[16/25][510/573] Loss_D: 0.3117 Loss_G: 2.4567 D(x): 0.8734 D(G(z)): 0.
1483 / 0.1115
[16/25][520/573] Loss_D: 0.5897 Loss_G: 3.0001 D(x): 0.9050 D(G(z)): 0.
3537 / 0.0685
[16/25][530/573] Loss_D: 0.6010 Loss_G: 2.6428 D(x): 0.8474 D(G(z)): 0.
3231 / 0.0915
[16/25][540/573] Loss_D: 0.6732 Loss_G: 1.2931 D(x): 0.6117 D(G(z)): 0.
1057 / 0.3261
[16/25][550/573] Loss_D: 0.4661 Loss_G: 1.9081 D(x): 0.7829 D(G(z)): 0.
1750 / 0.1804
[16/25][560/573] Loss_D: 0.4573 Loss_G: 2.7748 D(x): 0.9216 D(G(z)): 0.
2914 / 0.0823
[16/25][570/573] Loss_D: 0.4921 Loss_G: 1.9321 D(x): 0.7295 D(G(z)): 0.
1298 / 0.2032
```

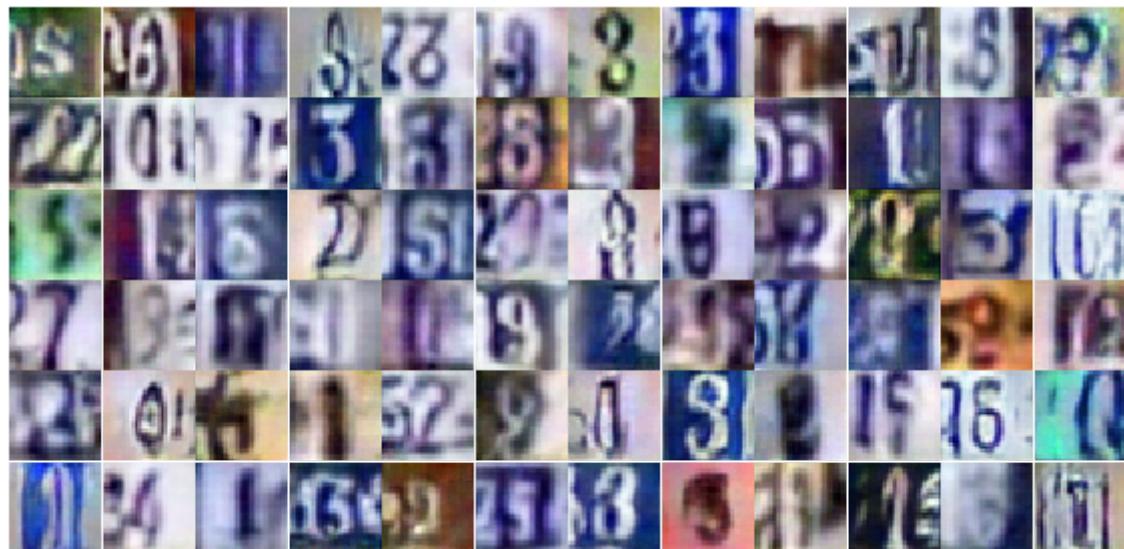
[17 / 25] [0 / 573] Loss_D: 0.3382 Loss_G: 2.7160 D(x): 0.8217 D(G(z)): 0.11
58 / 0.0936



```
[17/25][10/573] Loss_D: 0.4159 Loss_G: 2.7784 D(x): 0.9299 D(G(z)): 0.2  
680 / 0.0788  
[17/25][20/573] Loss_D: 0.4615 Loss_G: 2.3520 D(x): 0.7770 D(G(z)): 0.1  
674 / 0.1311  
[17/25][30/573] Loss_D: 0.4185 Loss_G: 2.6919 D(x): 0.8368 D(G(z)): 0.1  
856 / 0.1027  
[17/25][40/573] Loss_D: 0.2728 Loss_G: 2.7967 D(x): 0.8370 D(G(z)): 0.0  
801 / 0.0773  
[17/25][50/573] Loss_D: 0.5449 Loss_G: 2.8450 D(x): 0.8189 D(G(z)): 0.2  
597 / 0.0785  
[17/25][60/573] Loss_D: 0.5384 Loss_G: 2.3787 D(x): 0.8482 D(G(z)): 0.2  
828 / 0.1250  
[17/25][70/573] Loss_D: 0.5574 Loss_G: 2.4649 D(x): 0.8082 D(G(z)): 0.2  
478 / 0.1195  
[17/25][80/573] Loss_D: 0.5939 Loss_G: 2.2041 D(x): 0.8782 D(G(z)): 0.3  
356 / 0.1452  
[17/25][90/573] Loss_D: 0.4873 Loss_G: 2.4299 D(x): 0.7307 D(G(z)): 0.1  
286 / 0.1297  
[17/25][100/573] Loss_D: 0.4629 Loss_G: 2.2519 D(x): 0.8548 D(G(z)): 0.  
2398 / 0.1457  
[17/25][110/573] Loss_D: 0.3422 Loss_G: 3.3875 D(x): 0.8914 D(G(z)): 0.  
1862 / 0.0500  
[17/25][120/573] Loss_D: 0.3871 Loss_G: 3.3153 D(x): 0.9277 D(G(z)): 0.  
2512 / 0.0517  
[17/25][130/573] Loss_D: 0.5725 Loss_G: 2.7506 D(x): 0.8622 D(G(z)): 0.  
3068 / 0.0943  
[17/25][140/573] Loss_D: 0.6046 Loss_G: 1.7645 D(x): 0.6168 D(G(z)): 0.  
0600 / 0.2070  
[17/25][150/573] Loss_D: 0.3206 Loss_G: 2.8685 D(x): 0.8364 D(G(z)): 0.  
1193 / 0.0744  
[17/25][160/573] Loss_D: 0.9230 Loss_G: 1.3201 D(x): 0.4778 D(G(z)): 0.  
0657 / 0.3295  
[17/25][170/573] Loss_D: 0.7431 Loss_G: 1.7093 D(x): 0.5797 D(G(z)): 0.  
1199 / 0.2507  
[17/25][180/573] Loss_D: 0.3309 Loss_G: 2.5218 D(x): 0.8300 D(G(z)): 0.  
1195 / 0.1219  
[17/25][190/573] Loss_D: 0.7008 Loss_G: 1.6961 D(x): 0.5810 D(G(z)): 0.  
0729 / 0.2439  
[17/25][200/573] Loss_D: 0.3962 Loss_G: 2.5350 D(x): 0.8238 D(G(z)): 0.  
1662 / 0.1083  
[17/25][210/573] Loss_D: 0.5913 Loss_G: 2.7311 D(x): 0.8546 D(G(z)): 0.  
3213 / 0.0869  
[17/25][220/573] Loss_D: 0.4312 Loss_G: 2.7861 D(x): 0.8264 D(G(z)): 0.  
1973 / 0.0829  
[17/25][230/573] Loss_D: 0.4678 Loss_G: 2.2364 D(x): 0.7998 D(G(z)): 0.  
1946 / 0.1326  
[17/25][240/573] Loss_D: 0.4799 Loss_G: 2.2065 D(x): 0.7151 D(G(z)): 0.  
0912 / 0.1442  
[17/25][250/573] Loss_D: 0.5260 Loss_G: 2.9808 D(x): 0.9379 D(G(z)): 0.  
3410 / 0.0655  
[17/25][260/573] Loss_D: 0.4341 Loss_G: 3.8284 D(x): 0.9077 D(G(z)): 0.  
2604 / 0.0325  
[17/25][270/573] Loss_D: 0.5533 Loss_G: 2.2668 D(x): 0.7698 D(G(z)): 0.  
2240 / 0.1398  
[17/25][280/573] Loss_D: 0.4262 Loss_G: 1.7217 D(x): 0.7843 D(G(z)): 0.  
1422 / 0.2240  
[17/25][290/573] Loss_D: 0.6318 Loss_G: 3.0605 D(x): 0.8979 D(G(z)): 0.
```

3702 / 0.0649
[17/25][300/573] Loss_D: 0.5738 Loss_G: 3.8075 D(x): 0.9467 D(G(z)): 0.
3828 / 0.0301
[17/25][310/573] Loss_D: 0.6813 Loss_G: 1.6422 D(x): 0.6155 D(G(z)): 0.
1340 / 0.2408
[17/25][320/573] Loss_D: 1.2640 Loss_G: 2.9845 D(x): 0.8913 D(G(z)): 0.
6215 / 0.0912
[17/25][330/573] Loss_D: 0.4249 Loss_G: 2.1265 D(x): 0.7731 D(G(z)): 0.
1222 / 0.1647
[17/25][340/573] Loss_D: 0.3690 Loss_G: 2.6335 D(x): 0.8677 D(G(z)): 0.
1870 / 0.0978
[17/25][350/573] Loss_D: 0.3205 Loss_G: 2.7886 D(x): 0.8504 D(G(z)): 0.
1310 / 0.0942
[17/25][360/573] Loss_D: 0.2827 Loss_G: 2.9709 D(x): 0.8904 D(G(z)): 0.
1456 / 0.0663
[17/25][370/573] Loss_D: 0.3046 Loss_G: 2.9321 D(x): 0.9305 D(G(z)): 0.
1946 / 0.0788
[17/25][380/573] Loss_D: 0.5517 Loss_G: 1.9726 D(x): 0.6438 D(G(z)): 0.
0631 / 0.1745
[17/25][390/573] Loss_D: 0.9852 Loss_G: 0.6308 D(x): 0.4542 D(G(z)): 0.
0876 / 0.5735
[17/25][400/573] Loss_D: 0.5915 Loss_G: 2.1891 D(x): 0.7877 D(G(z)): 0.
2639 / 0.1564
[17/25][410/573] Loss_D: 0.5662 Loss_G: 2.8687 D(x): 0.7927 D(G(z)): 0.
2498 / 0.0827
[17/25][420/573] Loss_D: 1.2059 Loss_G: 0.2915 D(x): 0.4205 D(G(z)): 0.
1463 / 0.8085
[17/25][430/573] Loss_D: 1.0632 Loss_G: 1.0967 D(x): 0.5221 D(G(z)): 0.
1999 / 0.3970
[17/25][440/573] Loss_D: 0.5076 Loss_G: 1.5143 D(x): 0.7521 D(G(z)): 0.
1723 / 0.2647
[17/25][450/573] Loss_D: 0.3705 Loss_G: 2.2825 D(x): 0.7795 D(G(z)): 0.
0980 / 0.1503
[17/25][460/573] Loss_D: 0.7239 Loss_G: 1.2611 D(x): 0.5964 D(G(z)): 0.
1219 / 0.3506
[17/25][470/573] Loss_D: 0.5886 Loss_G: 1.8377 D(x): 0.6637 D(G(z)): 0.
1177 / 0.2172
[17/25][480/573] Loss_D: 0.4912 Loss_G: 2.2946 D(x): 0.8066 D(G(z)): 0.
2159 / 0.1391
[17/25][490/573] Loss_D: 0.4595 Loss_G: 2.2858 D(x): 0.7545 D(G(z)): 0.
1376 / 0.1425
[17/25][500/573] Loss_D: 0.4983 Loss_G: 1.8626 D(x): 0.7752 D(G(z)): 0.
1928 / 0.2025
[17/25][510/573] Loss_D: 0.4243 Loss_G: 2.5525 D(x): 0.7730 D(G(z)): 0.
1283 / 0.1091
[17/25][520/573] Loss_D: 0.4025 Loss_G: 2.5021 D(x): 0.7596 D(G(z)): 0.
0950 / 0.1156
[17/25][530/573] Loss_D: 0.3743 Loss_G: 2.4485 D(x): 0.8271 D(G(z)): 0.
1421 / 0.1131
[17/25][540/573] Loss_D: 0.6252 Loss_G: 2.1584 D(x): 0.8089 D(G(z)): 0.
3024 / 0.1547
[17/25][550/573] Loss_D: 0.4149 Loss_G: 2.1026 D(x): 0.7665 D(G(z)): 0.
1224 / 0.1600
[17/25][560/573] Loss_D: 0.5493 Loss_G: 2.4187 D(x): 0.7053 D(G(z)): 0.
1420 / 0.1210
[17/25][570/573] Loss_D: 0.5037 Loss_G: 2.3950 D(x): 0.8745 D(G(z)): 0.
2853 / 0.1277

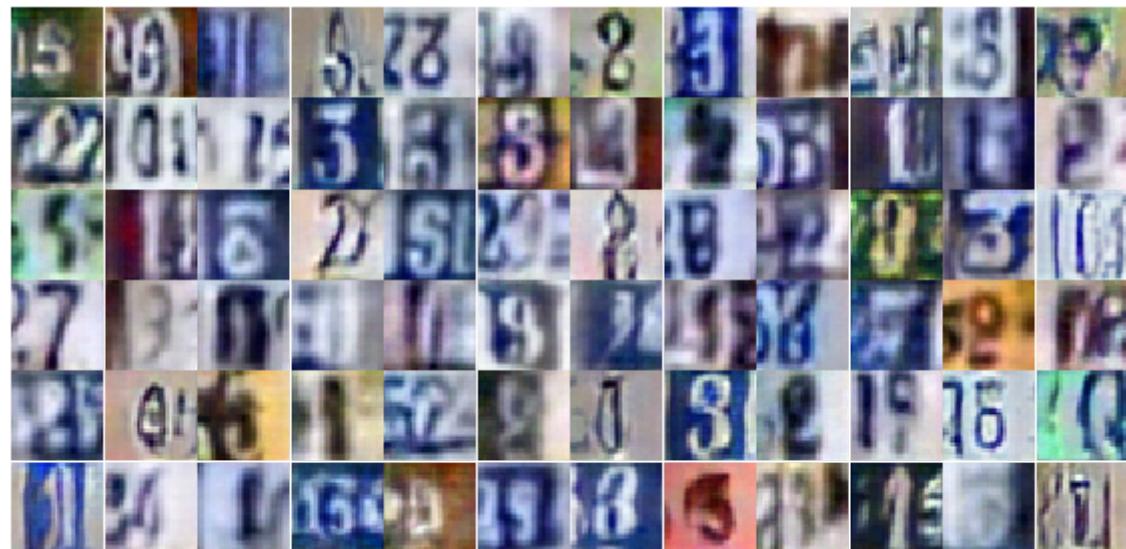
[18 / 25] [0 / 573] Loss_D: 0.6190 Loss_G: 1.7419 D(x): 0.7031 D(G(z)): 0.19
59 / 0.2200



```
[18/25][10/573] Loss_D: 0.3729 Loss_G: 2.5993 D(x): 0.8916 D(G(z)): 0.2  
121 / 0.1022  
[18/25][20/573] Loss_D: 0.2972 Loss_G: 3.6332 D(x): 0.9065 D(G(z)): 0.1  
628 / 0.0365  
[18/25][30/573] Loss_D: 0.3853 Loss_G: 2.4636 D(x): 0.7633 D(G(z)): 0.0  
824 / 0.1132  
[18/25][40/573] Loss_D: 0.5677 Loss_G: 2.1712 D(x): 0.7797 D(G(z)): 0.2  
363 / 0.1530  
[18/25][50/573] Loss_D: 0.3505 Loss_G: 2.8102 D(x): 0.8802 D(G(z)): 0.1  
849 / 0.0806  
[18/25][60/573] Loss_D: 0.6871 Loss_G: 2.0209 D(x): 0.5612 D(G(z)): 0.0  
361 / 0.1965  
[18/25][70/573] Loss_D: 0.4361 Loss_G: 2.3893 D(x): 0.8437 D(G(z)): 0.2  
101 / 0.1255  
[18/25][80/573] Loss_D: 0.6582 Loss_G: 3.2196 D(x): 0.9603 D(G(z)): 0.4  
247 / 0.0502  
[18/25][90/573] Loss_D: 0.5372 Loss_G: 2.0170 D(x): 0.6537 D(G(z)): 0.0  
633 / 0.1831  
[18/25][100/573] Loss_D: 0.3533 Loss_G: 2.3096 D(x): 0.8411 D(G(z)): 0.  
1451 / 0.1342  
[18/25][110/573] Loss_D: 0.3206 Loss_G: 2.4341 D(x): 0.8428 D(G(z)): 0.  
1234 / 0.1176  
[18/25][120/573] Loss_D: 0.4099 Loss_G: 3.4075 D(x): 0.9626 D(G(z)): 0.  
2908 / 0.0432  
[18/25][130/573] Loss_D: 0.4480 Loss_G: 2.1523 D(x): 0.7313 D(G(z)): 0.  
0964 / 0.1620  
[18/25][140/573] Loss_D: 0.7043 Loss_G: 3.9755 D(x): 0.9582 D(G(z)): 0.  
4276 / 0.0334  
[18/25][150/573] Loss_D: 0.7192 Loss_G: 2.9643 D(x): 0.8244 D(G(z)): 0.  
3623 / 0.0920  
[18/25][160/573] Loss_D: 1.1592 Loss_G: 5.1149 D(x): 0.9204 D(G(z)): 0.  
5933 / 0.0148  
[18/25][170/573] Loss_D: 0.8944 Loss_G: 1.8188 D(x): 0.5115 D(G(z)): 0.  
0903 / 0.2372  
[18/25][180/573] Loss_D: 0.3389 Loss_G: 3.5204 D(x): 0.8634 D(G(z)): 0.  
1574 / 0.0471  
[18/25][190/573] Loss_D: 0.5482 Loss_G: 2.4367 D(x): 0.8140 D(G(z)): 0.  
2608 / 0.1204  
[18/25][200/573] Loss_D: 0.4750 Loss_G: 2.6537 D(x): 0.8063 D(G(z)): 0.  
1917 / 0.0960  
[18/25][210/573] Loss_D: 0.3076 Loss_G: 2.9414 D(x): 0.8856 D(G(z)): 0.  
1577 / 0.0730  
[18/25][220/573] Loss_D: 0.3753 Loss_G: 2.6235 D(x): 0.7667 D(G(z)): 0.  
0795 / 0.0996  
[18/25][230/573] Loss_D: 0.7970 Loss_G: 1.4385 D(x): 0.5239 D(G(z)): 0.  
0710 / 0.3017  
[18/25][240/573] Loss_D: 0.4133 Loss_G: 2.0614 D(x): 0.7655 D(G(z)): 0.  
1160 / 0.1766  
[18/25][250/573] Loss_D: 0.6143 Loss_G: 1.8298 D(x): 0.6182 D(G(z)): 0.  
0734 / 0.2200  
[18/25][260/573] Loss_D: 0.8579 Loss_G: 5.6357 D(x): 0.9058 D(G(z)): 0.  
4598 / 0.0071  
[18/25][270/573] Loss_D: 1.6745 Loss_G: 3.8154 D(x): 0.9213 D(G(z)): 0.  
7252 / 0.0463  
[18/25][280/573] Loss_D: 1.0804 Loss_G: 1.0802 D(x): 0.4746 D(G(z)): 0.  
1838 / 0.4007  
[18/25][290/573] Loss_D: 0.4164 Loss_G: 2.6297 D(x): 0.7426 D(G(z)): 0.
```

0837 / 0.0979
[18/25][300/573] Loss_D: 0.4902 Loss_G: 1.9838 D(x): 0.7218 D(G(z)): 0.
1254 / 0.1975
[18/25][310/573] Loss_D: 0.3347 Loss_G: 2.4003 D(x): 0.8429 D(G(z)): 0.
1349 / 0.1147
[18/25][320/573] Loss_D: 0.3294 Loss_G: 2.7576 D(x): 0.9021 D(G(z)): 0.
1799 / 0.0906
[18/25][330/573] Loss_D: 0.3307 Loss_G: 2.3239 D(x): 0.9012 D(G(z)): 0.
1864 / 0.1257
[18/25][340/573] Loss_D: 0.6769 Loss_G: 2.3755 D(x): 0.8152 D(G(z)): 0.
3220 / 0.1307
[18/25][350/573] Loss_D: 1.0981 Loss_G: 3.6201 D(x): 0.9657 D(G(z)): 0.
6014 / 0.0364
[18/25][360/573] Loss_D: 0.5943 Loss_G: 2.0835 D(x): 0.8186 D(G(z)): 0.
2898 / 0.1769
[18/25][370/573] Loss_D: 0.6742 Loss_G: 1.4364 D(x): 0.5895 D(G(z)): 0.
0781 / 0.3179
[18/25][380/573] Loss_D: 0.5708 Loss_G: 2.7631 D(x): 0.8586 D(G(z)): 0.
3159 / 0.0803
[18/25][390/573] Loss_D: 0.5065 Loss_G: 2.8833 D(x): 0.9087 D(G(z)): 0.
3126 / 0.0739
[18/25][400/573] Loss_D: 0.3993 Loss_G: 2.4254 D(x): 0.8149 D(G(z)): 0.
1563 / 0.1231
[18/25][410/573] Loss_D: 0.3892 Loss_G: 2.8055 D(x): 0.8389 D(G(z)): 0.
1742 / 0.0811
[18/25][420/573] Loss_D: 0.2741 Loss_G: 3.0170 D(x): 0.8701 D(G(z)): 0.
1174 / 0.0695
[18/25][430/573] Loss_D: 0.5541 Loss_G: 3.5332 D(x): 0.9081 D(G(z)): 0.
3349 / 0.0465
[18/25][440/573] Loss_D: 0.3429 Loss_G: 2.5309 D(x): 0.7985 D(G(z)): 0.
0935 / 0.1136
[18/25][450/573] Loss_D: 0.7743 Loss_G: 2.4463 D(x): 0.7165 D(G(z)): 0.
3111 / 0.1179
[18/25][460/573] Loss_D: 2.4848 Loss_G: 0.8118 D(x): 0.1835 D(G(z)): 0.
1845 / 0.6132
[18/25][470/573] Loss_D: 1.7123 Loss_G: 0.4277 D(x): 0.3485 D(G(z)): 0.
3098 / 0.6794
[18/25][480/573] Loss_D: 1.5412 Loss_G: 2.4419 D(x): 0.7303 D(G(z)): 0.
6576 / 0.1174
[18/25][490/573] Loss_D: 0.9548 Loss_G: 1.2081 D(x): 0.5269 D(G(z)): 0.
1259 / 0.3777
[18/25][500/573] Loss_D: 0.8072 Loss_G: 3.0596 D(x): 0.8237 D(G(z)): 0.
4098 / 0.0760
[18/25][510/573] Loss_D: 0.6941 Loss_G: 1.6070 D(x): 0.6470 D(G(z)): 0.
1574 / 0.2426
[18/25][520/573] Loss_D: 0.3970 Loss_G: 2.9879 D(x): 0.8957 D(G(z)): 0.
2238 / 0.0761
[18/25][530/573] Loss_D: 0.4401 Loss_G: 2.3840 D(x): 0.7774 D(G(z)): 0.
1501 / 0.1314
[18/25][540/573] Loss_D: 0.7867 Loss_G: 0.9353 D(x): 0.6350 D(G(z)): 0.
2230 / 0.4352
[18/25][550/573] Loss_D: 0.4081 Loss_G: 2.2077 D(x): 0.7470 D(G(z)): 0.
0900 / 0.1681
[18/25][560/573] Loss_D: 0.6156 Loss_G: 2.0192 D(x): 0.7715 D(G(z)): 0.
2590 / 0.1849
[18/25][570/573] Loss_D: 0.3504 Loss_G: 2.9975 D(x): 0.9207 D(G(z)): 0.
2140 / 0.0678

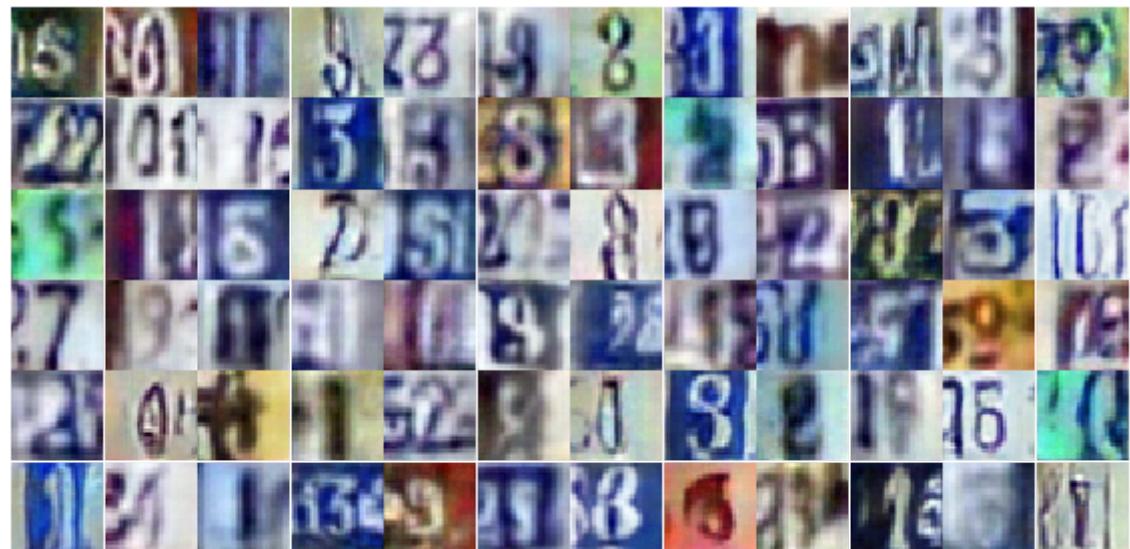
[19 / 25] [0 / 573] Loss_D: 0.5939 Loss_G: 1.9320 D(x): 0.8303 D(G(z)): 0.30
29 / 0.1956



```
[19/25][10/573] Loss_D: 0.4892 Loss_G: 2.4885 D(x): 0.7328 D(G(z)): 0.1  
362 / 0.1304  
[19/25][20/573] Loss_D: 0.5008 Loss_G: 2.3567 D(x): 0.8614 D(G(z)): 0.2  
724 / 0.1222  
[19/25][30/573] Loss_D: 0.6137 Loss_G: 1.8006 D(x): 0.7432 D(G(z)): 0.2  
377 / 0.2067  
[19/25][40/573] Loss_D: 0.4403 Loss_G: 2.7606 D(x): 0.9358 D(G(z)): 0.2  
806 / 0.0938  
[19/25][50/573] Loss_D: 0.4036 Loss_G: 2.2066 D(x): 0.7816 D(G(z)): 0.1  
289 / 0.1467  
[19/25][60/573] Loss_D: 0.5324 Loss_G: 2.0360 D(x): 0.8266 D(G(z)): 0.2  
608 / 0.1581  
[19/25][70/573] Loss_D: 0.3260 Loss_G: 2.8235 D(x): 0.8893 D(G(z)): 0.1  
749 / 0.0840  
[19/25][80/573] Loss_D: 0.7119 Loss_G: 2.7014 D(x): 0.8051 D(G(z)): 0.3  
551 / 0.0913  
[19/25][90/573] Loss_D: 0.8139 Loss_G: 1.1865 D(x): 0.6139 D(G(z)): 0.2  
009 / 0.3588  
[19/25][100/573] Loss_D: 0.5342 Loss_G: 3.2713 D(x): 0.6434 D(G(z)): 0.  
0330 / 0.0622  
[19/25][110/573] Loss_D: 0.8557 Loss_G: 1.3706 D(x): 0.5346 D(G(z)): 0.  
1191 / 0.2982  
[19/25][120/573] Loss_D: 0.4327 Loss_G: 2.4816 D(x): 0.8612 D(G(z)): 0.  
2246 / 0.1114  
[19/25][130/573] Loss_D: 0.5572 Loss_G: 2.3895 D(x): 0.8659 D(G(z)): 0.  
3114 / 0.1168  
[19/25][140/573] Loss_D: 0.4335 Loss_G: 2.3236 D(x): 0.8059 D(G(z)): 0.  
1737 / 0.1342  
[19/25][150/573] Loss_D: 0.5153 Loss_G: 1.5938 D(x): 0.6876 D(G(z)): 0.  
0924 / 0.2569  
[19/25][160/573] Loss_D: 0.4414 Loss_G: 2.0946 D(x): 0.8472 D(G(z)): 0.  
2194 / 0.1598  
[19/25][170/573] Loss_D: 0.5369 Loss_G: 3.3421 D(x): 0.9297 D(G(z)): 0.  
3333 / 0.0557  
[19/25][180/573] Loss_D: 0.6065 Loss_G: 2.5504 D(x): 0.7678 D(G(z)): 0.  
2578 / 0.1036  
[19/25][190/573] Loss_D: 0.5914 Loss_G: 2.2990 D(x): 0.6086 D(G(z)): 0.  
0426 / 0.1484  
[19/25][200/573] Loss_D: 0.4096 Loss_G: 2.5625 D(x): 0.7237 D(G(z)): 0.  
0591 / 0.1201  
[19/25][210/573] Loss_D: 0.6366 Loss_G: 1.6049 D(x): 0.6254 D(G(z)): 0.  
1037 / 0.2457  
[19/25][220/573] Loss_D: 1.1014 Loss_G: 0.9814 D(x): 0.5844 D(G(z)): 0.  
2775 / 0.4684  
[19/25][230/573] Loss_D: 0.3884 Loss_G: 3.0517 D(x): 0.8582 D(G(z)): 0.  
1893 / 0.0695  
[19/25][240/573] Loss_D: 0.5317 Loss_G: 2.8842 D(x): 0.9000 D(G(z)): 0.  
3172 / 0.0813  
[19/25][250/573] Loss_D: 0.3751 Loss_G: 2.2590 D(x): 0.8038 D(G(z)): 0.  
1253 / 0.1502  
[19/25][260/573] Loss_D: 0.4052 Loss_G: 1.9716 D(x): 0.7607 D(G(z)): 0.  
1054 / 0.1804  
[19/25][270/573] Loss_D: 0.6232 Loss_G: 1.8022 D(x): 0.8146 D(G(z)): 0.  
2960 / 0.2105  
[19/25][280/573] Loss_D: 0.8391 Loss_G: 1.3141 D(x): 0.6283 D(G(z)): 0.  
2635 / 0.3270  
[19/25][290/573] Loss_D: 0.3975 Loss_G: 2.5751 D(x): 0.8646 D(G(z)): 0.
```

```
2070 / 0.1036
[19/25][300/573] Loss_D: 0.4985 Loss_G: 1.9796 D(x): 0.6900 D(G(z)): 0.
0849 / 0.1966
[19/25][310/573] Loss_D: 0.4547 Loss_G: 2.8448 D(x): 0.8673 D(G(z)): 0.
2492 / 0.0749
[19/25][320/573] Loss_D: 0.3906 Loss_G: 2.8705 D(x): 0.7733 D(G(z)): 0.
0954 / 0.0791
[19/25][330/573] Loss_D: 0.5343 Loss_G: 1.2637 D(x): 0.7254 D(G(z)): 0.
1534 / 0.3275
[19/25][340/573] Loss_D: 0.6742 Loss_G: 2.1636 D(x): 0.8367 D(G(z)): 0.
3526 / 0.1511
[19/25][350/573] Loss_D: 0.5386 Loss_G: 2.4489 D(x): 0.9189 D(G(z)): 0.
3358 / 0.1120
[19/25][360/573] Loss_D: 0.3826 Loss_G: 2.5072 D(x): 0.9040 D(G(z)): 0.
2264 / 0.1130
[19/25][370/573] Loss_D: 0.8360 Loss_G: 3.1360 D(x): 0.9090 D(G(z)): 0.
4702 / 0.0640
[19/25][380/573] Loss_D: 0.6430 Loss_G: 1.5724 D(x): 0.6911 D(G(z)): 0.
1939 / 0.2686
[19/25][390/573] Loss_D: 0.5172 Loss_G: 3.3580 D(x): 0.9416 D(G(z)): 0.
3364 / 0.0507
[19/25][400/573] Loss_D: 0.8410 Loss_G: 3.1441 D(x): 0.9033 D(G(z)): 0.
4799 / 0.0719
[19/25][410/573] Loss_D: 0.4389 Loss_G: 2.7317 D(x): 0.7617 D(G(z)): 0.
1245 / 0.0946
[19/25][420/573] Loss_D: 0.4113 Loss_G: 3.6198 D(x): 0.8977 D(G(z)): 0.
2286 / 0.0419
[19/25][430/573] Loss_D: 0.7088 Loss_G: 1.3556 D(x): 0.5728 D(G(z)): 0.
0786 / 0.3437
[19/25][440/573] Loss_D: 0.5766 Loss_G: 2.4357 D(x): 0.7949 D(G(z)): 0.
2653 / 0.1230
[19/25][450/573] Loss_D: 0.3264 Loss_G: 2.6152 D(x): 0.7959 D(G(z)): 0.
0748 / 0.1107
[19/25][460/573] Loss_D: 0.5875 Loss_G: 1.6495 D(x): 0.6780 D(G(z)): 0.
1399 / 0.2443
[19/25][470/573] Loss_D: 0.8295 Loss_G: 3.0981 D(x): 0.9301 D(G(z)): 0.
4801 / 0.0671
[19/25][480/573] Loss_D: 0.3834 Loss_G: 2.4463 D(x): 0.7712 D(G(z)): 0.
0940 / 0.1228
[19/25][490/573] Loss_D: 0.1992 Loss_G: 3.1638 D(x): 0.8768 D(G(z)): 0.
0555 / 0.0577
[19/25][500/573] Loss_D: 0.3390 Loss_G: 3.2943 D(x): 0.9372 D(G(z)): 0.
2231 / 0.0514
[19/25][510/573] Loss_D: 0.3068 Loss_G: 2.5387 D(x): 0.8057 D(G(z)): 0.
0743 / 0.1114
[19/25][520/573] Loss_D: 0.6037 Loss_G: 2.2956 D(x): 0.8487 D(G(z)): 0.
3238 / 0.1238
[19/25][530/573] Loss_D: 0.6073 Loss_G: 1.3032 D(x): 0.6403 D(G(z)): 0.
0934 / 0.3581
[19/25][540/573] Loss_D: 0.7032 Loss_G: 2.6779 D(x): 0.8829 D(G(z)): 0.
3931 / 0.1043
[19/25][550/573] Loss_D: 0.4392 Loss_G: 2.3068 D(x): 0.7223 D(G(z)): 0.
0765 / 0.1479
[19/25][560/573] Loss_D: 0.5746 Loss_G: 2.0913 D(x): 0.7856 D(G(z)): 0.
2399 / 0.1662
[19/25][570/573] Loss_D: 0.7576 Loss_G: 2.2662 D(x): 0.5428 D(G(z)): 0.
0460 / 0.1641
```

[20 / 25] [0 / 573] Loss_D: 0.5709 Loss_G: 1.4781 D(x): 0.7181 D(G(z)): 0.17
91 / 0.2780



```
[20/25][10/573] Loss_D: 0.3532 Loss_G: 3.1617 D(x): 0.8299 D(G(z)): 0.1  
357 / 0.0696  
[20/25][20/573] Loss_D: 0.4650 Loss_G: 1.8748 D(x): 0.7024 D(G(z)): 0.0  
749 / 0.2130  
[20/25][30/573] Loss_D: 1.6661 Loss_G: 0.7135 D(x): 0.2502 D(G(z)): 0.0  
517 / 0.5489  
[20/25][40/573] Loss_D: 0.6734 Loss_G: 2.7192 D(x): 0.7999 D(G(z)): 0.3  
212 / 0.0882  
[20/25][50/573] Loss_D: 0.8908 Loss_G: 1.2772 D(x): 0.5224 D(G(z)): 0.1  
299 / 0.3283  
[20/25][60/573] Loss_D: 0.5843 Loss_G: 2.3843 D(x): 0.8788 D(G(z)): 0.3  
314 / 0.1248  
[20/25][70/573] Loss_D: 0.5537 Loss_G: 1.8767 D(x): 0.7722 D(G(z)): 0.2  
102 / 0.2062  
[20/25][80/573] Loss_D: 0.5040 Loss_G: 1.6859 D(x): 0.7610 D(G(z)): 0.1  
794 / 0.2348  
[20/25][90/573] Loss_D: 0.7213 Loss_G: 1.1529 D(x): 0.5795 D(G(z)): 0.0  
893 / 0.3637  
[20/25][100/573] Loss_D: 0.3662 Loss_G: 2.8396 D(x): 0.9213 D(G(z)): 0.  
2323 / 0.0772  
[20/25][110/573] Loss_D: 0.4646 Loss_G: 2.4273 D(x): 0.6938 D(G(z)): 0.  
0598 / 0.1262  
[20/25][120/573] Loss_D: 1.5729 Loss_G: 3.4970 D(x): 0.8731 D(G(z)): 0.  
6923 / 0.0440  
[20/25][130/573] Loss_D: 0.5614 Loss_G: 1.3753 D(x): 0.6929 D(G(z)): 0.  
1361 / 0.3016  
[20/25][140/573] Loss_D: 0.4561 Loss_G: 1.8127 D(x): 0.7993 D(G(z)): 0.  
1736 / 0.2165  
[20/25][150/573] Loss_D: 0.4083 Loss_G: 2.2765 D(x): 0.7632 D(G(z)): 0.  
1068 / 0.1426  
[20/25][160/573] Loss_D: 0.4114 Loss_G: 2.8595 D(x): 0.8898 D(G(z)): 0.  
2358 / 0.0759  
[20/25][170/573] Loss_D: 0.4068 Loss_G: 3.2627 D(x): 0.8569 D(G(z)): 0.  
1969 / 0.0513  
[20/25][180/573] Loss_D: 0.6976 Loss_G: 2.9522 D(x): 0.9291 D(G(z)): 0.  
4218 / 0.0775  
[20/25][190/573] Loss_D: 0.5726 Loss_G: 3.0997 D(x): 0.6372 D(G(z)): 0.  
0688 / 0.0852  
[20/25][200/573] Loss_D: 0.6588 Loss_G: 1.6607 D(x): 0.5960 D(G(z)): 0.  
0685 / 0.2978  
[20/25][210/573] Loss_D: 0.2395 Loss_G: 3.2666 D(x): 0.9329 D(G(z)): 0.  
1445 / 0.0542  
[20/25][220/573] Loss_D: 0.4139 Loss_G: 2.3767 D(x): 0.8634 D(G(z)): 0.  
2111 / 0.1209  
[20/25][230/573] Loss_D: 0.4012 Loss_G: 2.6350 D(x): 0.8800 D(G(z)): 0.  
2195 / 0.0986  
[20/25][240/573] Loss_D: 0.7884 Loss_G: 3.8411 D(x): 0.9294 D(G(z)): 0.  
4736 / 0.0364  
[20/25][250/573] Loss_D: 0.5261 Loss_G: 1.7154 D(x): 0.7269 D(G(z)): 0.  
1608 / 0.2281  
[20/25][260/573] Loss_D: 0.3315 Loss_G: 2.4503 D(x): 0.8645 D(G(z)): 0.  
1574 / 0.1107  
[20/25][270/573] Loss_D: 0.2865 Loss_G: 3.4348 D(x): 0.9520 D(G(z)): 0.  
1939 / 0.0457  
[20/25][280/573] Loss_D: 0.5110 Loss_G: 1.6924 D(x): 0.8073 D(G(z)): 0.  
2334 / 0.2227  
[20/25][290/573] Loss_D: 0.3979 Loss_G: 2.6781 D(x): 0.8723 D(G(z)): 0.
```

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2088 / 0.0933
[20/25][300/573] Loss_D: 0.4366 Loss_G: 2.4151 D(x): 0.8209 D(G(z)): 0.
1965 / 0.1277
[20/25][310/573] Loss_D: 0.5495 Loss_G: 2.3089 D(x): 0.7271 D(G(z)): 0.
1694 / 0.1488
[20/25][320/573] Loss_D: 0.5828 Loss_G: 3.2202 D(x): 0.8460 D(G(z)): 0.
3075 / 0.0548
[20/25][330/573] Loss_D: 0.5086 Loss_G: 2.4380 D(x): 0.6743 D(G(z)): 0.
0699 / 0.1275
[20/25][340/573] Loss_D: 0.3751 Loss_G: 2.2201 D(x): 0.8625 D(G(z)): 0.
1833 / 0.1542
[20/25][350/573] Loss_D: 0.3308 Loss_G: 2.6605 D(x): 0.8918 D(G(z)): 0.
1778 / 0.0963
[20/25][360/573] Loss_D: 0.3117 Loss_G: 2.3695 D(x): 0.8970 D(G(z)): 0.
1728 / 0.1221
[20/25][370/573] Loss_D: 0.4316 Loss_G: 2.1650 D(x): 0.8767 D(G(z)): 0.
2398 / 0.1481
[20/25][380/573] Loss_D: 0.3050 Loss_G: 2.8786 D(x): 0.9091 D(G(z)): 0.
1766 / 0.0812
[20/25][390/573] Loss_D: 0.3643 Loss_G: 4.0498 D(x): 0.9168 D(G(z)): 0.
2184 / 0.0261
[20/25][400/573] Loss_D: 0.7688 Loss_G: 1.2246 D(x): 0.5827 D(G(z)): 0.
1001 / 0.3845
[20/25][410/573] Loss_D: 0.6196 Loss_G: 3.8835 D(x): 0.9538 D(G(z)): 0.
3908 / 0.0387
[20/25][420/573] Loss_D: 0.8294 Loss_G: 1.7558 D(x): 0.5002 D(G(z)): 0.
0439 / 0.2574
[20/25][430/573] Loss_D: 0.8271 Loss_G: 1.0285 D(x): 0.5235 D(G(z)): 0.
0841 / 0.4266
[20/25][440/573] Loss_D: 0.5368 Loss_G: 2.1488 D(x): 0.7271 D(G(z)): 0.
1610 / 0.1648
[20/25][450/573] Loss_D: 0.9013 Loss_G: 3.2916 D(x): 0.9235 D(G(z)): 0.
5097 / 0.0540
[20/25][460/573] Loss_D: 0.6853 Loss_G: 2.7470 D(x): 0.8879 D(G(z)): 0.
3805 / 0.1174
[20/25][470/573] Loss_D: 0.5391 Loss_G: 3.0554 D(x): 0.9079 D(G(z)): 0.
3282 / 0.0682
[20/25][480/573] Loss_D: 0.3720 Loss_G: 3.1470 D(x): 0.8194 D(G(z)): 0.
1379 / 0.0668
[20/25][490/573] Loss_D: 0.3073 Loss_G: 2.7433 D(x): 0.8758 D(G(z)): 0.
1428 / 0.0882
[20/25][500/573] Loss_D: 0.5126 Loss_G: 2.5785 D(x): 0.7237 D(G(z)): 0.
1432 / 0.1043
[20/25][510/573] Loss_D: 0.4853 Loss_G: 2.2551 D(x): 0.7017 D(G(z)): 0.
0796 / 0.1417
[20/25][520/573] Loss_D: 0.3503 Loss_G: 2.1667 D(x): 0.8623 D(G(z)): 0.
1668 / 0.1626
[20/25][530/573] Loss_D: 0.3560 Loss_G: 2.8530 D(x): 0.8982 D(G(z)): 0.
2023 / 0.0835
[20/25][540/573] Loss_D: 0.5180 Loss_G: 3.1387 D(x): 0.9217 D(G(z)): 0.
3261 / 0.0609
[20/25][550/573] Loss_D: 0.7467 Loss_G: 4.0363 D(x): 0.9357 D(G(z)): 0.
4447 / 0.0304
[20/25][560/573] Loss_D: 0.5073 Loss_G: 2.0775 D(x): 0.8054 D(G(z)): 0.
2115 / 0.1738
[20/25][570/573] Loss_D: 0.4808 Loss_G: 2.7707 D(x): 0.9397 D(G(z)): 0.
3139 / 0.0859
```

[21/25] [0/573] Loss_D: 0.4324 Loss_G: 1.9473 D(x): 0.8025 D(G(z)): 0.17
02 / 0.1802



```
[21/25][10/573] Loss_D: 0.6283 Loss_G: 1.6638 D(x): 0.6932 D(G(z)): 0.1  
934 / 0.2406  
[21/25][20/573] Loss_D: 0.2400 Loss_G: 2.8691 D(x): 0.8743 D(G(z)): 0.0  
939 / 0.0778  
[21/25][30/573] Loss_D: 0.3984 Loss_G: 3.4404 D(x): 0.9687 D(G(z)): 0.2  
827 / 0.0472  
[21/25][40/573] Loss_D: 0.4532 Loss_G: 1.7669 D(x): 0.7800 D(G(z)): 0.1  
576 / 0.2318  
[21/25][50/573] Loss_D: 2.8389 Loss_G: 6.1390 D(x): 0.9782 D(G(z)): 0.8  
922 / 0.0074  
[21/25][60/573] Loss_D: 1.0684 Loss_G: 2.1899 D(x): 0.7799 D(G(z)): 0.4  
806 / 0.1784  
[21/25][70/573] Loss_D: 0.8847 Loss_G: 3.2224 D(x): 0.8379 D(G(z)): 0.4  
532 / 0.0599  
[21/25][80/573] Loss_D: 0.4564 Loss_G: 2.7008 D(x): 0.7464 D(G(z)): 0.1  
186 / 0.0941  
[21/25][90/573] Loss_D: 0.5687 Loss_G: 1.9886 D(x): 0.7510 D(G(z)): 0.2  
134 / 0.1749  
[21/25][100/573] Loss_D: 0.5363 Loss_G: 3.3485 D(x): 0.8772 D(G(z)): 0.  
3069 / 0.0499  
[21/25][110/573] Loss_D: 0.5492 Loss_G: 2.1355 D(x): 0.7113 D(G(z)): 0.  
1494 / 0.1662  
[21/25][120/573] Loss_D: 0.6213 Loss_G: 2.0385 D(x): 0.7915 D(G(z)): 0.  
2867 / 0.1710  
[21/25][130/573] Loss_D: 0.4326 Loss_G: 2.6574 D(x): 0.7391 D(G(z)): 0.  
1003 / 0.1077  
[21/25][140/573] Loss_D: 0.4676 Loss_G: 2.1441 D(x): 0.7916 D(G(z)): 0.  
1881 / 0.1545  
[21/25][150/573] Loss_D: 0.6299 Loss_G: 1.3808 D(x): 0.6301 D(G(z)): 0.  
1025 / 0.3003  
[21/25][160/573] Loss_D: 0.3710 Loss_G: 2.6151 D(x): 0.8368 D(G(z)): 0.  
1592 / 0.0987  
[21/25][170/573] Loss_D: 0.2723 Loss_G: 2.8195 D(x): 0.9116 D(G(z)): 0.  
1556 / 0.0842  
[21/25][180/573] Loss_D: 0.8711 Loss_G: 2.4778 D(x): 0.7481 D(G(z)): 0.  
3966 / 0.1140  
[21/25][190/573] Loss_D: 0.3506 Loss_G: 2.6698 D(x): 0.8190 D(G(z)): 0.  
1255 / 0.0898  
[21/25][200/573] Loss_D: 0.3102 Loss_G: 2.5393 D(x): 0.8564 D(G(z)): 0.  
1328 / 0.1038  
[21/25][210/573] Loss_D: 0.6853 Loss_G: 2.3344 D(x): 0.7802 D(G(z)): 0.  
3085 / 0.1528  
[21/25][220/573] Loss_D: 0.5628 Loss_G: 2.2109 D(x): 0.6581 D(G(z)): 0.  
0752 / 0.1599  
[21/25][230/573] Loss_D: 0.5853 Loss_G: 2.8999 D(x): 0.9703 D(G(z)): 0.  
3932 / 0.0710  
[21/25][240/573] Loss_D: 0.4159 Loss_G: 2.6177 D(x): 0.7613 D(G(z)): 0.  
1084 / 0.1019  
[21/25][250/573] Loss_D: 0.4392 Loss_G: 2.4498 D(x): 0.7385 D(G(z)): 0.  
0965 / 0.1208  
[21/25][260/573] Loss_D: 0.5497 Loss_G: 1.8696 D(x): 0.6929 D(G(z)): 0.  
1153 / 0.2037  
[21/25][270/573] Loss_D: 0.3262 Loss_G: 2.6642 D(x): 0.8358 D(G(z)): 0.  
1242 / 0.0904  
[21/25][280/573] Loss_D: 0.5125 Loss_G: 2.0763 D(x): 0.7322 D(G(z)): 0.  
1504 / 0.1630  
[21/25][290/573] Loss_D: 0.6015 Loss_G: 2.9064 D(x): 0.9094 D(G(z)): 0.
```

3687 / 0.0751
[21/25][300/573] Loss_D: 0.3789 Loss_G: 2.4343 D(x): 0.8377 D(G(z)): 0.
1662 / 0.1213
[21/25][310/573] Loss_D: 0.5578 Loss_G: 2.6066 D(x): 0.7433 D(G(z)): 0.
1907 / 0.1001
[21/25][320/573] Loss_D: 0.6305 Loss_G: 1.6736 D(x): 0.6859 D(G(z)): 0.
1817 / 0.2354
[21/25][330/573] Loss_D: 0.3357 Loss_G: 2.7613 D(x): 0.8201 D(G(z)): 0.
1165 / 0.0974
[21/25][340/573] Loss_D: 0.3320 Loss_G: 3.0838 D(x): 0.9009 D(G(z)): 0.
1892 / 0.0668
[21/25][350/573] Loss_D: 0.9262 Loss_G: 3.2112 D(x): 0.8295 D(G(z)): 0.
4636 / 0.0639
[21/25][360/573] Loss_D: 0.4433 Loss_G: 2.9349 D(x): 0.7875 D(G(z)): 0.
1572 / 0.0723
[21/25][370/573] Loss_D: 0.4659 Loss_G: 2.1012 D(x): 0.7488 D(G(z)): 0.
1383 / 0.1650
[21/25][380/573] Loss_D: 1.1925 Loss_G: 4.1072 D(x): 0.9205 D(G(z)): 0.
6115 / 0.0276
[21/25][390/573] Loss_D: 1.2273 Loss_G: 1.2095 D(x): 0.4117 D(G(z)): 0.
0974 / 0.4069
[21/25][400/573] Loss_D: 0.4056 Loss_G: 2.0725 D(x): 0.8292 D(G(z)): 0.
1721 / 0.1670
[21/25][410/573] Loss_D: 0.3709 Loss_G: 2.3817 D(x): 0.8498 D(G(z)): 0.
1720 / 0.1377
[21/25][420/573] Loss_D: 0.8830 Loss_G: 1.5555 D(x): 0.4809 D(G(z)): 0.
0560 / 0.2826
[21/25][430/573] Loss_D: 0.9809 Loss_G: 0.8936 D(x): 0.4497 D(G(z)): 0.
0624 / 0.4634
[21/25][440/573] Loss_D: 0.7226 Loss_G: 1.5356 D(x): 0.6055 D(G(z)): 0.
1419 / 0.2688
[21/25][450/573] Loss_D: 0.5496 Loss_G: 2.9857 D(x): 0.8238 D(G(z)): 0.
2684 / 0.0786
[21/25][460/573] Loss_D: 0.4937 Loss_G: 2.1038 D(x): 0.7512 D(G(z)): 0.
1565 / 0.1738
[21/25][470/573] Loss_D: 0.3767 Loss_G: 2.6239 D(x): 0.8907 D(G(z)): 0.
2094 / 0.0979
[21/25][480/573] Loss_D: 0.6199 Loss_G: 2.0847 D(x): 0.8064 D(G(z)): 0.
2942 / 0.1667
[21/25][490/573] Loss_D: 0.4699 Loss_G: 2.3910 D(x): 0.7246 D(G(z)): 0.
1085 / 0.1385
[21/25][500/573] Loss_D: 0.6452 Loss_G: 1.8041 D(x): 0.6285 D(G(z)): 0.
1125 / 0.2390
[21/25][510/573] Loss_D: 0.8802 Loss_G: 1.3793 D(x): 0.5336 D(G(z)): 0.
1365 / 0.3133
[21/25][520/573] Loss_D: 0.5185 Loss_G: 2.4074 D(x): 0.7579 D(G(z)): 0.
1703 / 0.1235
[21/25][530/573] Loss_D: 0.4762 Loss_G: 1.9905 D(x): 0.7304 D(G(z)): 0.
1236 / 0.1763
[21/25][540/573] Loss_D: 0.6462 Loss_G: 1.8945 D(x): 0.6147 D(G(z)): 0.
0939 / 0.2000
[21/25][550/573] Loss_D: 0.5778 Loss_G: 2.9286 D(x): 0.8761 D(G(z)): 0.
3162 / 0.0856
[21/25][560/573] Loss_D: 1.2522 Loss_G: 0.2087 D(x): 0.3640 D(G(z)): 0.
0611 / 0.8289
[21/25][570/573] Loss_D: 1.7806 Loss_G: 3.6342 D(x): 0.9486 D(G(z)): 0.
7360 / 0.0564

[22 / 25] [0 / 573] Loss_D: 0.6386 Loss_G: 2.5365 D(x): 0.8518 D(G(z)): 0.31
70 / 0.1266



```
[22/25][10/573] Loss_D: 0.7959 Loss_G: 2.3808 D(x): 0.7918 D(G(z)): 0.3  
872 / 0.1313  
[22/25][20/573] Loss_D: 0.4008 Loss_G: 3.0117 D(x): 0.8723 D(G(z)): 0.2  
095 / 0.0734  
[22/25][30/573] Loss_D: 0.6893 Loss_G: 1.7355 D(x): 0.6284 D(G(z)): 0.1  
376 / 0.2343  
[22/25][40/573] Loss_D: 0.3294 Loss_G: 2.5854 D(x): 0.8112 D(G(z)): 0.1  
008 / 0.1118  
[22/25][50/573] Loss_D: 0.3027 Loss_G: 2.3410 D(x): 0.8501 D(G(z)): 0.1  
184 / 0.1323  
[22/25][60/573] Loss_D: 0.4328 Loss_G: 2.9044 D(x): 0.8195 D(G(z)): 0.1  
824 / 0.0710  
[22/25][70/573] Loss_D: 0.5604 Loss_G: 3.0460 D(x): 0.9546 D(G(z)): 0.3  
710 / 0.0674  
[22/25][80/573] Loss_D: 0.6649 Loss_G: 1.6946 D(x): 0.6124 D(G(z)): 0.1  
075 / 0.2322  
[22/25][90/573] Loss_D: 0.5435 Loss_G: 2.4093 D(x): 0.8963 D(G(z)): 0.3  
219 / 0.1169  
[22/25][100/573] Loss_D: 0.3904 Loss_G: 2.4924 D(x): 0.8493 D(G(z)): 0.  
1860 / 0.1114  
[22/25][110/573] Loss_D: 0.7626 Loss_G: 2.7444 D(x): 0.9197 D(G(z)): 0.  
4410 / 0.0926  
[22/25][120/573] Loss_D: 0.9151 Loss_G: 0.9979 D(x): 0.5943 D(G(z)): 0.  
2237 / 0.4621  
[22/25][130/573] Loss_D: 0.8043 Loss_G: 3.1133 D(x): 0.8948 D(G(z)): 0.  
4530 / 0.0758  
[22/25][140/573] Loss_D: 0.5175 Loss_G: 2.4393 D(x): 0.9146 D(G(z)): 0.  
3154 / 0.1129  
[22/25][150/573] Loss_D: 0.4163 Loss_G: 2.8894 D(x): 0.8573 D(G(z)): 0.  
2063 / 0.0817  
[22/25][160/573] Loss_D: 0.7960 Loss_G: 2.7144 D(x): 0.9068 D(G(z)): 0.  
4501 / 0.0951  
[22/25][170/573] Loss_D: 0.2496 Loss_G: 3.1987 D(x): 0.8751 D(G(z)): 0.  
1017 / 0.0577  
[22/25][180/573] Loss_D: 0.6041 Loss_G: 2.4304 D(x): 0.6925 D(G(z)): 0.  
1627 / 0.1477  
[22/25][190/573] Loss_D: 0.4147 Loss_G: 2.2677 D(x): 0.7425 D(G(z)): 0.  
0858 / 0.1411  
[22/25][200/573] Loss_D: 0.3367 Loss_G: 2.8853 D(x): 0.8261 D(G(z)): 0.  
1190 / 0.0846  
[22/25][210/573] Loss_D: 0.6411 Loss_G: 1.7803 D(x): 0.6896 D(G(z)): 0.  
1957 / 0.2094  
[22/25][220/573] Loss_D: 0.3880 Loss_G: 2.3263 D(x): 0.8444 D(G(z)): 0.  
1759 / 0.1209  
[22/25][230/573] Loss_D: 0.6454 Loss_G: 1.3251 D(x): 0.6173 D(G(z)): 0.  
0947 / 0.3301  
[22/25][240/573] Loss_D: 0.6338 Loss_G: 1.5363 D(x): 0.6871 D(G(z)): 0.  
1738 / 0.2704  
[22/25][250/573] Loss_D: 0.3883 Loss_G: 2.8974 D(x): 0.7468 D(G(z)): 0.  
0690 / 0.0822  
[22/25][260/573] Loss_D: 0.3567 Loss_G: 2.8573 D(x): 0.8823 D(G(z)): 0.  
1873 / 0.0767  
[22/25][270/573] Loss_D: 0.2754 Loss_G: 3.0698 D(x): 0.8769 D(G(z)): 0.  
1111 / 0.0734  
[22/25][280/573] Loss_D: 0.4466 Loss_G: 2.3490 D(x): 0.8460 D(G(z)): 0.  
2153 / 0.1346  
[22/25][290/573] Loss_D: 0.7709 Loss_G: 1.2545 D(x): 0.5984 D(G(z)): 0.
```

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1620 / 0.3330
[22/25][300/573] Loss_D: 0.4901 Loss_G: 3.2710 D(x): 0.9453 D(G(z)): 0.
3327 / 0.0501
[22/25][310/573] Loss_D: 0.7565 Loss_G: 3.8130 D(x): 0.8922 D(G(z)): 0.
4259 / 0.0371
[22/25][320/573] Loss_D: 0.4550 Loss_G: 3.1711 D(x): 0.9137 D(G(z)): 0.
2822 / 0.0543
[22/25][330/573] Loss_D: 0.6330 Loss_G: 2.0708 D(x): 0.5993 D(G(z)): 0.
0509 / 0.1934
[22/25][340/573] Loss_D: 0.4635 Loss_G: 2.8554 D(x): 0.8236 D(G(z)): 0.
2076 / 0.0771
[22/25][350/573] Loss_D: 0.6741 Loss_G: 2.5455 D(x): 0.7402 D(G(z)): 0.
2681 / 0.1072
[22/25][360/573] Loss_D: 0.5157 Loss_G: 3.3137 D(x): 0.9535 D(G(z)): 0.
3370 / 0.0511
[22/25][370/573] Loss_D: 0.4661 Loss_G: 2.6304 D(x): 0.8879 D(G(z)): 0.
2638 / 0.1052
[22/25][380/573] Loss_D: 0.3394 Loss_G: 2.3190 D(x): 0.7960 D(G(z)): 0.
0884 / 0.1326
[22/25][390/573] Loss_D: 0.7031 Loss_G: 1.8096 D(x): 0.6231 D(G(z)): 0.
1479 / 0.2222
[22/25][400/573] Loss_D: 0.3559 Loss_G: 2.1223 D(x): 0.7696 D(G(z)): 0.
0725 / 0.1641
[22/25][410/573] Loss_D: 1.1206 Loss_G: 3.4980 D(x): 0.9713 D(G(z)): 0.
6055 / 0.0523
[22/25][420/573] Loss_D: 0.3952 Loss_G: 2.7576 D(x): 0.7977 D(G(z)): 0.
1333 / 0.1019
[22/25][430/573] Loss_D: 0.8068 Loss_G: 1.1591 D(x): 0.5373 D(G(z)): 0.
0854 / 0.3741
[22/25][440/573] Loss_D: 0.2105 Loss_G: 3.6729 D(x): 0.8611 D(G(z)): 0.
0510 / 0.0455
[22/25][450/573] Loss_D: 1.1015 Loss_G: 1.1600 D(x): 0.4144 D(G(z)): 0.
0303 / 0.3941
[22/25][460/573] Loss_D: 1.0938 Loss_G: 0.9209 D(x): 0.4498 D(G(z)): 0.
1114 / 0.4839
[22/25][470/573] Loss_D: 0.6203 Loss_G: 2.4988 D(x): 0.7531 D(G(z)): 0.
2431 / 0.1422
[22/25][480/573] Loss_D: 0.7604 Loss_G: 2.8754 D(x): 0.9302 D(G(z)): 0.
4526 / 0.0863
[22/25][490/573] Loss_D: 0.4114 Loss_G: 2.5600 D(x): 0.8416 D(G(z)): 0.
1912 / 0.1038
[22/25][500/573] Loss_D: 0.4751 Loss_G: 2.2221 D(x): 0.8332 D(G(z)): 0.
2296 / 0.1519
[22/25][510/573] Loss_D: 0.5801 Loss_G: 1.8338 D(x): 0.6585 D(G(z)): 0.
0889 / 0.2006
[22/25][520/573] Loss_D: 0.3229 Loss_G: 2.6610 D(x): 0.8229 D(G(z)): 0.
1064 / 0.0941
[22/25][530/573] Loss_D: 0.3047 Loss_G: 2.7590 D(x): 0.7953 D(G(z)): 0.
0559 / 0.0962
[22/25][540/573] Loss_D: 0.4489 Loss_G: 2.4825 D(x): 0.7321 D(G(z)): 0.
0930 / 0.1231
[22/25][550/573] Loss_D: 0.4175 Loss_G: 3.0848 D(x): 0.9231 D(G(z)): 0.
2572 / 0.0688
[22/25][560/573] Loss_D: 0.7331 Loss_G: 1.2875 D(x): 0.5541 D(G(z)): 0.
0713 / 0.3298
[22/25][570/573] Loss_D: 0.4990 Loss_G: 2.7064 D(x): 0.8206 D(G(z)): 0.
2389 / 0.0859
```

[23/25] [0/573] Loss_D: 0.4462 Loss_G: 2.6315 D(x): 0.8913 D(G(z)): 0.24
85 / 0.1014



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[23/25][10/573] Loss_D: 0.3065 Loss_G: 2.9691 D(x): 0.8495 D(G(z)): 0.1  
152 / 0.0792  
[23/25][20/573] Loss_D: 0.3883 Loss_G: 3.3756 D(x): 0.9364 D(G(z)): 0.2  
553 / 0.0535  
[23/25][30/573] Loss_D: 0.3899 Loss_G: 2.3212 D(x): 0.8251 D(G(z)): 0.1  
592 / 0.1401  
[23/25][40/573] Loss_D: 0.5324 Loss_G: 2.6779 D(x): 0.9051 D(G(z)): 0.3  
202 / 0.0852  
[23/25][50/573] Loss_D: 0.2091 Loss_G: 3.0155 D(x): 0.9032 D(G(z)): 0.0  
947 / 0.0779  
[23/25][60/573] Loss_D: 0.6109 Loss_G: 2.8930 D(x): 0.8492 D(G(z)): 0.3  
217 / 0.0738  
[23/25][70/573] Loss_D: 0.3452 Loss_G: 2.5341 D(x): 0.8668 D(G(z)): 0.1  
663 / 0.1154  
[23/25][80/573] Loss_D: 0.4324 Loss_G: 2.3065 D(x): 0.8359 D(G(z)): 0.1  
992 / 0.1384  
[23/25][90/573] Loss_D: 0.5569 Loss_G: 2.0655 D(x): 0.6420 D(G(z)): 0.0  
551 / 0.1671  
[23/25][100/573] Loss_D: 0.2144 Loss_G: 3.3561 D(x): 0.9779 D(G(z)): 0.  
1620 / 0.0492  
[23/25][110/573] Loss_D: 0.3929 Loss_G: 3.3367 D(x): 0.9364 D(G(z)): 0.  
2545 / 0.0525  
[23/25][120/573] Loss_D: 0.6803 Loss_G: 0.6814 D(x): 0.6221 D(G(z)): 0.  
1217 / 0.5733  
[23/25][130/573] Loss_D: 1.3419 Loss_G: 0.2332 D(x): 0.3796 D(G(z)): 0.  
0936 / 0.8108  
[23/25][140/573] Loss_D: 0.7902 Loss_G: 2.0283 D(x): 0.6709 D(G(z)): 0.  
2521 / 0.2088  
[23/25][150/573] Loss_D: 0.6957 Loss_G: 3.5948 D(x): 0.9370 D(G(z)): 0.  
4193 / 0.0443  
[23/25][160/573] Loss_D: 0.4889 Loss_G: 2.6772 D(x): 0.9101 D(G(z)): 0.  
2937 / 0.0928  
[23/25][170/573] Loss_D: 0.6962 Loss_G: 1.1261 D(x): 0.6516 D(G(z)): 0.  
1800 / 0.3841  
[23/25][180/573] Loss_D: 0.4450 Loss_G: 2.5395 D(x): 0.7696 D(G(z)): 0.  
1449 / 0.1192  
[23/25][190/573] Loss_D: 0.5045 Loss_G: 2.2115 D(x): 0.8229 D(G(z)): 0.  
2320 / 0.1481  
[23/25][200/573] Loss_D: 0.4599 Loss_G: 3.0992 D(x): 0.9153 D(G(z)): 0.  
2818 / 0.0670  
[23/25][210/573] Loss_D: 0.6231 Loss_G: 1.5337 D(x): 0.6144 D(G(z)): 0.  
0716 / 0.2709  
[23/25][220/573] Loss_D: 0.6828 Loss_G: 2.2095 D(x): 0.5716 D(G(z)): 0.  
0528 / 0.1535  
[23/25][230/573] Loss_D: 0.5209 Loss_G: 2.5487 D(x): 0.8339 D(G(z)): 0.  
2600 / 0.1128  
[23/25][240/573] Loss_D: 0.5610 Loss_G: 1.7030 D(x): 0.6958 D(G(z)): 0.  
1502 / 0.2319  
[23/25][250/573] Loss_D: 0.8940 Loss_G: 3.7352 D(x): 0.9272 D(G(z)): 0.  
5097 / 0.0325  
[23/25][260/573] Loss_D: 0.3667 Loss_G: 2.4550 D(x): 0.8573 D(G(z)): 0.  
1732 / 0.1178  
[23/25][270/573] Loss_D: 0.3406 Loss_G: 3.4111 D(x): 0.9409 D(G(z)): 0.  
2293 / 0.0474  
[23/25][280/573] Loss_D: 0.4559 Loss_G: 2.5056 D(x): 0.8527 D(G(z)): 0.  
2348 / 0.1120  
[23/25][290/573] Loss_D: 0.4173 Loss_G: 1.8167 D(x): 0.7458 D(G(z)): 0.
```

0856 / 0.2090
[23/25][300/573] Loss_D: 0.5470 Loss_G: 1.5357 D(x): 0.7486 D(G(z)): 0.
1964 / 0.2842
[23/25][310/573] Loss_D: 0.3260 Loss_G: 2.8977 D(x): 0.8104 D(G(z)): 0.
0927 / 0.0815
[23/25][320/573] Loss_D: 0.4205 Loss_G: 2.5741 D(x): 0.7941 D(G(z)): 0.
1514 / 0.1077
[23/25][330/573] Loss_D: 0.3240 Loss_G: 2.7982 D(x): 0.8830 D(G(z)): 0.
1641 / 0.0882
[23/25][340/573] Loss_D: 1.0806 Loss_G: 4.3164 D(x): 0.9849 D(G(z)): 0.
5832 / 0.0228
[23/25][350/573] Loss_D: 0.8811 Loss_G: 1.5625 D(x): 0.4895 D(G(z)): 0.
0367 / 0.2850
[23/25][360/573] Loss_D: 0.8141 Loss_G: 1.5221 D(x): 0.5650 D(G(z)): 0.
1304 / 0.3165
[23/25][370/573] Loss_D: 0.5285 Loss_G: 3.8438 D(x): 0.9570 D(G(z)): 0.
3521 / 0.0327
[23/25][380/573] Loss_D: 0.4628 Loss_G: 2.4582 D(x): 0.7129 D(G(z)): 0.
0907 / 0.1209
[23/25][390/573] Loss_D: 0.4412 Loss_G: 2.8269 D(x): 0.9181 D(G(z)): 0.
2720 / 0.0818
[23/25][400/573] Loss_D: 0.5830 Loss_G: 1.7500 D(x): 0.7392 D(G(z)): 0.
2092 / 0.2302
[23/25][410/573] Loss_D: 0.5972 Loss_G: 2.0043 D(x): 0.7455 D(G(z)): 0.
2211 / 0.1806
[23/25][420/573] Loss_D: 0.5420 Loss_G: 2.3305 D(x): 0.8187 D(G(z)): 0.
2551 / 0.1416
[23/25][430/573] Loss_D: 0.5105 Loss_G: 1.9952 D(x): 0.7325 D(G(z)): 0.
1432 / 0.1784
[23/25][440/573] Loss_D: 0.6549 Loss_G: 3.2551 D(x): 0.8748 D(G(z)): 0.
3543 / 0.0590
[23/25][450/573] Loss_D: 0.5442 Loss_G: 2.4244 D(x): 0.8425 D(G(z)): 0.
2811 / 0.1092
[23/25][460/573] Loss_D: 0.2730 Loss_G: 3.1511 D(x): 0.8198 D(G(z)): 0.
0547 / 0.0734
[23/25][470/573] Loss_D: 0.5422 Loss_G: 2.1709 D(x): 0.7210 D(G(z)): 0.
1475 / 0.1518
[23/25][480/573] Loss_D: 0.5562 Loss_G: 2.4833 D(x): 0.6592 D(G(z)): 0.
0831 / 0.1206
[23/25][490/573] Loss_D: 0.2556 Loss_G: 3.2513 D(x): 0.9449 D(G(z)): 0.
1692 / 0.0543
[23/25][500/573] Loss_D: 0.3607 Loss_G: 2.8088 D(x): 0.7613 D(G(z)): 0.
0509 / 0.0998
[23/25][510/573] Loss_D: 0.3791 Loss_G: 3.4923 D(x): 0.9414 D(G(z)): 0.
2457 / 0.0466
[23/25][520/573] Loss_D: 0.1844 Loss_G: 3.0165 D(x): 0.9389 D(G(z)): 0.
1086 / 0.0683
[23/25][530/573] Loss_D: 0.6641 Loss_G: 1.2828 D(x): 0.5746 D(G(z)): 0.
0555 / 0.3704
[23/25][540/573] Loss_D: 0.4249 Loss_G: 2.1938 D(x): 0.7871 D(G(z)): 0.
1393 / 0.1450
[23/25][550/573] Loss_D: 1.0244 Loss_G: 4.1706 D(x): 0.9264 D(G(z)): 0.
5338 / 0.0287
[23/25][560/573] Loss_D: 0.4179 Loss_G: 2.7935 D(x): 0.7857 D(G(z)): 0.
1351 / 0.1026
[23/25][570/573] Loss_D: 0.4582 Loss_G: 2.7773 D(x): 0.8632 D(G(z)): 0.
2433 / 0.0991

[24 / 25] [0 / 573] Loss_D: 0.4399 Loss_G: 3.0488 D(x): 0.9010 D(G(z)): 0.26
19 / 0.0654



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[24/25][10/573] Loss_D: 0.4107 Loss_G: 2.3293 D(x): 0.7402 D(G(z)): 0.0  
808 / 0.1348  
[24/25][20/573] Loss_D: 0.4958 Loss_G: 3.5478 D(x): 0.9106 D(G(z)): 0.3  
023 / 0.0408  
[24/25][30/573] Loss_D: 0.3654 Loss_G: 2.8168 D(x): 0.7423 D(G(z)): 0.0  
499 / 0.0898  
[24/25][40/573] Loss_D: 0.5938 Loss_G: 3.1537 D(x): 0.8790 D(G(z)): 0.3  
371 / 0.0716  
[24/25][50/573] Loss_D: 0.4324 Loss_G: 2.1872 D(x): 0.7376 D(G(z)): 0.0  
872 / 0.1528  
[24/25][60/573] Loss_D: 0.6155 Loss_G: 3.8209 D(x): 0.9371 D(G(z)): 0.3  
858 / 0.0311  
[24/25][70/573] Loss_D: 0.4535 Loss_G: 2.6197 D(x): 0.7800 D(G(z)): 0.1  
572 / 0.1084  
[24/25][80/573] Loss_D: 0.4742 Loss_G: 2.1592 D(x): 0.7348 D(G(z)): 0.1  
279 / 0.1452  
[24/25][90/573] Loss_D: 0.2715 Loss_G: 2.9593 D(x): 0.9276 D(G(z)): 0.1  
662 / 0.0787  
[24/25][100/573] Loss_D: 0.7980 Loss_G: 3.9639 D(x): 0.9448 D(G(z)): 0.  
4768 / 0.0315  
[24/25][110/573] Loss_D: 0.5528 Loss_G: 1.8233 D(x): 0.6409 D(G(z)): 0.  
0529 / 0.2455  
[24/25][120/573] Loss_D: 0.7729 Loss_G: 0.8987 D(x): 0.5894 D(G(z)): 0.  
1532 / 0.4655  
[24/25][130/573] Loss_D: 0.4343 Loss_G: 2.9303 D(x): 0.9114 D(G(z)): 0.  
2629 / 0.0718  
[24/25][140/573] Loss_D: 0.4775 Loss_G: 2.8711 D(x): 0.6921 D(G(z)): 0.  
0450 / 0.0873  
[24/25][150/573] Loss_D: 0.3971 Loss_G: 2.9174 D(x): 0.8887 D(G(z)): 0.  
2256 / 0.0733  
[24/25][160/573] Loss_D: 0.3759 Loss_G: 2.6067 D(x): 0.8614 D(G(z)): 0.  
1755 / 0.1105  
[24/25][170/573] Loss_D: 1.3664 Loss_G: 1.5647 D(x): 0.5645 D(G(z)): 0.  
2743 / 0.4575  
[24/25][180/573] Loss_D: 0.5995 Loss_G: 2.5124 D(x): 0.7565 D(G(z)): 0.  
2232 / 0.1345  
[24/25][190/573] Loss_D: 0.9758 Loss_G: 1.4078 D(x): 0.4733 D(G(z)): 0.  
0387 / 0.3320  
[24/25][200/573] Loss_D: 1.1348 Loss_G: 1.2371 D(x): 0.4071 D(G(z)): 0.  
0388 / 0.3823  
[24/25][210/573] Loss_D: 0.3879 Loss_G: 2.3084 D(x): 0.7400 D(G(z)): 0.  
0633 / 0.1435  
[24/25][220/573] Loss_D: 0.4479 Loss_G: 2.1766 D(x): 0.8414 D(G(z)): 0.  
2187 / 0.1453  
[24/25][230/573] Loss_D: 0.5815 Loss_G: 1.8083 D(x): 0.7205 D(G(z)): 0.  
1827 / 0.2088  
[24/25][240/573] Loss_D: 0.4062 Loss_G: 3.0923 D(x): 0.9102 D(G(z)): 0.  
2454 / 0.0632  
[24/25][250/573] Loss_D: 0.4945 Loss_G: 2.7203 D(x): 0.9530 D(G(z)): 0.  
3305 / 0.0927  
[24/25][260/573] Loss_D: 0.6278 Loss_G: 2.4389 D(x): 0.5970 D(G(z)): 0.  
0359 / 0.1270  
[24/25][270/573] Loss_D: 0.4050 Loss_G: 2.9477 D(x): 0.8713 D(G(z)): 0.  
2095 / 0.0765  
[24/25][280/573] Loss_D: 0.7462 Loss_G: 1.1292 D(x): 0.5745 D(G(z)): 0.  
1114 / 0.3719  
[24/25][290/573] Loss_D: 0.3908 Loss_G: 2.4277 D(x): 0.7328 D(G(z)): 0.
```

0492 / 0.1266
[24/25][300/573] Loss_D: 0.7696 Loss_G: 1.0815 D(x): 0.5285 D(G(z)): 0.
0397 / 0.4647
[24/25][310/573] Loss_D: 0.5380 Loss_G: 2.2964 D(x): 0.7344 D(G(z)): 0.
1700 / 0.1293
[24/25][320/573] Loss_D: 0.3457 Loss_G: 2.3066 D(x): 0.8009 D(G(z)): 0.
0947 / 0.1361
[24/25][330/573] Loss_D: 0.3926 Loss_G: 2.5227 D(x): 0.9061 D(G(z)): 0.
2345 / 0.1151
[24/25][340/573] Loss_D: 0.7174 Loss_G: 3.6418 D(x): 0.9402 D(G(z)): 0.
4380 / 0.0418
[24/25][350/573] Loss_D: 0.8289 Loss_G: 3.3161 D(x): 0.9631 D(G(z)): 0.
4913 / 0.0508
[24/25][360/573] Loss_D: 0.4321 Loss_G: 2.9723 D(x): 0.8355 D(G(z)): 0.
1975 / 0.0747
[24/25][370/573] Loss_D: 0.4053 Loss_G: 2.6086 D(x): 0.7458 D(G(z)): 0.
0733 / 0.1060
[24/25][380/573] Loss_D: 0.5692 Loss_G: 2.4127 D(x): 0.6239 D(G(z)): 0.
0344 / 0.1381
[24/25][390/573] Loss_D: 0.6405 Loss_G: 3.1067 D(x): 0.8949 D(G(z)): 0.
3792 / 0.0586
[24/25][400/573] Loss_D: 0.5856 Loss_G: 3.2443 D(x): 0.9064 D(G(z)): 0.
3516 / 0.0562
[24/25][410/573] Loss_D: 1.4100 Loss_G: 0.4835 D(x): 0.4001 D(G(z)): 0.
1209 / 0.6638
[24/25][420/573] Loss_D: 3.7521 Loss_G: 0.3634 D(x): 0.2231 D(G(z)): 0.
1389 / 0.7882
[24/25][430/573] Loss_D: 0.5491 Loss_G: 1.6926 D(x): 0.7239 D(G(z)): 0.
1527 / 0.2650
[24/25][440/573] Loss_D: 0.6006 Loss_G: 1.9597 D(x): 0.7309 D(G(z)): 0.
2030 / 0.1959
[24/25][450/573] Loss_D: 0.4390 Loss_G: 2.4024 D(x): 0.8790 D(G(z)): 0.
2401 / 0.1289
[24/25][460/573] Loss_D: 0.8166 Loss_G: 1.3401 D(x): 0.6134 D(G(z)): 0.
2100 / 0.3101
[24/25][470/573] Loss_D: 0.3213 Loss_G: 2.6683 D(x): 0.8901 D(G(z)): 0.
1692 / 0.1012
[24/25][480/573] Loss_D: 0.7114 Loss_G: 1.6369 D(x): 0.6461 D(G(z)): 0.
1924 / 0.2592
[24/25][490/573] Loss_D: 0.4843 Loss_G: 2.8505 D(x): 0.8731 D(G(z)): 0.
2675 / 0.0793
[24/25][500/573] Loss_D: 0.5111 Loss_G: 1.9378 D(x): 0.7566 D(G(z)): 0.
1708 / 0.1969
[24/25][510/573] Loss_D: 0.3607 Loss_G: 2.3044 D(x): 0.8692 D(G(z)): 0.
1815 / 0.1329
[24/25][520/573] Loss_D: 0.4387 Loss_G: 3.0546 D(x): 0.9028 D(G(z)): 0.
2577 / 0.0700
[24/25][530/573] Loss_D: 0.4823 Loss_G: 2.5040 D(x): 0.8295 D(G(z)): 0.
2304 / 0.1172
[24/25][540/573] Loss_D: 0.8540 Loss_G: 1.2680 D(x): 0.5214 D(G(z)): 0.
0952 / 0.3252
[24/25][550/573] Loss_D: 0.6204 Loss_G: 2.1453 D(x): 0.6751 D(G(z)): 0.
1573 / 0.1640
[24/25][560/573] Loss_D: 0.5948 Loss_G: 1.6271 D(x): 0.6992 D(G(z)): 0.
1617 / 0.2542
[24/25][570/573] Loss_D: 0.3596 Loss_G: 2.8656 D(x): 0.8469 D(G(z)): 0.
1611 / 0.0903

Sample images after the training

```
In [12]: _ = view_samples(-1, samples, 6, 12, figsize=(10,5))
```



Training Losses

```
In [13]: fig, ax = plt.subplots()
losses = np.array(losses)
plt.plot(losses.T[0], label='Discriminator', alpha=0.5)
plt.plot(losses.T[1], label='Generator', alpha=0.5)
plt.title("Training Losses")
plt.legend()
```

```
Out[13]: <matplotlib.legend.Legend at 0x7f70c79cc3c8>
```

