

Generative Adversarial Neural Networks

April 19, 2025

Authors:

Fabio Cozzuto Student ID: 002214965

Johan Mogollon Student ID: 002359844

Contributions:

- Fabio Cozzuto: All code, experiments, and analysis
- Johan Mogollon: All code, experiments, and analysis

Course: CS551 - Deep Learning

Professor: Dr. Mohammed Ayoub Alaoui Mhamdi

0.1 Abstract

In this report, we analyze the results of the final exam, in which we conducted an investigation of generative adversarial networks (GANs) and their different configurations. Two architectures, Vanilla_GAN and CycleGAN were developed and then trained with a dataset of “grumpy cats”. the idea is to compare the performance of the models with two augmentations: basic and deluxe. We analyzed the loss curves of the networks, both for the Generator and the Discriminator, by visual inspection of the generated image at different iterations. in the same way, we evaluated how the various configurations influenced the learning process. The results lead us to interesting conclusions, providing knowledge, ideas, and learning about strategies for training GANs for image transformation tasks.

1 PART 1: Deep Convolutional GAN

1.1 Environment Setup & Imports

```
[ ]: # Ensure Jupyter can import our GAN modules
import os, sys
sys.path.insert(0, os.path.abspath('.'))
sys.path.append('.')

# --- Standard Libraries ---
import warnings
warnings.filterwarnings("ignore")
```

```

# --- Data Handling ---
import numpy as np
from PIL import Image
import math
np.math = math

# --- PyTorch ---
import torch
import torch.nn as nn
import torch.nn.functional as F
import torch.optim as optim
from torch.utils.data import DataLoader
from torchvision import transforms
from torch.utils.tensorboard import SummaryWriter

# --- Local Modules ---
from data_loader import get_data_loader, CustomDataSet
from models import DCGenerator, DCDiscriminator, CycleGenerator, conv, deconv,
↳ ResnetBlock
from utils import to_var, to_data, create_dir

# --- Visualization ---
import matplotlib.pyplot as plt
import imageio # For saving images
import matplotlib.image as mpimg

# --- Argument Parsing ---
import argparse

# --- Other ---
import glob

# Set random seed
SEED = 11
np.random.seed(SEED)
torch.manual_seed(SEED)
if torch.cuda.is_available():
    torch.cuda.manual_seed(SEED)

os.environ['TF_ENABLE_ONEDNN_OPTS'] = '0'

# Check for GPU availability
device = torch.device("cuda" if torch.cuda.is_available() else "cpu")
print(f"Using device: {device}")

```

Using device: cuda

1.2 Implement Data Augmentation [10 points]

We implemented the augmentations in the following code:

```
def get_data_loader(data_path, opts):
    """Creates data loaders.
    """
    basic_transform = transforms.Compose([
        transforms.Resize(opts.image_size, Image.BICUBIC),
        transforms.ToTensor(),
        transforms.Normalize((0.5, 0.5, 0.5), (0.5, 0.5, 0.5)),
    ])

    if opts.data_aug == 'basic':
        transform = basic_transform
    elif opts.data_aug == 'deluxe':
        load_size = int(1.1 * opts.image_size)
        osize = [load_size, load_size]
        transform = transforms.Compose([
            transforms.Resize(osize, Image.BICUBIC),
            transforms.RandomCrop(opts.image_size),
            transforms.RandomHorizontalFlip(),
            transforms.ToTensor(),
            transforms.Normalize((0.5, 0.5, 0.5), (0.5, 0.5, 0.5)),
        ])
    else:
        pass

    dataset = CustomDataSet(os.path.join('data/', data_path), opts.ext, transform)
    dloader = DataLoader(dataset=dataset, batch_size=opts.batch_size, shuffle=True, num_workers=opts.num_workers)

    return dloader
```

1.3 Implement the Discriminator of the DCGAN [10 points]

1.3.1 1. Padding Calculation for DCGAN Discriminator

Question: With kernel size (K=4) and stride (S=2), what padding (P) halves the spatial dimensions?

Answer: We want each layer to reduce the spatial dimensions by a factor of 2, without clipping important features. That means that we want to control the padding. So, we have the convolution output formula:

$$O = \left\lfloor \frac{I + 2P - K}{S} \right\rfloor + 1$$

Where: - (I) = input size - (O) = output size - (K = 4) (kernel size) - (S = 2) (stride) - (P) = padding

We want to obtain this:

$$output_size = \frac{input_size}{2}$$

So we solve as follows:

$$\left\lfloor \frac{I + 2P - 4}{2} \right\rfloor + 1 = \frac{I}{2} \Rightarrow 2P = 2 \Rightarrow P = 1$$

[]: *# We can do the same calculations with the following code:*

```
input_size = 64 # Example input size, this will vary per layer
```

```

kernel_size = 4
stride = 2
padding = 1
output_size = (input_size - kernel_size + 2 * padding) / stride + 1

print(f"Given kernel_size={kernel_size}, stride={stride}, the required padding_
is: {padding}")
print(f"Example: Input size = {input_size}, Output size = {output_size}")

```

Given kernel_size=4, stride=2, the required padding is: 1

Example: Input size = 64, Output size = 32.0

1.3.2 2. DCDiscriminator class in the models.py file

We completed the code for DCDiscriminator as you can see in the following image:

```

class DCDiscriminator(nn.Module):
    """Defines the architecture of the discriminator network.
    Note: Both discriminators D_X and D_Y have the same architecture in this assignment.
    """
    def __init__(self, conv_dim=64, norm='batch'):
        super(DCDiscriminator, self).__init__()

        #####
        ## FILL THIS IN: CREATE ARCHITECTURE ##
        #####

        self.conv1 = conv(3, conv_dim, kernel_size=4, stride=2, padding=1, norm=None)
        self.conv2 = conv(conv_dim, conv_dim * 2, kernel_size=4, stride=2, padding=1, norm=norm)
        self.conv3 = conv(conv_dim * 2, conv_dim * 4, kernel_size=4, stride=2, padding=1, norm=norm)
        self.conv4 = conv(conv_dim * 4, conv_dim * 8, kernel_size=4, stride=2, padding=1, norm=norm)
        self.conv5 = nn.Sequential(
            nn.AdaptiveAvgPool2d(1),
            nn.Conv2d(conv_dim * 8, 1, kernel_size=1, stride=1, padding=0, bias=False)
        )

    def forward(self, x):
        #####
        ## FILL THIS IN: FORWARD PASS ##
        #####

        out = F.leaky_relu(self.conv1(x), 0.2)
        out = F.leaky_relu(self.conv2(out), 0.2)
        out = F.leaky_relu(self.conv3(out), 0.2)
        out = F.leaky_relu(self.conv4(out), 0.2)
        out = self.conv5(out)
        out = torch.sigmoid(out)
        return out.view(out.size(0), -1).mean(1)

```

1.4 Implement the Generator of the DCGAN [10 points]

1.4.1 1. DCGenerator class in the models.py file

```
50 class DCGenerator(nn.Module):
51     def __init__(self, noise_size, conv_dim):
52         super(DCGenerator, self).__init__()
53
54         #####
55         ## FILL THIS IN: CREATE ARCHITECTURE ##
56         #####
57
58         self.deconv1 = deconv(noise_size, conv_dim * 8, kernel_size=4, stride=1, padding=0, norm='batch')
59         self.deconv2 = deconv(conv_dim * 8, conv_dim * 4, kernel_size=4, stride=2, padding=1, norm='batch')
60         self.deconv3 = deconv(conv_dim * 4, conv_dim * 2, kernel_size=4, stride=2, padding=1, norm='batch')
61         self.deconv4 = deconv(conv_dim * 2, conv_dim, kernel_size=4, stride=2, padding=1, norm='batch')
62         self.deconv5 = deconv(conv_dim, 3, kernel_size=3, stride=1, padding=1, norm=None)
63
64     def forward(self, z):
65         """Generates an image given a sample of random noise.
66
67         Input
68         ----
69         | z: BS x noise_size x 1 x 1 --> 16x100x1x1
70         |
71         Output
72         ----
73         | out: BS x channels x image_width x image_height --> 16x3x32x32
74         """
75
76         #####
77         ## FILL THIS IN: FORWARD PASS ##
78         #####
79         out = F.relu(self.deconv1(z))
80         out = F.relu(self.deconv2(out))
81         out = F.relu(self.deconv3(out))
82         out = F.relu(self.deconv4(out))
83         out = F.tanh(self.deconv5(out))
84         return out
85
```

1.5 Experiments

1.5.1 1. Implement the DCGAN Training Loop [10 points]

Discriminator

```

for batch in train_dataloader:

    real_images, labels = batch
    real_images, labels = utils.to_var(real_images), utils.to_var(labels).long().squeeze()

    #####
    ###      TRAIN THE DISCRIMINATOR      ###
    #####

    d_optimizer.zero_grad()

    # FILL THIS IN
    # 1. Compute the discriminator loss on real images
    D_real_loss = criterion(D(real_images), torch.ones(real_images.size(0)).to(real_images.device))

    # 2. Sample noise
    noise = sample_noise(opts.noise_size)

    # 3. Generate fake images from the noise
    fake_images = G(noise)

    # 4. Compute the discriminator loss on the fake images
    D_fake_loss = criterion(D(fake_images.detach()), torch.zeros(fake_images.size(0)).to(fake_images.device))

    D_total_loss = D_real_loss + D_fake_loss
    if iteration % 2 == 0:
        D_total_loss.backward()
        d_optimizer.step()

```

Generator

For this part we filled the code and carefully add the logger to work with TensorBoard

```

#####
###      TRAIN THE GENERATOR      ###
#####

g_optimizer.zero_grad()

# FILL THIS IN
# 1. Sample noise
noise = sample_noise(opts.noise_size)

# 2. Generate fake images from the noise
fake_images = G(noise)

# 3. Compute the generator loss
G_loss = criterion(D(fake_images), torch.ones(fake_images.size(0)).to(fake_images.device))

G_loss.backward()
g_optimizer.step()

# Print the log info
if iteration % opts.log_step == 0:
    logger.add_scalar('D/real_loss', D_real_loss.item(), iteration)
    logger.add_scalar('D/fake_loss', D_fake_loss.item(), iteration)
    logger.add_scalar('G/loss', G_loss.item(), iteration)
    print('Iteration [{:4d}/{:4d}] | D_real_loss: {:.6.4f} | D_fake_loss: {:.6.4f} | G_loss: {:.6.4f}'.format(
        iteration, total_train_iters, D_real_loss.item(), D_fake_loss.item(), G_loss.item()))

```

1.5.2 2. Train the DCGAN [10 points]

The following code train the DCGAN, so this is the first execution we can do to understand the model and to see if there is some kind of error.

```
[17]: !python vanilla_gan.py --num_epochs=100
```

```
Namespace(image_size=64, conv_dim=32, noise_size=100, num_epochs=100,
batch_size=16, num_workers=0, lr=0.0003, beta1=0.5, beta2=0.999,
data='cat/grumpifyBprocessed', data_aug='deluxe', ext='*.png',
checkpoint_dir='./checkpoints_vanilla',
sample_dir='output/./vanilla\\grumpifyBprocessed_deluxe', log_step=10,
sample_every=200, checkpoint_every=400)
data/cat/grumpifyBprocessed\\*.png
204
```

G

```
-----
DCGenerator(
  (deconv1): Sequential(
    (0): ConvTranspose2d(100, 256, kernel_size=(4, 4), stride=(1, 1),
bias=False)
    (1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
  )
  (deconv2): Sequential(
    (0): ConvTranspose2d(256, 128, kernel_size=(4, 4), stride=(2, 2),
padding=(1, 1), bias=False)
    (1): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
  )
  (deconv3): Sequential(
    (0): ConvTranspose2d(128, 64, kernel_size=(4, 4), stride=(2, 2), padding=(1,
1), bias=False)
    (1): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
  )
  (deconv4): Sequential(
    (0): ConvTranspose2d(64, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1,
1), bias=False)
    (1): BatchNorm2d(32, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
  )
  (deconv5): Sequential(
    (0): ConvTranspose2d(32, 3, kernel_size=(3, 3), stride=(1, 1), padding=(1,
1), bias=False)
  )
)
```

D

```
-----
DCDiscriminator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
```

```

bias=False)
)
(conv2): Sequential(
  (0): Conv2d(32, 64, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
  (1): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
)
(conv3): Sequential(
  (0): Conv2d(64, 128, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
  (1): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
)
(conv4): Sequential(
  (0): Conv2d(128, 256, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
  (1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
)
(conv5): Sequential(
  (0): AdaptiveAvgPool2d(output_size=1)
  (1): Conv2d(256, 1, kernel_size=(1, 1), stride=(1, 1), bias=False)
)
)

```

Models moved to GPU.

```

Iteration [ 10/1300] | D_real_loss: 0.6886 | D_fake_loss: 0.6780 | G_loss:
0.7176
Iteration [ 20/1300] | D_real_loss: 0.6600 | D_fake_loss: 0.6536 | G_loss:
0.7482
Iteration [ 30/1300] | D_real_loss: 0.6303 | D_fake_loss: 0.6343 | G_loss:
0.7780
Iteration [ 40/1300] | D_real_loss: 0.5999 | D_fake_loss: 0.5999 | G_loss:
0.8199
Iteration [ 50/1300] | D_real_loss: 0.5857 | D_fake_loss: 0.5697 | G_loss:
0.8619
Iteration [ 60/1300] | D_real_loss: 0.5415 | D_fake_loss: 0.5436 | G_loss:
0.9054
Iteration [ 70/1300] | D_real_loss: 0.5283 | D_fake_loss: 0.5370 | G_loss:
0.9225
Iteration [ 80/1300] | D_real_loss: 0.5355 | D_fake_loss: 0.5120 | G_loss:
0.9652
Iteration [ 90/1300] | D_real_loss: 0.4908 | D_fake_loss: 0.4915 | G_loss:
1.0009
Iteration [ 100/1300] | D_real_loss: 0.4953 | D_fake_loss: 0.4711 | G_loss:
1.0268
Iteration [ 110/1300] | D_real_loss: 0.4628 | D_fake_loss: 0.4369 | G_loss:

```


1.0830
Iteration [120/1300] | D_real_loss: 0.4515 | D_fake_loss: 0.4328 | G_loss:
1.1126
Iteration [130/1300] | D_real_loss: 0.4169 | D_fake_loss: 0.4646 | G_loss:
1.1368
Iteration [140/1300] | D_real_loss: 0.3923 | D_fake_loss: 0.4126 | G_loss:
1.1782
Iteration [150/1300] | D_real_loss: 0.4158 | D_fake_loss: 0.3936 | G_loss:
1.1876
Iteration [160/1300] | D_real_loss: 0.4097 | D_fake_loss: 0.3940 | G_loss:
1.2006
Iteration [170/1300] | D_real_loss: 0.3830 | D_fake_loss: 0.3900 | G_loss:
1.2341
Iteration [180/1300] | D_real_loss: 0.3773 | D_fake_loss: 0.4033 | G_loss:
1.3027
Iteration [190/1300] | D_real_loss: 0.4332 | D_fake_loss: 0.4735 | G_loss:
1.2208
Iteration [200/1300] | D_real_loss: 0.3877 | D_fake_loss: 0.3528 | G_loss:
1.2636
Saved output/./vanilla\grumpifyBprocessed_deluxe\sample-000200.png
Saved output/./vanilla\grumpifyBprocessed_deluxe\real-000200.png
Iteration [210/1300] | D_real_loss: 0.4409 | D_fake_loss: 0.3481 | G_loss:
1.3035
Iteration [220/1300] | D_real_loss: 0.3696 | D_fake_loss: 0.3463 | G_loss:
1.3431
Iteration [230/1300] | D_real_loss: 0.2799 | D_fake_loss: 0.3310 | G_loss:
1.3511
Iteration [240/1300] | D_real_loss: 0.3580 | D_fake_loss: 0.3454 | G_loss:
1.3631
Iteration [250/1300] | D_real_loss: 0.2690 | D_fake_loss: 0.3074 | G_loss:
1.4110
Iteration [260/1300] | D_real_loss: 0.2601 | D_fake_loss: 0.3149 | G_loss:
1.4438
Iteration [270/1300] | D_real_loss: 0.2731 | D_fake_loss: 0.2691 | G_loss:
1.5300
Iteration [280/1300] | D_real_loss: 0.2344 | D_fake_loss: 0.2525 | G_loss:
1.5597
Iteration [290/1300] | D_real_loss: 0.2329 | D_fake_loss: 0.2386 | G_loss:
1.6055
Iteration [300/1300] | D_real_loss: 0.2453 | D_fake_loss: 0.2440 | G_loss:
1.6008
Iteration [310/1300] | D_real_loss: 0.2015 | D_fake_loss: 0.2272 | G_loss:
1.6806
Iteration [320/1300] | D_real_loss: 0.2081 | D_fake_loss: 0.2144 | G_loss:
1.7300
Iteration [330/1300] | D_real_loss: 0.1986 | D_fake_loss: 0.2261 | G_loss:
1.7291
Iteration [340/1300] | D_real_loss: 0.2213 | D_fake_loss: 0.2050 | G_loss:

```

1.7409
Iteration [ 350/1300] | D_real_loss: 0.1943 | D_fake_loss: 0.2045 | G_loss:
1.7981
Iteration [ 360/1300] | D_real_loss: 0.2000 | D_fake_loss: 0.1919 | G_loss:
1.8153
Iteration [ 370/1300] | D_real_loss: 0.1695 | D_fake_loss: 0.1829 | G_loss:
1.8720
Iteration [ 380/1300] | D_real_loss: 0.1741 | D_fake_loss: 0.1872 | G_loss:
1.8679
Iteration [ 390/1300] | D_real_loss: 0.1710 | D_fake_loss: 0.1710 | G_loss:
1.9251
Iteration [ 400/1300] | D_real_loss: 0.1636 | D_fake_loss: 0.1641 | G_loss:
1.9613
Saved output/./vanilla\grumpifyBprocessed_deluxe\sample-000400.png
Saved output/./vanilla\grumpifyBprocessed_deluxe\real-000400.png
Iteration [ 410/1300] | D_real_loss: 0.1562 | D_fake_loss: 0.1670 | G_loss:
1.9618
Iteration [ 420/1300] | D_real_loss: 0.1491 | D_fake_loss: 0.1600 | G_loss:
2.0185
Iteration [ 430/1300] | D_real_loss: 0.1390 | D_fake_loss: 0.1550 | G_loss:
2.0090
Iteration [ 440/1300] | D_real_loss: 0.1383 | D_fake_loss: 0.1471 | G_loss:
2.1174
Iteration [ 450/1300] | D_real_loss: 0.1422 | D_fake_loss: 0.1359 | G_loss:
2.0970
Iteration [ 460/1300] | D_real_loss: 0.1535 | D_fake_loss: 0.1352 | G_loss:
2.1245
Iteration [ 470/1300] | D_real_loss: 0.1155 | D_fake_loss: 0.1406 | G_loss:
2.1666
Iteration [ 480/1300] | D_real_loss: 0.1304 | D_fake_loss: 0.1393 | G_loss:
2.1831
Iteration [ 490/1300] | D_real_loss: 0.1122 | D_fake_loss: 0.1225 | G_loss:
2.2420
Iteration [ 500/1300] | D_real_loss: 0.1298 | D_fake_loss: 0.1254 | G_loss:
2.2422
Iteration [ 510/1300] | D_real_loss: 0.1134 | D_fake_loss: 0.1229 | G_loss:
2.3181
Iteration [ 520/1300] | D_real_loss: 0.1175 | D_fake_loss: 0.1143 | G_loss:
2.3298
Iteration [ 530/1300] | D_real_loss: 0.1007 | D_fake_loss: 0.1099 | G_loss:
2.3436
Iteration [ 540/1300] | D_real_loss: 0.1037 | D_fake_loss: 0.1148 | G_loss:
2.3553
Iteration [ 550/1300] | D_real_loss: 0.0984 | D_fake_loss: 0.1010 | G_loss:
2.4175
Iteration [ 560/1300] | D_real_loss: 0.1092 | D_fake_loss: 0.1036 | G_loss:
2.4443
Iteration [ 570/1300] | D_real_loss: 0.1028 | D_fake_loss: 0.0945 | G_loss:

```

2.5103
Iteration [580/1300] | D_real_loss: 0.0908 | D_fake_loss: 0.0897 | G_loss: 2.5398
Iteration [590/1300] | D_real_loss: 0.0885 | D_fake_loss: 0.0912 | G_loss: 2.5227
Iteration [600/1300] | D_real_loss: 0.0958 | D_fake_loss: 0.0906 | G_loss: 2.5278
Saved output/./vanilla\grumpifyBprocessed_deluxe\sample-000600.png
Saved output/./vanilla\grumpifyBprocessed_deluxe\real-000600.png
Iteration [610/1300] | D_real_loss: 0.0818 | D_fake_loss: 0.0986 | G_loss: 2.5499
Iteration [620/1300] | D_real_loss: 0.0907 | D_fake_loss: 0.0857 | G_loss: 2.6238
Iteration [630/1300] | D_real_loss: 0.0836 | D_fake_loss: 0.0803 | G_loss: 2.6720
Iteration [640/1300] | D_real_loss: 0.0853 | D_fake_loss: 0.0824 | G_loss: 2.6280
Iteration [650/1300] | D_real_loss: 0.0797 | D_fake_loss: 0.0940 | G_loss: 2.6137
Iteration [660/1300] | D_real_loss: 0.1045 | D_fake_loss: 0.0838 | G_loss: 2.6736
Iteration [670/1300] | D_real_loss: 0.0989 | D_fake_loss: 0.1474 | G_loss: 2.8275
Iteration [680/1300] | D_real_loss: 0.7356 | D_fake_loss: 0.0861 | G_loss: 2.7022
Iteration [690/1300] | D_real_loss: 0.2244 | D_fake_loss: 0.1525 | G_loss: 2.0848
Iteration [700/1300] | D_real_loss: 0.1002 | D_fake_loss: 0.1171 | G_loss: 2.1726
Iteration [710/1300] | D_real_loss: 0.0949 | D_fake_loss: 0.1283 | G_loss: 2.3960
Iteration [720/1300] | D_real_loss: 0.0845 | D_fake_loss: 0.1070 | G_loss: 2.4803
Iteration [730/1300] | D_real_loss: 0.0749 | D_fake_loss: 0.0982 | G_loss: 2.5582
Iteration [740/1300] | D_real_loss: 0.0799 | D_fake_loss: 0.0872 | G_loss: 2.6385
Iteration [750/1300] | D_real_loss: 0.0589 | D_fake_loss: 0.0770 | G_loss: 2.7263
Iteration [760/1300] | D_real_loss: 0.0717 | D_fake_loss: 0.0708 | G_loss: 2.7915
Iteration [770/1300] | D_real_loss: 0.0669 | D_fake_loss: 0.0707 | G_loss: 2.8149
Iteration [780/1300] | D_real_loss: 0.0756 | D_fake_loss: 0.0672 | G_loss: 2.7504
Iteration [790/1300] | D_real_loss: 0.0634 | D_fake_loss: 0.0688 | G_loss: 2.8115
Iteration [800/1300] | D_real_loss: 0.0623 | D_fake_loss: 0.0644 | G_loss:

2.8836
 Saved output/./vanilla\grumpifyBprocessed_deluxe\sample-000800.png
 Saved output/./vanilla\grumpifyBprocessed_deluxe\real-000800.png
 Iteration [810/1300] | D_real_loss: 0.0534 | D_fake_loss: 0.0708 | G_loss: 2.8680
 Iteration [820/1300] | D_real_loss: 0.0644 | D_fake_loss: 0.0580 | G_loss: 2.9687
 Iteration [830/1300] | D_real_loss: 0.0730 | D_fake_loss: 0.0599 | G_loss: 2.9512
 Iteration [840/1300] | D_real_loss: 0.0539 | D_fake_loss: 0.0587 | G_loss: 2.9422
 Iteration [850/1300] | D_real_loss: 0.0570 | D_fake_loss: 0.0619 | G_loss: 2.9131
 Iteration [860/1300] | D_real_loss: 0.0570 | D_fake_loss: 0.0611 | G_loss: 2.9301
 Iteration [870/1300] | D_real_loss: 0.0572 | D_fake_loss: 0.0586 | G_loss: 2.9409
 Iteration [880/1300] | D_real_loss: 0.0596 | D_fake_loss: 0.0618 | G_loss: 2.9340
 Iteration [890/1300] | D_real_loss: 0.0613 | D_fake_loss: 0.0621 | G_loss: 3.0504
 Iteration [900/1300] | D_real_loss: 0.0810 | D_fake_loss: 0.0524 | G_loss: 3.1509
 Iteration [910/1300] | D_real_loss: 0.0617 | D_fake_loss: 0.0525 | G_loss: 2.9509
 Iteration [920/1300] | D_real_loss: 0.0625 | D_fake_loss: 0.0408 | G_loss: 3.1412
 Iteration [930/1300] | D_real_loss: 0.0860 | D_fake_loss: 0.0466 | G_loss: 2.9014
 Iteration [940/1300] | D_real_loss: 0.2439 | D_fake_loss: 0.1144 | G_loss: 3.0295
 Iteration [950/1300] | D_real_loss: 0.0655 | D_fake_loss: 0.0724 | G_loss: 3.2387
 Iteration [960/1300] | D_real_loss: 0.0975 | D_fake_loss: 0.0704 | G_loss: 3.0680
 Iteration [970/1300] | D_real_loss: 0.0613 | D_fake_loss: 0.0399 | G_loss: 3.2813
 Iteration [980/1300] | D_real_loss: 0.0585 | D_fake_loss: 0.0494 | G_loss: 3.1749
 Iteration [990/1300] | D_real_loss: 0.0539 | D_fake_loss: 0.0495 | G_loss: 3.0401
 Iteration [1000/1300] | D_real_loss: 0.0351 | D_fake_loss: 0.0486 | G_loss: 3.0879
 Saved output/./vanilla\grumpifyBprocessed_deluxe\sample-001000.png
 Saved output/./vanilla\grumpifyBprocessed_deluxe\real-001000.png
 Iteration [1010/1300] | D_real_loss: 0.0313 | D_fake_loss: 0.0507 | G_loss: 3.1066
 Iteration [1020/1300] | D_real_loss: 0.0345 | D_fake_loss: 0.0515 | G_loss:

3.1881
Iteration [1030/1300] | D_real_loss: 0.0341 | D_fake_loss: 0.0507 | G_loss:
3.1411
Iteration [1040/1300] | D_real_loss: 0.0343 | D_fake_loss: 0.0489 | G_loss:
3.1827
Iteration [1050/1300] | D_real_loss: 0.0378 | D_fake_loss: 0.0468 | G_loss:
3.2570
Iteration [1060/1300] | D_real_loss: 0.0389 | D_fake_loss: 0.0426 | G_loss:
3.2545
Iteration [1070/1300] | D_real_loss: 0.0416 | D_fake_loss: 0.0421 | G_loss:
3.2335
Iteration [1080/1300] | D_real_loss: 0.0427 | D_fake_loss: 0.0387 | G_loss:
3.3257
Iteration [1090/1300] | D_real_loss: 0.0394 | D_fake_loss: 0.0388 | G_loss:
3.3344
Iteration [1100/1300] | D_real_loss: 0.0420 | D_fake_loss: 0.0390 | G_loss:
3.3290
Iteration [1110/1300] | D_real_loss: 0.0466 | D_fake_loss: 0.0393 | G_loss:
3.4301
Iteration [1120/1300] | D_real_loss: 0.0307 | D_fake_loss: 0.0349 | G_loss:
3.3750
Iteration [1130/1300] | D_real_loss: 0.0335 | D_fake_loss: 0.0391 | G_loss:
3.3973
Iteration [1140/1300] | D_real_loss: 0.0355 | D_fake_loss: 0.0345 | G_loss:
3.5277
Iteration [1150/1300] | D_real_loss: 0.0302 | D_fake_loss: 0.0356 | G_loss:
3.5366
Iteration [1160/1300] | D_real_loss: 0.0314 | D_fake_loss: 0.0358 | G_loss:
3.5027
Iteration [1170/1300] | D_real_loss: 0.0359 | D_fake_loss: 0.0326 | G_loss:
3.5259
Iteration [1180/1300] | D_real_loss: 0.0292 | D_fake_loss: 0.0337 | G_loss:
3.5807
Iteration [1190/1300] | D_real_loss: 0.0348 | D_fake_loss: 0.0356 | G_loss:
3.5662
Iteration [1200/1300] | D_real_loss: 0.0399 | D_fake_loss: 0.0322 | G_loss:
3.6566
Saved output/./vanilla\grumpifyBprocessed_deluxe\sample-001200.png
Saved output/./vanilla\grumpifyBprocessed_deluxe\real-001200.png
Iteration [1210/1300] | D_real_loss: 0.0316 | D_fake_loss: 0.0313 | G_loss:
3.5915
Iteration [1220/1300] | D_real_loss: 0.0309 | D_fake_loss: 0.0291 | G_loss:
3.6784
Iteration [1230/1300] | D_real_loss: 0.0330 | D_fake_loss: 0.0370 | G_loss:
3.6001
Iteration [1240/1300] | D_real_loss: 0.0346 | D_fake_loss: 0.0303 | G_loss:
3.5972
Iteration [1250/1300] | D_real_loss: 0.0288 | D_fake_loss: 0.0281 | G_loss:

```

3.6394
Iteration [1260/1300] | D_real_loss: 0.0353 | D_fake_loss: 0.0301 | G_loss:
3.5909
Iteration [1270/1300] | D_real_loss: 0.0270 | D_fake_loss: 0.0305 | G_loss:
3.6708
Iteration [1280/1300] | D_real_loss: 0.0263 | D_fake_loss: 0.0281 | G_loss:
3.7085
Iteration [1290/1300] | D_real_loss: 0.0375 | D_fake_loss: 0.0270 | G_loss:
3.7469
Iteration [1300/1300] | D_real_loss: 0.0320 | D_fake_loss: 0.0251 | G_loss:
3.7590

```

```

2025-04-18 12:25:45.926669: I tensorflow/core/util/port.cc:153] oneDNN custom
operations are on. You may see slightly different numerical results due to
floating-point round-off errors from different computation orders. To turn them
off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.
2025-04-18 12:25:46.733076: I tensorflow/core/util/port.cc:153] oneDNN custom
operations are on. You may see slightly different numerical results due to
floating-point round-off errors from different computation orders. To turn them
off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.

```

Basic Execution

```
[20]: !python vanilla_gan.py --data_aug=basic --num_epochs=100
```

```

Namespace(image_size=64, conv_dim=32, noise_size=100, num_epochs=100,
batch_size=16, num_workers=0, lr=0.0003, beta1=0.5, beta2=0.999,
data='cat/grumpifyBprocessed', data_aug='basic', ext='*.png',
checkpoint_dir='./checkpoints_vanilla',
sample_dir='output/./vanilla\grumpifyBprocessed_basic', log_step=10,
sample_every=200, checkpoint_every=400)
data/cat/grumpifyBprocessed\*.png
204

```

G

```

-----
DCGenerator(
  (deconv1): Sequential(
    (0): ConvTranspose2d(100, 256, kernel_size=(4, 4), stride=(1, 1),
bias=False)
    (1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
  )
  (deconv2): Sequential(
    (0): ConvTranspose2d(256, 128, kernel_size=(4, 4), stride=(2, 2),
padding=(1, 1), bias=False)
    (1): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
  )
  (deconv3): Sequential(

```

```

        (0): ConvTranspose2d(128, 64, kernel_size=(4, 4), stride=(2, 2), padding=(1,
1), bias=False)
        (1): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
    )
    (deconv4): Sequential(
        (0): ConvTranspose2d(64, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1,
1), bias=False)
        (1): BatchNorm2d(32, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
    )
    (deconv5): Sequential(
        (0): ConvTranspose2d(32, 3, kernel_size=(3, 3), stride=(1, 1), padding=(1,
1), bias=False)
    )
)

```

D

```

DCDiscriminator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
  )
  (conv2): Sequential(
    (0): Conv2d(32, 64, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
  )
  (conv3): Sequential(
    (0): Conv2d(64, 128, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
  )
  (conv4): Sequential(
    (0): Conv2d(128, 256, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
  )
  (conv5): Sequential(
    (0): AdaptiveAvgPool2d(output_size=1)
    (1): Conv2d(256, 1, kernel_size=(1, 1), stride=(1, 1), bias=False)
  )
)

```

Models moved to GPU.

```
Iteration [ 10/1300] | D_real_loss: 0.6822 | D_fake_loss: 0.6784 | G_loss: 0.7192
Iteration [ 20/1300] | D_real_loss: 0.6330 | D_fake_loss: 0.6469 | G_loss: 0.7575
Iteration [ 30/1300] | D_real_loss: 0.5952 | D_fake_loss: 0.6090 | G_loss: 0.8043
Iteration [ 40/1300] | D_real_loss: 0.5799 | D_fake_loss: 0.5790 | G_loss: 0.8440
Iteration [ 50/1300] | D_real_loss: 0.5652 | D_fake_loss: 0.5603 | G_loss: 0.8835
Iteration [ 60/1300] | D_real_loss: 0.5112 | D_fake_loss: 0.5141 | G_loss: 0.9417
Iteration [ 70/1300] | D_real_loss: 0.4754 | D_fake_loss: 0.5076 | G_loss: 0.9687
Iteration [ 80/1300] | D_real_loss: 0.4859 | D_fake_loss: 0.4790 | G_loss: 0.9931
Iteration [ 90/1300] | D_real_loss: 0.4537 | D_fake_loss: 0.4656 | G_loss: 1.0338
Iteration [ 100/1300] | D_real_loss: 0.4418 | D_fake_loss: 0.4534 | G_loss: 1.0463
Iteration [ 110/1300] | D_real_loss: 0.4452 | D_fake_loss: 0.4807 | G_loss: 1.0839
Iteration [ 120/1300] | D_real_loss: 0.4188 | D_fake_loss: 0.4973 | G_loss: 1.1065
Iteration [ 130/1300] | D_real_loss: 0.4138 | D_fake_loss: 0.4193 | G_loss: 1.1317
Iteration [ 140/1300] | D_real_loss: 0.3846 | D_fake_loss: 0.4140 | G_loss: 1.1814
Iteration [ 150/1300] | D_real_loss: 0.3745 | D_fake_loss: 0.3636 | G_loss: 1.2170
Iteration [ 160/1300] | D_real_loss: 0.3741 | D_fake_loss: 0.3690 | G_loss: 1.2428
Iteration [ 170/1300] | D_real_loss: 0.3662 | D_fake_loss: 0.3541 | G_loss: 1.2487
Iteration [ 180/1300] | D_real_loss: 0.3576 | D_fake_loss: 0.3507 | G_loss: 1.3111
Iteration [ 190/1300] | D_real_loss: 0.3622 | D_fake_loss: 0.3530 | G_loss: 1.3403
Iteration [ 200/1300] | D_real_loss: 0.3428 | D_fake_loss: 0.3415 | G_loss: 1.2557
Saved output/./vanilla\grumpifyBprocessed_basic\sample-000200.png
Saved output/./vanilla\grumpifyBprocessed_basic\real-000200.png
Iteration [ 210/1300] | D_real_loss: 0.3318 | D_fake_loss: 0.3398 | G_loss: 1.3433
Iteration [ 220/1300] | D_real_loss: 0.3007 | D_fake_loss: 0.3626 | G_loss: 1.4044
Iteration [ 230/1300] | D_real_loss: 0.2957 | D_fake_loss: 0.3139 | G_loss:
```



```

1.3567
Iteration [ 240/1300] | D_real_loss: 0.2925 | D_fake_loss: 0.3092 | G_loss:
1.4072
Iteration [ 250/1300] | D_real_loss: 0.2535 | D_fake_loss: 0.2869 | G_loss:
1.4425
Iteration [ 260/1300] | D_real_loss: 0.2500 | D_fake_loss: 0.2635 | G_loss:
1.5566
Iteration [ 270/1300] | D_real_loss: 0.2827 | D_fake_loss: 0.2627 | G_loss:
1.5219
Iteration [ 280/1300] | D_real_loss: 0.2328 | D_fake_loss: 0.2513 | G_loss:
1.5806
Iteration [ 290/1300] | D_real_loss: 0.2208 | D_fake_loss: 0.2343 | G_loss:
1.6490
Iteration [ 300/1300] | D_real_loss: 0.2317 | D_fake_loss: 0.2252 | G_loss:
1.6562
Iteration [ 310/1300] | D_real_loss: 0.2144 | D_fake_loss: 0.2225 | G_loss:
1.6926
Iteration [ 320/1300] | D_real_loss: 0.1999 | D_fake_loss: 0.2215 | G_loss:
1.7254
Iteration [ 330/1300] | D_real_loss: 0.2130 | D_fake_loss: 0.1980 | G_loss:
1.7666
Iteration [ 340/1300] | D_real_loss: 0.1934 | D_fake_loss: 0.1945 | G_loss:
1.7713
Iteration [ 350/1300] | D_real_loss: 0.1819 | D_fake_loss: 0.2007 | G_loss:
1.7942
Iteration [ 360/1300] | D_real_loss: 0.1802 | D_fake_loss: 0.1835 | G_loss:
1.8692
Iteration [ 370/1300] | D_real_loss: 0.1724 | D_fake_loss: 0.1730 | G_loss:
1.8957
Iteration [ 380/1300] | D_real_loss: 0.1679 | D_fake_loss: 0.1734 | G_loss:
1.9249
Iteration [ 390/1300] | D_real_loss: 0.1627 | D_fake_loss: 0.1660 | G_loss:
1.9485
Iteration [ 400/1300] | D_real_loss: 0.1663 | D_fake_loss: 0.1707 | G_loss:
1.9654
Saved output/./vanilla\grumpifyBprocessed_basic\sample-000400.png
Saved output/./vanilla\grumpifyBprocessed_basic\real-000400.png
Iteration [ 410/1300] | D_real_loss: 0.1494 | D_fake_loss: 0.1703 | G_loss:
1.9827
Iteration [ 420/1300] | D_real_loss: 0.1536 | D_fake_loss: 0.1502 | G_loss:
2.0016
Iteration [ 430/1300] | D_real_loss: 0.1483 | D_fake_loss: 0.1669 | G_loss:
2.0361
Iteration [ 440/1300] | D_real_loss: 0.1474 | D_fake_loss: 0.1495 | G_loss:
2.1738
Iteration [ 450/1300] | D_real_loss: 0.1530 | D_fake_loss: 0.1757 | G_loss:
2.1846
Iteration [ 460/1300] | D_real_loss: 0.1305 | D_fake_loss: 0.1336 | G_loss:

```

2.1318
 Iteration [470/1300] | D_real_loss: 0.1104 | D_fake_loss: 0.2172 | G_loss: 2.1034
 Iteration [480/1300] | D_real_loss: 0.1403 | D_fake_loss: 0.1493 | G_loss: 2.0817
 Iteration [490/1300] | D_real_loss: 0.1330 | D_fake_loss: 0.1212 | G_loss: 2.2196
 Iteration [500/1300] | D_real_loss: 0.1219 | D_fake_loss: 0.1191 | G_loss: 2.3014
 Iteration [510/1300] | D_real_loss: 0.1141 | D_fake_loss: 0.1433 | G_loss: 2.1171
 Iteration [520/1300] | D_real_loss: 0.0992 | D_fake_loss: 0.1323 | G_loss: 2.2005
 Iteration [530/1300] | D_real_loss: 0.1002 | D_fake_loss: 0.1253 | G_loss: 2.2481
 Iteration [540/1300] | D_real_loss: 0.0975 | D_fake_loss: 0.1173 | G_loss: 2.2913
 Iteration [550/1300] | D_real_loss: 0.1030 | D_fake_loss: 0.1107 | G_loss: 2.3562
 Iteration [560/1300] | D_real_loss: 0.0990 | D_fake_loss: 0.1060 | G_loss: 2.4102
 Iteration [570/1300] | D_real_loss: 0.0924 | D_fake_loss: 0.1026 | G_loss: 2.4152
 Iteration [580/1300] | D_real_loss: 0.0954 | D_fake_loss: 0.0934 | G_loss: 2.4823
 Iteration [590/1300] | D_real_loss: 0.0891 | D_fake_loss: 0.0894 | G_loss: 2.5103
 Iteration [600/1300] | D_real_loss: 0.0868 | D_fake_loss: 0.0933 | G_loss: 2.5058
 Saved output/./vanilla\grumpifyBprocessed_basic\sample-000600.png
 Saved output/./vanilla\grumpifyBprocessed_basic\real-000600.png
 Iteration [610/1300] | D_real_loss: 0.0911 | D_fake_loss: 0.0929 | G_loss: 2.4794
 Iteration [620/1300] | D_real_loss: 0.0964 | D_fake_loss: 0.0942 | G_loss: 2.4929
 Iteration [630/1300] | D_real_loss: 0.0818 | D_fake_loss: 0.0859 | G_loss: 2.5348
 Iteration [640/1300] | D_real_loss: 0.0815 | D_fake_loss: 0.0833 | G_loss: 2.5917
 Iteration [650/1300] | D_real_loss: 0.0895 | D_fake_loss: 0.0863 | G_loss: 2.5447
 Iteration [660/1300] | D_real_loss: 0.0724 | D_fake_loss: 0.0833 | G_loss: 2.6218
 Iteration [670/1300] | D_real_loss: 0.0820 | D_fake_loss: 0.0810 | G_loss: 2.5984
 Iteration [680/1300] | D_real_loss: 0.0750 | D_fake_loss: 0.0804 | G_loss: 2.6338
 Iteration [690/1300] | D_real_loss: 0.0759 | D_fake_loss: 0.0781 | G_loss:

2.7357
Iteration [700/1300] | D_real_loss: 0.0801 | D_fake_loss: 0.0704 | G_loss:
2.7513
Iteration [710/1300] | D_real_loss: 0.0702 | D_fake_loss: 0.0663 | G_loss:
2.8095
Iteration [720/1300] | D_real_loss: 0.0694 | D_fake_loss: 0.0708 | G_loss:
2.7880
Iteration [730/1300] | D_real_loss: 0.0669 | D_fake_loss: 0.0700 | G_loss:
2.8175
Iteration [740/1300] | D_real_loss: 0.0633 | D_fake_loss: 0.0657 | G_loss:
2.8241
Iteration [750/1300] | D_real_loss: 0.0634 | D_fake_loss: 0.0652 | G_loss:
2.8659
Iteration [760/1300] | D_real_loss: 0.0608 | D_fake_loss: 0.0638 | G_loss:
2.8801
Iteration [770/1300] | D_real_loss: 0.0658 | D_fake_loss: 0.0615 | G_loss:
2.9150
Iteration [780/1300] | D_real_loss: 0.0602 | D_fake_loss: 0.0607 | G_loss:
2.9222
Iteration [790/1300] | D_real_loss: 0.0530 | D_fake_loss: 0.0610 | G_loss:
2.9036
Iteration [800/1300] | D_real_loss: 0.0602 | D_fake_loss: 0.0587 | G_loss:
2.9430
Saved output/./vanilla\grumpifyBprocessed_basic\sample-000800.png
Saved output/./vanilla\grumpifyBprocessed_basic\real-000800.png
Iteration [810/1300] | D_real_loss: 0.0548 | D_fake_loss: 0.0570 | G_loss:
2.9850
Iteration [820/1300] | D_real_loss: 0.0556 | D_fake_loss: 0.0603 | G_loss:
2.9626
Iteration [830/1300] | D_real_loss: 0.0551 | D_fake_loss: 0.0524 | G_loss:
3.0559
Iteration [840/1300] | D_real_loss: 0.0529 | D_fake_loss: 0.0520 | G_loss:
3.0748
Iteration [850/1300] | D_real_loss: 0.0536 | D_fake_loss: 0.0512 | G_loss:
3.0520
Iteration [860/1300] | D_real_loss: 0.0503 | D_fake_loss: 0.0548 | G_loss:
3.0642
Iteration [870/1300] | D_real_loss: 0.0562 | D_fake_loss: 0.0544 | G_loss:
3.0876
Iteration [880/1300] | D_real_loss: 0.0513 | D_fake_loss: 0.0649 | G_loss:
3.1969
Iteration [890/1300] | D_real_loss: 0.0688 | D_fake_loss: 0.0672 | G_loss:
3.1383
Iteration [900/1300] | D_real_loss: 0.0544 | D_fake_loss: 0.0537 | G_loss:
3.1587
Iteration [910/1300] | D_real_loss: 0.0570 | D_fake_loss: 0.0564 | G_loss:
3.1926
Iteration [920/1300] | D_real_loss: 0.0563 | D_fake_loss: 0.0405 | G_loss:

3.2409
 Iteration [930/1300] | D_real_loss: 0.0443 | D_fake_loss: 0.0442 | G_loss:
 3.3166
 Iteration [940/1300] | D_real_loss: 0.0431 | D_fake_loss: 0.0491 | G_loss:
 3.3131
 Iteration [950/1300] | D_real_loss: 0.0396 | D_fake_loss: 0.0609 | G_loss:
 3.0843
 Iteration [960/1300] | D_real_loss: 0.0426 | D_fake_loss: 0.0474 | G_loss:
 3.1038
 Iteration [970/1300] | D_real_loss: 0.0359 | D_fake_loss: 0.0473 | G_loss:
 3.1781
 Iteration [980/1300] | D_real_loss: 0.0381 | D_fake_loss: 0.0448 | G_loss:
 3.2058
 Iteration [990/1300] | D_real_loss: 0.0357 | D_fake_loss: 0.0460 | G_loss:
 3.2100
 Iteration [1000/1300] | D_real_loss: 0.0371 | D_fake_loss: 0.0440 | G_loss:
 3.2620
 Saved output/./vanilla\grumpifyBprocessed_basic\sample-001000.png
 Saved output/./vanilla\grumpifyBprocessed_basic\real-001000.png
 Iteration [1010/1300] | D_real_loss: 0.0391 | D_fake_loss: 0.0394 | G_loss:
 3.3353
 Iteration [1020/1300] | D_real_loss: 0.0358 | D_fake_loss: 0.0377 | G_loss:
 3.3628
 Iteration [1030/1300] | D_real_loss: 0.0392 | D_fake_loss: 0.0394 | G_loss:
 3.3359
 Iteration [1040/1300] | D_real_loss: 0.0344 | D_fake_loss: 0.0371 | G_loss:
 3.3958
 Iteration [1050/1300] | D_real_loss: 0.0338 | D_fake_loss: 0.0378 | G_loss:
 3.4181
 Iteration [1060/1300] | D_real_loss: 0.0345 | D_fake_loss: 0.0356 | G_loss:
 3.4219
 Iteration [1070/1300] | D_real_loss: 0.0344 | D_fake_loss: 0.0378 | G_loss:
 3.4700
 Iteration [1080/1300] | D_real_loss: 0.0334 | D_fake_loss: 0.0341 | G_loss:
 3.4592
 Iteration [1090/1300] | D_real_loss: 0.0348 | D_fake_loss: 0.0335 | G_loss:
 3.4471
 Iteration [1100/1300] | D_real_loss: 0.0325 | D_fake_loss: 0.0358 | G_loss:
 3.5016
 Iteration [1110/1300] | D_real_loss: 0.0311 | D_fake_loss: 0.0340 | G_loss:
 3.5402
 Iteration [1120/1300] | D_real_loss: 0.0302 | D_fake_loss: 0.0312 | G_loss:
 3.6037
 Iteration [1130/1300] | D_real_loss: 0.0298 | D_fake_loss: 0.0301 | G_loss:
 3.5648
 Iteration [1140/1300] | D_real_loss: 0.0318 | D_fake_loss: 0.0312 | G_loss:
 3.5372
 Iteration [1150/1300] | D_real_loss: 0.0309 | D_fake_loss: 0.0336 | G_loss:

```

3.4819
Iteration [1160/1300] | D_real_loss: 0.0282 | D_fake_loss: 0.0336 | G_loss:
3.5588
Iteration [1170/1300] | D_real_loss: 0.0306 | D_fake_loss: 0.0330 | G_loss:
3.5267
Iteration [1180/1300] | D_real_loss: 0.0321 | D_fake_loss: 0.0308 | G_loss:
3.5992
Iteration [1190/1300] | D_real_loss: 0.0274 | D_fake_loss: 0.0296 | G_loss:
3.5718
Iteration [1200/1300] | D_real_loss: 0.0290 | D_fake_loss: 0.0303 | G_loss:
3.6394
Saved output/./vanilla\grumpifyBprocessed_basic\sample-001200.png
Saved output/./vanilla\grumpifyBprocessed_basic\real-001200.png
Iteration [1210/1300] | D_real_loss: 0.0309 | D_fake_loss: 0.0265 | G_loss:
3.7206
Iteration [1220/1300] | D_real_loss: 0.0266 | D_fake_loss: 0.0287 | G_loss:
3.6876
Iteration [1230/1300] | D_real_loss: 0.0262 | D_fake_loss: 0.0270 | G_loss:
3.6845
Iteration [1240/1300] | D_real_loss: 0.0274 | D_fake_loss: 0.0261 | G_loss:
3.7191
Iteration [1250/1300] | D_real_loss: 0.0241 | D_fake_loss: 0.0248 | G_loss:
3.7644
Iteration [1260/1300] | D_real_loss: 0.0268 | D_fake_loss: 0.0251 | G_loss:
3.7305
Iteration [1270/1300] | D_real_loss: 0.0223 | D_fake_loss: 0.0261 | G_loss:
3.7005
Iteration [1280/1300] | D_real_loss: 0.0228 | D_fake_loss: 0.0256 | G_loss:
3.7767
Iteration [1290/1300] | D_real_loss: 0.0246 | D_fake_loss: 0.0323 | G_loss:
3.6704
Iteration [1300/1300] | D_real_loss: 0.0273 | D_fake_loss: 0.0284 | G_loss:
3.7543

```

```

2025-04-18 12:33:59.464338: I tensorflow/core/util/port.cc:153] oneDNN custom
operations are on. You may see slightly different numerical results due to
floating-point round-off errors from different computation orders. To turn them
off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.

```

```

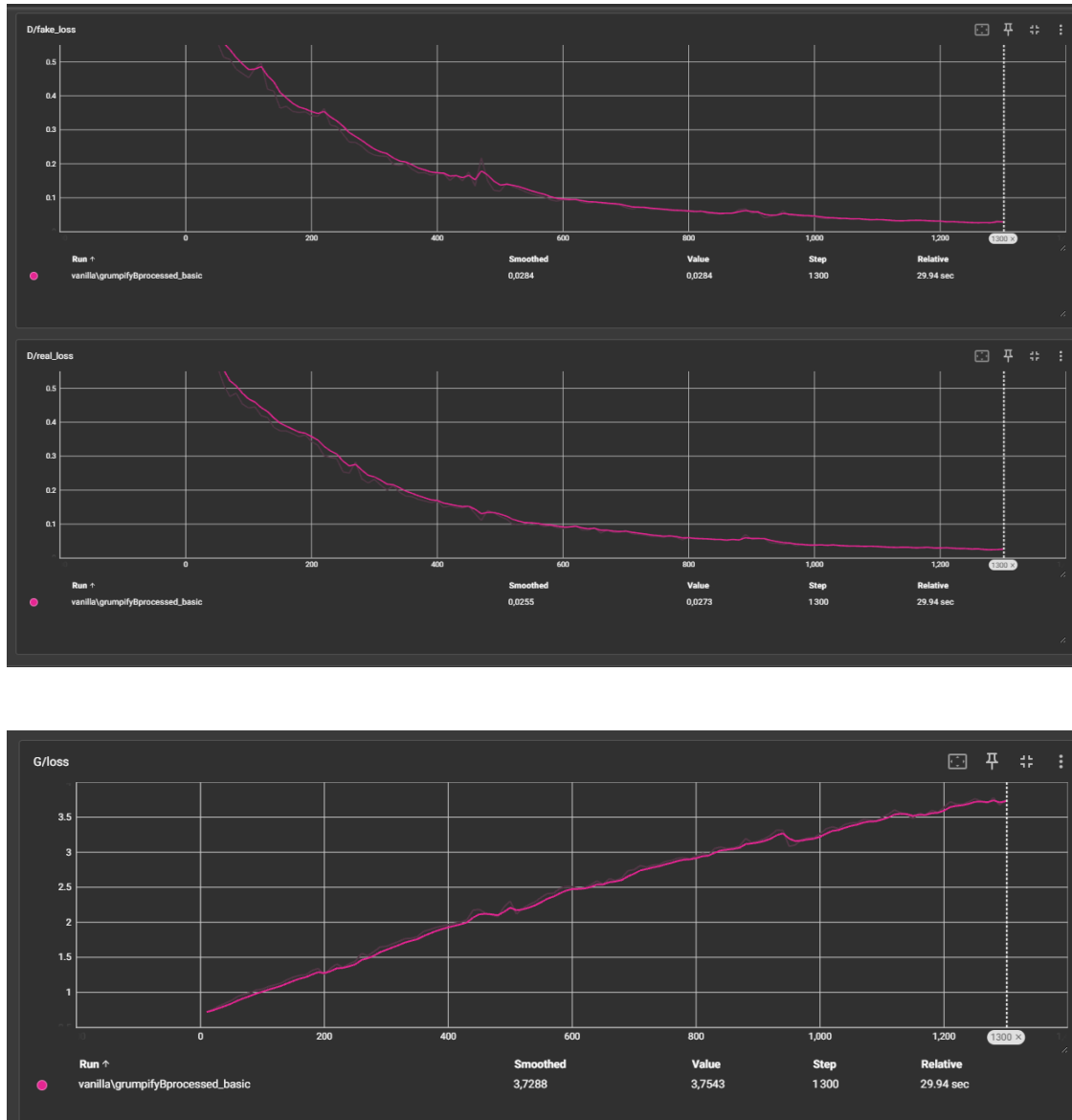
2025-04-18 12:34:00.257890: I tensorflow/core/util/port.cc:153] oneDNN custom
operations are on. You may see slightly different numerical results due to
floating-point round-off errors from different computation orders. To turn them
off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.

```

Basic Loss Curves On the Generator losses we can see an increase trend over the training steps. This indicates that the discriminator is getting better at separating false images from real ones, making it more difficult for the generator to “fool” it. This increase in loss may suggest that the generator requires additional effort to achieve good images, and that the discriminator is indeed getting better, outperforming the generator. However, it may also indicate that the generator is

not performing as well as the training progresses.

The discriminator losses show a decreasing trend in both false images and real images. This indicates that, as training progresses, the discriminator fails to differentiate between false and real images. Now, it is possible to expect that $D/\text{false_loss}$ is reduced as the generator gets closer to producing better images, in the same way that a reduction in $D/\text{real_loss}$ can be seen. Both reductions would be indications that the generator is managing to “fool” the discriminator, however, it could also indicate that there is a learning problem and that therefore the discriminator is losing the ability to effectively differentiate between the two groups of images.



Deluxe Execution

```
[21]: !python vanilla_gan.py --data_aug=deluxe --num_epochs=100
```

```
Namespace(image_size=64, conv_dim=32, noise_size=100, num_epochs=100,  
batch_size=16, num_workers=0, lr=0.0003, beta1=0.5, beta2=0.999,
```

```

data='cat/grumpifyBprocessed', data_aug='deluxe', ext='*.png',
checkpoint_dir='./checkpoints_vanilla',
sample_dir='output/./vanilla\\grumpifyBprocessed_deluxe', log_step=10,
sample_every=200, checkpoint_every=400)
data/cat/grumpifyBprocessed\\*.png
204

```

G

```

-----
DCGenerator(
  (deconv1): Sequential(
    (0): ConvTranspose2d(100, 256, kernel_size=(4, 4), stride=(1, 1),
bias=False)
    (1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
  )
  (deconv2): Sequential(
    (0): ConvTranspose2d(256, 128, kernel_size=(4, 4), stride=(2, 2),
padding=(1, 1), bias=False)
    (1): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
  )
  (deconv3): Sequential(
    (0): ConvTranspose2d(128, 64, kernel_size=(4, 4), stride=(2, 2), padding=(1,
1), bias=False)
    (1): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
  )
  (deconv4): Sequential(
    (0): ConvTranspose2d(64, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1,
1), bias=False)
    (1): BatchNorm2d(32, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
  )
  (deconv5): Sequential(
    (0): ConvTranspose2d(32, 3, kernel_size=(3, 3), stride=(1, 1), padding=(1,
1), bias=False)
  )
)
-----

```

D

```

-----
DCDiscriminator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
  )
  (conv2): Sequential(
    (0): Conv2d(32, 64, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),

```

```

bias=False)
    (1): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
    )
    (conv3): Sequential(
      (0): Conv2d(64, 128, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
      (1): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
      )
    (conv4): Sequential(
      (0): Conv2d(128, 256, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
      (1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True,
track_running_stats=True)
      )
    (conv5): Sequential(
      (0): AdaptiveAvgPool2d(output_size=1)
      (1): Conv2d(256, 1, kernel_size=(1, 1), stride=(1, 1), bias=False)
    )
  )
)

```

Models moved to GPU.

```

Iteration [ 10/1300] | D_real_loss: 0.6892 | D_fake_loss: 0.6732 | G_loss:
0.7201
Iteration [ 20/1300] | D_real_loss: 0.6625 | D_fake_loss: 0.6575 | G_loss:
0.7464
Iteration [ 30/1300] | D_real_loss: 0.6312 | D_fake_loss: 0.6353 | G_loss:
0.7742
Iteration [ 40/1300] | D_real_loss: 0.6001 | D_fake_loss: 0.5987 | G_loss:
0.8166
Iteration [ 50/1300] | D_real_loss: 0.5894 | D_fake_loss: 0.5798 | G_loss:
0.8487
Iteration [ 60/1300] | D_real_loss: 0.5445 | D_fake_loss: 0.5501 | G_loss:
0.8914
Iteration [ 70/1300] | D_real_loss: 0.5309 | D_fake_loss: 0.5372 | G_loss:
0.9088
Iteration [ 80/1300] | D_real_loss: 0.5419 | D_fake_loss: 0.5241 | G_loss:
0.9531
Iteration [ 90/1300] | D_real_loss: 0.4934 | D_fake_loss: 0.5008 | G_loss:
0.9715
Iteration [ 100/1300] | D_real_loss: 0.5020 | D_fake_loss: 0.4605 | G_loss:
1.0341
Iteration [ 110/1300] | D_real_loss: 0.4657 | D_fake_loss: 0.4600 | G_loss:
1.0627
Iteration [ 120/1300] | D_real_loss: 0.4698 | D_fake_loss: 0.4519 | G_loss:
1.1020
Iteration [ 130/1300] | D_real_loss: 0.4253 | D_fake_loss: 0.4317 | G_loss:

```



```

1.1111
Iteration [ 140/1300] | D_real_loss: 0.4141 | D_fake_loss: 0.4566 | G_loss:
1.1222
Iteration [ 150/1300] | D_real_loss: 0.4534 | D_fake_loss: 0.4169 | G_loss:
1.1348
Iteration [ 160/1300] | D_real_loss: 0.4188 | D_fake_loss: 0.3979 | G_loss:
1.2065
Iteration [ 170/1300] | D_real_loss: 0.3872 | D_fake_loss: 0.3967 | G_loss:
1.2234
Iteration [ 180/1300] | D_real_loss: 0.3471 | D_fake_loss: 0.3995 | G_loss:
1.2618
Iteration [ 190/1300] | D_real_loss: 0.4031 | D_fake_loss: 0.3819 | G_loss:
1.3110
Iteration [ 200/1300] | D_real_loss: 0.3637 | D_fake_loss: 0.3651 | G_loss:
1.3387
Saved output/./vanilla\grumpifyBprocessed_deluxe\sample-000200.png
Saved output/./vanilla\grumpifyBprocessed_deluxe\real-000200.png
Iteration [ 210/1300] | D_real_loss: 0.3773 | D_fake_loss: 0.3508 | G_loss:
1.3434
Iteration [ 220/1300] | D_real_loss: 0.3267 | D_fake_loss: 0.3203 | G_loss:
1.3904
Iteration [ 230/1300] | D_real_loss: 0.2712 | D_fake_loss: 0.3067 | G_loss:
1.3975
Iteration [ 240/1300] | D_real_loss: 0.3339 | D_fake_loss: 0.3013 | G_loss:
1.4192
Iteration [ 250/1300] | D_real_loss: 0.2647 | D_fake_loss: 0.2793 | G_loss:
1.5037
Iteration [ 260/1300] | D_real_loss: 0.2581 | D_fake_loss: 0.2667 | G_loss:
1.5353
Iteration [ 270/1300] | D_real_loss: 0.2651 | D_fake_loss: 0.2624 | G_loss:
1.5469
Iteration [ 280/1300] | D_real_loss: 0.2388 | D_fake_loss: 0.2503 | G_loss:
1.5888
Iteration [ 290/1300] | D_real_loss: 0.2354 | D_fake_loss: 0.2557 | G_loss:
1.6460
Iteration [ 300/1300] | D_real_loss: 0.2436 | D_fake_loss: 0.2275 | G_loss:
1.6817
Iteration [ 310/1300] | D_real_loss: 0.1917 | D_fake_loss: 0.2270 | G_loss:
1.6919
Iteration [ 320/1300] | D_real_loss: 0.2017 | D_fake_loss: 0.2247 | G_loss:
1.7304
Iteration [ 330/1300] | D_real_loss: 0.2019 | D_fake_loss: 0.2052 | G_loss:
1.7702
Iteration [ 340/1300] | D_real_loss: 0.2148 | D_fake_loss: 0.1996 | G_loss:
1.7920
Iteration [ 350/1300] | D_real_loss: 0.1892 | D_fake_loss: 0.1950 | G_loss:
1.8465
Iteration [ 360/1300] | D_real_loss: 0.1926 | D_fake_loss: 0.1890 | G_loss:

```

```

1.8342
Iteration [ 370/1300] | D_real_loss: 0.1669 | D_fake_loss: 0.1847 | G_loss:
1.8722
Iteration [ 380/1300] | D_real_loss: 0.1647 | D_fake_loss: 0.1832 | G_loss:
1.9144
Iteration [ 390/1300] | D_real_loss: 0.1605 | D_fake_loss: 0.1671 | G_loss:
1.9574
Iteration [ 400/1300] | D_real_loss: 0.1585 | D_fake_loss: 0.1648 | G_loss:
1.9940
Saved output/./vanilla\grumpifyBprocessed_deluxe\sample-000400.png
Saved output/./vanilla\grumpifyBprocessed_deluxe\real-000400.png
Iteration [ 410/1300] | D_real_loss: 0.1534 | D_fake_loss: 0.1601 | G_loss:
2.0160
Iteration [ 420/1300] | D_real_loss: 0.1458 | D_fake_loss: 0.1484 | G_loss:
2.0617
Iteration [ 430/1300] | D_real_loss: 0.1335 | D_fake_loss: 0.1369 | G_loss:
2.1059
Iteration [ 440/1300] | D_real_loss: 0.1275 | D_fake_loss: 0.1368 | G_loss:
2.1189
Iteration [ 450/1300] | D_real_loss: 0.1306 | D_fake_loss: 0.1463 | G_loss:
2.1103
Iteration [ 460/1300] | D_real_loss: 0.1524 | D_fake_loss: 0.1477 | G_loss:
2.1464
Iteration [ 470/1300] | D_real_loss: 0.1179 | D_fake_loss: 0.1304 | G_loss:
2.2296
Iteration [ 480/1300] | D_real_loss: 0.1298 | D_fake_loss: 0.1446 | G_loss:
2.2066
Iteration [ 490/1300] | D_real_loss: 0.1122 | D_fake_loss: 0.1219 | G_loss:
2.2614
Iteration [ 500/1300] | D_real_loss: 0.1228 | D_fake_loss: 0.1185 | G_loss:
2.2679
Iteration [ 510/1300] | D_real_loss: 0.1145 | D_fake_loss: 0.1203 | G_loss:
2.3108
Iteration [ 520/1300] | D_real_loss: 0.1169 | D_fake_loss: 0.1145 | G_loss:
2.3493
Iteration [ 530/1300] | D_real_loss: 0.0959 | D_fake_loss: 0.1060 | G_loss:
2.3602
Iteration [ 540/1300] | D_real_loss: 0.0966 | D_fake_loss: 0.1235 | G_loss:
2.3822
Iteration [ 550/1300] | D_real_loss: 0.1026 | D_fake_loss: 0.1015 | G_loss:
2.4169
Iteration [ 560/1300] | D_real_loss: 0.1155 | D_fake_loss: 0.1380 | G_loss:
2.4812
Iteration [ 570/1300] | D_real_loss: 0.1815 | D_fake_loss: 0.1744 | G_loss:
2.1963
Iteration [ 580/1300] | D_real_loss: 0.1870 | D_fake_loss: 0.2650 | G_loss:
2.0213
Iteration [ 590/1300] | D_real_loss: 0.1480 | D_fake_loss: 0.1648 | G_loss:

```

2.1641
Iteration [600/1300] | D_real_loss: 0.1438 | D_fake_loss: 0.1203 | G_loss:
2.2124
Saved output/./vanilla\grumpifyBprocessed_deluxe\sample-000600.png
Saved output/./vanilla\grumpifyBprocessed_deluxe\real-000600.png
Iteration [610/1300] | D_real_loss: 0.0979 | D_fake_loss: 0.1082 | G_loss:
2.4140
Iteration [620/1300] | D_real_loss: 0.1392 | D_fake_loss: 0.1181 | G_loss:
2.3809
Iteration [630/1300] | D_real_loss: 0.1054 | D_fake_loss: 0.1160 | G_loss:
2.3714
Iteration [640/1300] | D_real_loss: 0.0845 | D_fake_loss: 0.0996 | G_loss:
2.3737
Iteration [650/1300] | D_real_loss: 0.0811 | D_fake_loss: 0.0941 | G_loss:
2.4789
Iteration [660/1300] | D_real_loss: 0.1057 | D_fake_loss: 0.0867 | G_loss:
2.5566
Iteration [670/1300] | D_real_loss: 0.0854 | D_fake_loss: 0.0860 | G_loss:
2.5894
Iteration [680/1300] | D_real_loss: 0.0756 | D_fake_loss: 0.0927 | G_loss:
2.6171
Iteration [690/1300] | D_real_loss: 0.0733 | D_fake_loss: 0.0788 | G_loss:
2.6981
Iteration [700/1300] | D_real_loss: 0.0639 | D_fake_loss: 0.0778 | G_loss:
2.7337
Iteration [710/1300] | D_real_loss: 0.0686 | D_fake_loss: 0.0746 | G_loss:
2.7509
Iteration [720/1300] | D_real_loss: 0.0682 | D_fake_loss: 0.0792 | G_loss:
2.7168
Iteration [730/1300] | D_real_loss: 0.0634 | D_fake_loss: 0.0732 | G_loss:
2.7367
Iteration [740/1300] | D_real_loss: 0.0785 | D_fake_loss: 0.0713 | G_loss:
2.7869
Iteration [750/1300] | D_real_loss: 0.0578 | D_fake_loss: 0.0676 | G_loss:
2.8768
Iteration [760/1300] | D_real_loss: 0.0694 | D_fake_loss: 0.0687 | G_loss:
2.8612
Iteration [770/1300] | D_real_loss: 0.0669 | D_fake_loss: 0.0618 | G_loss:
2.8991
Iteration [780/1300] | D_real_loss: 0.0753 | D_fake_loss: 0.0623 | G_loss:
2.9077
Iteration [790/1300] | D_real_loss: 0.0644 | D_fake_loss: 0.0598 | G_loss:
2.9948
Iteration [800/1300] | D_real_loss: 0.0601 | D_fake_loss: 0.0585 | G_loss:
2.9346
Saved output/./vanilla\grumpifyBprocessed_deluxe\sample-000800.png
Saved output/./vanilla\grumpifyBprocessed_deluxe\real-000800.png
Iteration [810/1300] | D_real_loss: 0.0496 | D_fake_loss: 0.0662 | G_loss:

2.9914
Iteration [820/1300] | D_real_loss: 0.0602 | D_fake_loss: 0.0606 | G_loss:
2.9915
Iteration [830/1300] | D_real_loss: 0.0706 | D_fake_loss: 0.0543 | G_loss:
3.0203
Iteration [840/1300] | D_real_loss: 0.0513 | D_fake_loss: 0.0560 | G_loss:
3.0654
Iteration [850/1300] | D_real_loss: 0.0564 | D_fake_loss: 0.0486 | G_loss:
3.0807
Iteration [860/1300] | D_real_loss: 0.0498 | D_fake_loss: 0.0527 | G_loss:
3.0786
Iteration [870/1300] | D_real_loss: 0.0519 | D_fake_loss: 0.0512 | G_loss:
3.0725
Iteration [880/1300] | D_real_loss: 0.0491 | D_fake_loss: 0.0528 | G_loss:
3.1054
Iteration [890/1300] | D_real_loss: 0.0426 | D_fake_loss: 0.0550 | G_loss:
3.1161
Iteration [900/1300] | D_real_loss: 0.0561 | D_fake_loss: 0.0572 | G_loss:
3.0392
Iteration [910/1300] | D_real_loss: 0.0497 | D_fake_loss: 0.0528 | G_loss:
3.0795
Iteration [920/1300] | D_real_loss: 0.0580 | D_fake_loss: 0.0470 | G_loss:
3.3065
Iteration [930/1300] | D_real_loss: 0.0737 | D_fake_loss: 0.0702 | G_loss:
3.3551
Iteration [940/1300] | D_real_loss: 0.0654 | D_fake_loss: 0.0403 | G_loss:
3.0751
Iteration [950/1300] | D_real_loss: 0.3518 | D_fake_loss: 0.4752 | G_loss:
2.6367
Iteration [960/1300] | D_real_loss: 0.1827 | D_fake_loss: 0.1059 | G_loss:
2.4224
Iteration [970/1300] | D_real_loss: 0.0842 | D_fake_loss: 0.1013 | G_loss:
2.7072
Iteration [980/1300] | D_real_loss: 0.0814 | D_fake_loss: 0.0813 | G_loss:
2.8876
Iteration [990/1300] | D_real_loss: 0.0704 | D_fake_loss: 0.0557 | G_loss:
3.0143
Iteration [1000/1300] | D_real_loss: 0.0550 | D_fake_loss: 0.0480 | G_loss:
3.2382
Saved output/./vanilla\grumpifyBprocessed_deluxe\sample-001000.png
Saved output/./vanilla\grumpifyBprocessed_deluxe\real-001000.png
Iteration [1010/1300] | D_real_loss: 0.0371 | D_fake_loss: 0.0620 | G_loss:
3.1317
Iteration [1020/1300] | D_real_loss: 0.0395 | D_fake_loss: 0.0540 | G_loss:
3.1372
Iteration [1030/1300] | D_real_loss: 0.0427 | D_fake_loss: 0.0615 | G_loss:
2.9802
Iteration [1040/1300] | D_real_loss: 0.0412 | D_fake_loss: 0.0559 | G_loss:

2.9849
Iteration [1050/1300] | D_real_loss: 0.0405 | D_fake_loss: 0.0501 | G_loss: 3.1566
Iteration [1060/1300] | D_real_loss: 0.0424 | D_fake_loss: 0.0474 | G_loss: 3.1816
Iteration [1070/1300] | D_real_loss: 0.0505 | D_fake_loss: 0.0471 | G_loss: 3.1693
Iteration [1080/1300] | D_real_loss: 0.0426 | D_fake_loss: 0.0468 | G_loss: 3.2055
Iteration [1090/1300] | D_real_loss: 0.0377 | D_fake_loss: 0.0473 | G_loss: 3.1816
Iteration [1100/1300] | D_real_loss: 0.0423 | D_fake_loss: 0.0401 | G_loss: 3.3359
Iteration [1110/1300] | D_real_loss: 0.0485 | D_fake_loss: 0.0493 | G_loss: 3.2344
Iteration [1120/1300] | D_real_loss: 0.0333 | D_fake_loss: 0.0414 | G_loss: 3.3450
Iteration [1130/1300] | D_real_loss: 0.0377 | D_fake_loss: 0.0375 | G_loss: 3.3622
Iteration [1140/1300] | D_real_loss: 0.0359 | D_fake_loss: 0.0397 | G_loss: 3.3573
Iteration [1150/1300] | D_real_loss: 0.0313 | D_fake_loss: 0.0394 | G_loss: 3.3782
Iteration [1160/1300] | D_real_loss: 0.0358 | D_fake_loss: 0.0358 | G_loss: 3.4630
Iteration [1170/1300] | D_real_loss: 0.0339 | D_fake_loss: 0.0366 | G_loss: 3.5120
Iteration [1180/1300] | D_real_loss: 0.0309 | D_fake_loss: 0.0368 | G_loss: 3.4825
Iteration [1190/1300] | D_real_loss: 0.0381 | D_fake_loss: 0.0331 | G_loss: 3.5547
Iteration [1200/1300] | D_real_loss: 0.0399 | D_fake_loss: 0.0330 | G_loss: 3.5434
Saved output/./vanilla\grumpifyBprocessed_deluxe\sample-001200.png
Saved output/./vanilla\grumpifyBprocessed_deluxe\real-001200.png
Iteration [1210/1300] | D_real_loss: 0.0310 | D_fake_loss: 0.0362 | G_loss: 3.5566
Iteration [1220/1300] | D_real_loss: 0.0321 | D_fake_loss: 0.0379 | G_loss: 3.5193
Iteration [1230/1300] | D_real_loss: 0.0337 | D_fake_loss: 0.0335 | G_loss: 3.5627
Iteration [1240/1300] | D_real_loss: 0.0279 | D_fake_loss: 0.0321 | G_loss: 3.5653
Iteration [1250/1300] | D_real_loss: 0.0320 | D_fake_loss: 0.0317 | G_loss: 3.6517
Iteration [1260/1300] | D_real_loss: 0.0421 | D_fake_loss: 0.0322 | G_loss: 3.6243
Iteration [1270/1300] | D_real_loss: 0.0276 | D_fake_loss: 0.0308 | G_loss:

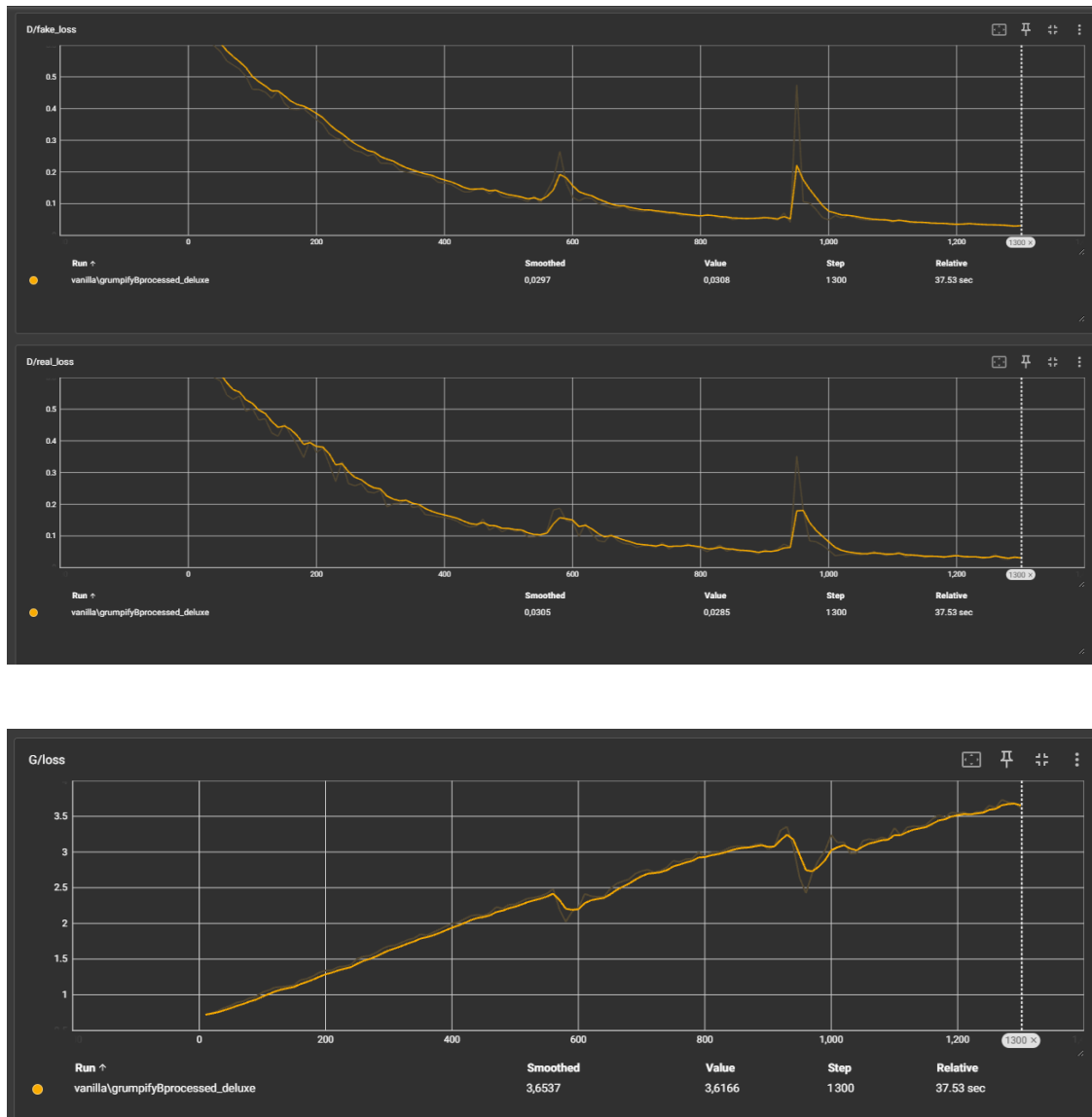
```

3.7333
Iteration [1280/1300] | D_real_loss: 0.0247 | D_fake_loss: 0.0285 | G_loss:
3.6961
Iteration [1290/1300] | D_real_loss: 0.0357 | D_fake_loss: 0.0266 | G_loss:
3.6880
Iteration [1300/1300] | D_real_loss: 0.0285 | D_fake_loss: 0.0308 | G_loss:
3.6166

2025-04-18 12:34:46.358713: I tensorflow/core/util/port.cc:153] oneDNN custom
operations are on. You may see slightly different numerical results due to
floating-point round-off errors from different computation orders. To turn them
off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.
2025-04-18 12:34:47.145111: I tensorflow/core/util/port.cc:153] oneDNN custom
operations are on. You may see slightly different numerical results due to
floating-point round-off errors from different computation orders. To turn them
off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.

```

Deluxe Loss Curves The curve D/false_loss starts high and decreases as the training progresses, showing some fluctuations during the process. Again, at the beginning, the discriminator manages to identify the generated images as false, losing accuracy as the training advances, since the generator improves its performance. Now, the fluctuations that we see could suggest moments when the discriminator adapts to the strategies of the generator to produce more realistic false images. The same way D/real_loss shows a dropping tendency from a high starting point, this suggests that the performance of the discriminator in trying to classify images decreases over the training process. The presence of the augmentations is an important component for this to happen, as the discriminator learns to identify real images even under various transformations, but the decreasing loss indicates that the generator also improves. The fluctuations could represent the Discriminator continued attempts to learn features and correctly identify images but it is not constant.



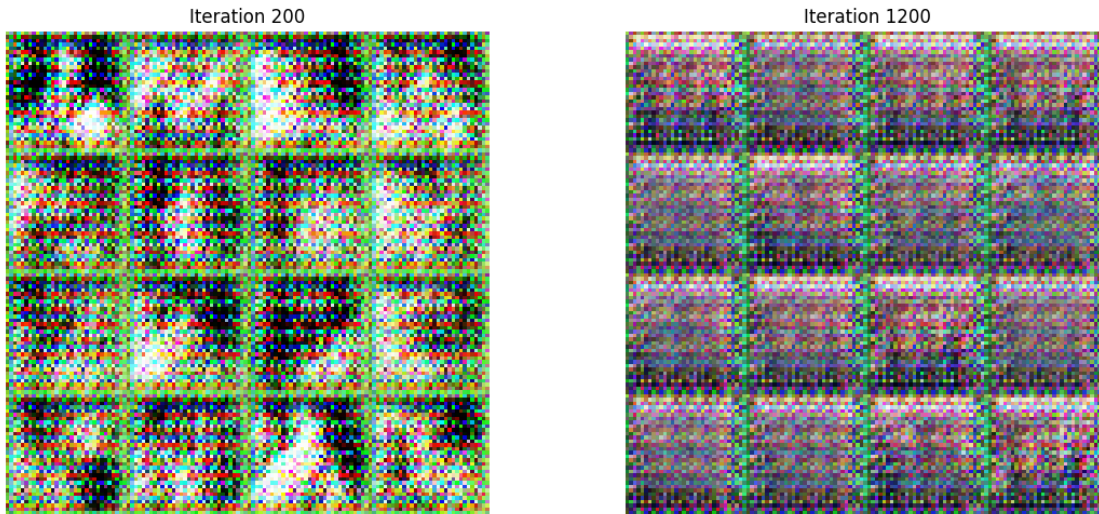
```
[ ]: # Load images from specific iterations
img_early = mpimg.imread("output/vanilla/grumpifyBprocessed_deluxe/
    ↪sample-000200.png")
img_late = mpimg.imread("output/vanilla/grumpifyBprocessed_deluxe/sample-001200.
    ↪png")

# Plot the images for comparison
plt.figure(figsize=(12, 5))

# Plot early stage
plt.subplot(1, 2, 1)
plt.imshow(img_early)
plt.title("Iteration 200")
plt.axis('off')
```

```
# Plot late stage
plt.subplot(1, 2, 2)
plt.imshow(img_late)
plt.title("Iteration 1200")
plt.axis('off')

plt.tight_layout()
plt.show()
```



In this comparison of images that Vanilla GAN generated, we can see that at the beginning, around step 200, the images are just messy noise and do not look like anything specific, not even a cat. This is normal because the network that creates the images is just starting to learn and being as basic as Vanilla_Gan is, it may not be as fast in generating good results from the beginning. However, if we look at step 1200, the images improve a bit. However, they are still blurry and although you can see some shapes and colors that maybe look a bit like cats they are not of the best quality. It is as if the network is slowly realizing what a grumpy cat looks like, but it is still not very clear or real, it is clear at this stage that the network requires many more steps to learn how to create cat images.

2 PART 2: CycleGAN

2.1 Generator [20 points]

```
Final_exam_solution.ipynb M  models.py 4, M X  cycle_gan.py 9+, M  CycleGANCycle.png U
models.py > CycleGenerator > forward
98
99
100 class CycleGenerator(nn.Module):
101     """Defines the architecture of the generator network.
102     Note: Both generators G_XtoY and G_YtoX have the same architecture in this assignment.
103     """
104     def __init__(self, conv_dim=64, init_zero_weights=False, norm='batch'):
105         super(CycleGenerator, self).__init__()
106
107         #####
108         ## FILL THIS IN: CREATE ARCHITECTURE ##
109         #####
110
111         # 1. Define the encoder part of the generator (that extracts features from the input image)
112         self.conv1 = conv(3, conv_dim, kernel_size=7, stride=1, padding=3, norm=norm)
113         self.conv2 = conv(conv_dim, conv_dim * 2, kernel_size=3, stride=2, padding=1, norm=norm)
114
115         # 2. Define the transformation part of the generator
116         self.resnet_block = nn.Sequential(
117             ResnetBlock(conv_dim * 2, norm),
118             ResnetBlock(conv_dim * 2, norm),
119             ResnetBlock(conv_dim * 2, norm)
120         )
121
122         # 3. Define the decoder part of the generator (that builds up the output image from features)
123         self.deconv1 = deconv(conv_dim * 2, conv_dim, kernel_size=4, stride=2, padding=1, norm=norm)
124         self.deconv2 = nn.Sequential(
125             nn.Conv2d(conv_dim, 3, kernel_size=7, stride=1, padding=3, bias=False),
126             nn.Tanh()
127         )
128
129     def forward(self, x):
130         """Generates an image conditioned on an input image.
131
132         Input
133         ----
134         | x: BS x 3 x 32 x 32
135         |
136         Output
137         ----
138         | out: BS x 3 x 32 x 32
139         """
140
141         out = F.relu(self.conv1(x))
142         out = F.relu(self.conv2(out))
143
144         out = F.relu(self.resnet_block(out))
145
146         out = F.relu(self.deconv1(out))
```

2.2 CycleGAN Training Loop [20 points]

2.2.1 Discriminator

```
# =====  
#          TRAIN THE DISCRIMINATORS  
# =====  
  
#####  
##          FILL THIS IN          ##  
#####  
  
# Train with real images  
d_optimizer.zero_grad()  
  
# 1. Compute the discriminator losses on real images  
D_X_loss = F.binary_cross_entropy(D_X(images_X), torch.ones_like(D_X(images_X))) # Real image loss for D_X  
D_Y_loss = F.binary_cross_entropy(D_Y(images_Y), torch.ones_like(D_Y(images_Y))) # Real image loss for D_Y  
  
d_real_loss = D_X_loss + D_Y_loss  
d_real_loss.backward()  
d_optimizer.step()  
logger.add_scalar('D/XY/real', D_X_loss, iteration)  
logger.add_scalar('D/YX/real', D_Y_loss, iteration)  
# Train with fake images  
d_optimizer.zero_grad()  
  
# 2. Generate fake images that look like domain X based on real images in domain Y  
fake_X = G_YtoX(images_Y)  
  
# 3. Compute the loss for D_X  
D_X_fake = D_X(fake_X)  
D_X_loss = F.binary_cross_entropy(D_X_fake, torch.zeros_like(D_X_fake))  
  
# 4. Generate fake images that look like domain Y based on real images in domain X  
fake_Y = G_XtoY(images_X)  
  
# 5. Compute the loss for D_Y  
D_Y_loss = F.binary_cross_entropy(D_Y(fake_Y), torch.zeros_like(D_Y(fake_Y))) # Fake image loss for D_Y  
  
d_fake_loss = D_X_loss + D_Y_loss  
if iteration % 2 == 0:  
    d_fake_loss.backward()  
    d_optimizer.step()  
logger.add_scalar('D/XY/fake', D_X_loss, iteration)  
logger.add_scalar('D/YX/fake', D_Y_loss, iteration)
```

2.2.2 Generator Y-X->Y CYCLE

We are going to use L1 loss, as suggested in the original paper.

```

# =====
#             TRAIN THE GENERATORS
# =====

#####
##   FILL THIS IN: Y--X-->Y CYCLE   ##
#####
g_optimizer.zero_grad()

# 1. Generate fake images that look like domain X based on real images in domain Y
fake_X = G_YtoX(images_Y)

# 2. Compute the generator loss based on domain X
g_loss = F.binary_cross_entropy(D_X(fake_X), torch.ones_like(D_X(fake_X)))
logger.add_scalar('G/XY/fake', g_loss, iteration)

if opts.use_cycle_consistency_loss:
    reconstructed_Y = G_XtoY(fake_X)
    # 3. Compute the cycle consistency loss (the reconstruction loss)
    cycle_consistency_loss = torch.mean(torch.abs(images_Y - reconstructed_Y))
    g_loss += opts.lambda_cycle * cycle_consistency_loss
    logger.add_scalar('G/XY/cycle', opts.lambda_cycle * cycle_consistency_loss, iteration)

g_loss.backward()
g_optimizer.step()

```

2.2.3 Generator X-Y->X CYCLE

```
#####
##   FILL THIS IN: X--Y-->X CYCLE   ##
#####

g_optimizer.zero_grad()

# 1. Generate fake images that look like domain Y based on real images in domain X
fake_Y = G_XtoY(images_X)

# 2. Compute the generator loss based on domain Y
g_loss = F.binary_cross_entropy(D_Y(fake_Y), torch.ones_like(D_Y(fake_Y)))
logger.add_scalar('G/YX/fake', g_loss, iteration)

if opts.use_cycle_consistency_loss:
    reconstructed_X = G_YtoX(fake_Y)
    # 3. Compute the cycle consistency loss (the reconstruction loss)
    cycle_consistency_loss = torch.mean(torch.abs(images_X - reconstructed_X))
    g_loss += opts.lambda_cycle * cycle_consistency_loss
    logger.add_scalar('G/YX/cycle', cycle_consistency_loss, iteration)

g_loss.backward()
g_optimizer.step()

# Print the log info
if iteration % opts.log_step == 0:
    print('Iteration [{:5d}/{:5d}] | d_real_loss: {:.64f} | d_Y_loss: {:.64f} | d_X_loss: {:.64f} | '
          'd_fake_loss: {:.64f} | g_loss: {:.64f}'.format(
            iteration, opts.train_iters, d_real_loss.item(), D_Y_loss.item(),
            D_X_loss.item(), d_fake_loss.item(), g_loss.item()))

# Save the generated samples
if iteration % opts.sample_every == 0:
    save_samples(iteration, fixed_Y, fixed_X, G_YtoX, G_XtoY, opts)

if iteration in [400, 600]:
    save_samples(iteration, fixed_Y, fixed_X, G_YtoX, G_XtoY, opts)

# Save the model parameters
if iteration % opts.checkpoint_every == 0:
    checkpoint(iteration, G_XtoY, G_YtoX, D_X, D_Y, opts)
```

2.3 CycleGAN Experiments [15 points]

Basic Execution

[28]: !python cycle_gan.py

```
=====
                                Opts
-----
image_size: 64
disc: dc
gen: cycle
g_conv_dim: 32
d_conv_dim: 32
norm: instance
init_type: naive
train_iters: 1000
batch_size: 16
lr: 0.0003
beta1: 0.5
beta2: 0.999
```

```

        lambda_cycle: 10
            X: cat/grumpifyAprocessed
            Y: cat/grumpifyBprocessed
            ext: *.png
            data_aug: deluxe
            checkpoint_dir: checkpoints_cyclegan
        sample_dir:
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive
            log_step: 10
            sample_every: 100
            checkpoint_every: 800
            gpu: 0
=====
data/cat/grumpifyAprocessed\*.png
75
data/cat/grumpifyBprocessed\*.png
204
                G_XtoY
-----
CycleGenerator(
    (conv1): Sequential(
      (0): Conv2d(3, 32, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
      (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (conv2): Sequential(
      (0): Conv2d(32, 64, kernel_size=(3, 3), stride=(2, 2), padding=(1, 1),
bias=False)
      (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (resnet_block): Sequential(
      (0): ResnetBlock(
        (conv_layer): Sequential(
          (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
          (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
        )
      )
      (1): ResnetBlock(
        (conv_layer): Sequential(
          (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
          (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
        )
      )
    )
  )
)

```

```

    )
    (2): ResnetBlock(
      (conv_layer): Sequential(
        (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
      )
    )
  )
  (deconv1): Sequential(
    (0): ConvTranspose2d(64, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1,
1), bias=False)
    (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (deconv2): Sequential(
    (0): Conv2d(32, 3, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
    (1): Tanh()
  )
)
-----
                        G_YtoX
-----
CycleGenerator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
    (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv2): Sequential(
    (0): Conv2d(32, 64, kernel_size=(3, 3), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (resnet_block): Sequential(
    (0): ResnetBlock(
      (conv_layer): Sequential(
        (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
      )
    )
    (1): ResnetBlock(

```

```

        (conv_layer): Sequential(
          (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
          (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
        )
      )
      (2): ResnetBlock(
        (conv_layer): Sequential(
          (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
          (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
        )
      )
    )
    (deconv1): Sequential(
      (0): ConvTranspose2d(64, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1,
1), bias=False)
      (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (deconv2): Sequential(
      (0): Conv2d(32, 3, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
      (1): Tanh()
    )
  )
  -----
  D_X
  -----
DCDiscriminator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
  )
  (conv2): Sequential(
    (0): Conv2d(32, 64, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv3): Sequential(
    (0): Conv2d(64, 128, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(128, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
)

```

```

(conv4): Sequential(
  (0): Conv2d(128, 256, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
  (1): InstanceNorm2d(256, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
)
(conv5): Sequential(
  (0): AdaptiveAvgPool2d(output_size=1)
  (1): Conv2d(256, 1, kernel_size=(1, 1), stride=(1, 1), bias=False)
)
)

```

D_Y

```

DCDiscriminator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
  )
  (conv2): Sequential(
    (0): Conv2d(32, 64, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv3): Sequential(
    (0): Conv2d(64, 128, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(128, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv4): Sequential(
    (0): Conv2d(128, 256, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(256, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv5): Sequential(
    (0): AdaptiveAvgPool2d(output_size=1)
    (1): Conv2d(256, 1, kernel_size=(1, 1), stride=(1, 1), bias=False)
  )
)

```

Models moved to GPU.

```

Iteration [ 10/ 1000] | d_real_loss: 1.0438 | d_Y_loss: 0.9097 | d_X_loss:
0.7616 | d_fake_loss: 1.6713 | g_loss: 0.5504
Iteration [ 20/ 1000] | d_real_loss: 0.9160 | d_Y_loss: 0.9220 | d_X_loss:
0.8325 | d_fake_loss: 1.7544 | g_loss: 0.5421

```



```

Iteration [ 30/ 1000] | d_real_loss: 0.8401 | d_Y_loss: 0.9032 | d_X_loss:
0.8562 | d_fake_loss: 1.7594 | g_loss: 0.5538
Iteration [ 40/ 1000] | d_real_loss: 0.7865 | d_Y_loss: 0.8939 | d_X_loss:
0.8864 | d_fake_loss: 1.7802 | g_loss: 0.5589
Iteration [ 50/ 1000] | d_real_loss: 0.7642 | d_Y_loss: 0.8995 | d_X_loss:
0.8688 | d_fake_loss: 1.7683 | g_loss: 0.5578
Iteration [ 60/ 1000] | d_real_loss: 0.7675 | d_Y_loss: 0.8925 | d_X_loss:
0.9433 | d_fake_loss: 1.8358 | g_loss: 0.5637
Iteration [ 70/ 1000] | d_real_loss: 0.7308 | d_Y_loss: 0.9223 | d_X_loss:
0.8927 | d_fake_loss: 1.8150 | g_loss: 0.5429
Iteration [ 80/ 1000] | d_real_loss: 0.7739 | d_Y_loss: 0.9284 | d_X_loss:
0.9799 | d_fake_loss: 1.9083 | g_loss: 0.5361
Iteration [ 90/ 1000] | d_real_loss: 0.7506 | d_Y_loss: 0.9166 | d_X_loss:
0.9600 | d_fake_loss: 1.8766 | g_loss: 0.5518
Iteration [ 100/ 1000] | d_real_loss: 0.7666 | d_Y_loss: 0.9032 | d_X_loss:
0.9797 | d_fake_loss: 1.8829 | g_loss: 0.5571
Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000100-X-Y.png
Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000100-Y-X.png
Iteration [ 110/ 1000] | d_real_loss: 0.7416 | d_Y_loss: 0.9632 | d_X_loss:
0.9641 | d_fake_loss: 1.9273 | g_loss: 0.5259
Iteration [ 120/ 1000] | d_real_loss: 0.7699 | d_Y_loss: 0.9809 | d_X_loss:
1.0427 | d_fake_loss: 2.0236 | g_loss: 0.5206
Iteration [ 130/ 1000] | d_real_loss: 0.7967 | d_Y_loss: 1.0260 | d_X_loss:
1.0497 | d_fake_loss: 2.0756 | g_loss: 0.4910
Iteration [ 140/ 1000] | d_real_loss: 0.7641 | d_Y_loss: 0.9479 | d_X_loss:
1.0457 | d_fake_loss: 1.9936 | g_loss: 0.5489
Iteration [ 150/ 1000] | d_real_loss: 0.7744 | d_Y_loss: 1.0678 | d_X_loss:
1.0330 | d_fake_loss: 2.1008 | g_loss: 0.4739
Iteration [ 160/ 1000] | d_real_loss: 0.8265 | d_Y_loss: 1.0220 | d_X_loss:
1.0363 | d_fake_loss: 2.0583 | g_loss: 0.4951
Iteration [ 170/ 1000] | d_real_loss: 0.7839 | d_Y_loss: 1.0467 | d_X_loss:
1.0226 | d_fake_loss: 2.0693 | g_loss: 0.4782
Iteration [ 180/ 1000] | d_real_loss: 0.7668 | d_Y_loss: 1.0694 | d_X_loss:
1.0458 | d_fake_loss: 2.1152 | g_loss: 0.4655
Iteration [ 190/ 1000] | d_real_loss: 0.7762 | d_Y_loss: 1.0317 | d_X_loss:
1.0468 | d_fake_loss: 2.0785 | g_loss: 0.4857
Iteration [ 200/ 1000] | d_real_loss: 0.7828 | d_Y_loss: 1.0398 | d_X_loss:
1.0270 | d_fake_loss: 2.0668 | g_loss: 0.4817
Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000200-X-Y.png
Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000200-Y-X.png
Iteration [ 210/ 1000] | d_real_loss: 0.7975 | d_Y_loss: 1.1069 | d_X_loss:
1.0175 | d_fake_loss: 2.1244 | g_loss: 0.4493
Iteration [ 220/ 1000] | d_real_loss: 0.7820 | d_Y_loss: 1.0388 | d_X_loss:
1.0406 | d_fake_loss: 2.0794 | g_loss: 0.4805
Iteration [ 230/ 1000] | d_real_loss: 0.7963 | d_Y_loss: 1.0365 | d_X_loss:
1.0129 | d_fake_loss: 2.0494 | g_loss: 0.4884
Iteration [ 240/ 1000] | d_real_loss: 0.7577 | d_Y_loss: 1.0972 | d_X_loss:
1.0326 | d_fake_loss: 2.1298 | g_loss: 0.4470

```

Iteration [250/ 1000] | d_real_loss: 0.7969 | d_Y_loss: 1.0905 | d_X_loss: 1.0153 | d_fake_loss: 2.1059 | g_loss: 0.4787
 Iteration [260/ 1000] | d_real_loss: 0.8140 | d_Y_loss: 1.0443 | d_X_loss: 1.0104 | d_fake_loss: 2.0547 | g_loss: 0.4756
 Iteration [270/ 1000] | d_real_loss: 0.8096 | d_Y_loss: 1.0580 | d_X_loss: 1.0269 | d_fake_loss: 2.0849 | g_loss: 0.4780
 Iteration [280/ 1000] | d_real_loss: 0.7818 | d_Y_loss: 1.0554 | d_X_loss: 1.0267 | d_fake_loss: 2.0821 | g_loss: 0.4754
 Iteration [290/ 1000] | d_real_loss: 0.7682 | d_Y_loss: 1.0190 | d_X_loss: 0.9941 | d_fake_loss: 2.0131 | g_loss: 0.4952
 Iteration [300/ 1000] | d_real_loss: 0.7637 | d_Y_loss: 1.0601 | d_X_loss: 1.0149 | d_fake_loss: 2.0750 | g_loss: 0.4801
 Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000300-X-Y.png
 Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000300-Y-X.png
 Iteration [310/ 1000] | d_real_loss: 0.7830 | d_Y_loss: 1.0245 | d_X_loss: 0.9780 | d_fake_loss: 2.0025 | g_loss: 0.4896
 Iteration [320/ 1000] | d_real_loss: 0.7379 | d_Y_loss: 1.0794 | d_X_loss: 0.9891 | d_fake_loss: 2.0685 | g_loss: 0.4832
 Iteration [330/ 1000] | d_real_loss: 0.7796 | d_Y_loss: 1.0389 | d_X_loss: 1.0493 | d_fake_loss: 2.0882 | g_loss: 0.4801
 Iteration [340/ 1000] | d_real_loss: 0.8179 | d_Y_loss: 1.0554 | d_X_loss: 0.9974 | d_fake_loss: 2.0528 | g_loss: 0.4821
 Iteration [350/ 1000] | d_real_loss: 0.7721 | d_Y_loss: 1.0827 | d_X_loss: 1.0314 | d_fake_loss: 2.1141 | g_loss: 0.4620
 Iteration [360/ 1000] | d_real_loss: 0.7841 | d_Y_loss: 1.0314 | d_X_loss: 1.0019 | d_fake_loss: 2.0333 | g_loss: 0.4890
 Iteration [370/ 1000] | d_real_loss: 0.8003 | d_Y_loss: 1.0576 | d_X_loss: 0.9814 | d_fake_loss: 2.0390 | g_loss: 0.4827
 Iteration [380/ 1000] | d_real_loss: 0.7972 | d_Y_loss: 1.0605 | d_X_loss: 1.0151 | d_fake_loss: 2.0755 | g_loss: 0.4848
 Iteration [390/ 1000] | d_real_loss: 0.7788 | d_Y_loss: 1.0653 | d_X_loss: 0.9674 | d_fake_loss: 2.0327 | g_loss: 0.4741
 Iteration [400/ 1000] | d_real_loss: 0.7716 | d_Y_loss: 1.0450 | d_X_loss: 0.9815 | d_fake_loss: 2.0264 | g_loss: 0.4859
 Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000400-X-Y.png
 Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000400-Y-X.png
 Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000400-X-Y.png
 Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000400-Y-X.png
 Iteration [410/ 1000] | d_real_loss: 0.7852 | d_Y_loss: 1.0230 | d_X_loss: 0.9885 | d_fake_loss: 2.0115 | g_loss: 0.4974
 Iteration [420/ 1000] | d_real_loss: 0.7536 | d_Y_loss: 1.0529 | d_X_loss: 0.9673 | d_fake_loss: 2.0202 | g_loss: 0.4860
 Iteration [430/ 1000] | d_real_loss: 0.7854 | d_Y_loss: 1.0720 | d_X_loss: 1.0064 | d_fake_loss: 2.0784 | g_loss: 0.4690
 Iteration [440/ 1000] | d_real_loss: 0.7595 | d_Y_loss: 1.0453 | d_X_loss: 1.0042 | d_fake_loss: 2.0496 | g_loss: 0.4890
 Iteration [450/ 1000] | d_real_loss: 0.7802 | d_Y_loss: 1.0335 | d_X_loss: 0.9863 | d_fake_loss: 2.0199 | g_loss: 0.4862

Iteration [460/ 1000] | d_real_loss: 0.7645 | d_Y_loss: 1.0307 | d_X_loss: 0.9646 | d_fake_loss: 1.9952 | g_loss: 0.4839
 Iteration [470/ 1000] | d_real_loss: 0.7628 | d_Y_loss: 1.0433 | d_X_loss: 1.0125 | d_fake_loss: 2.0558 | g_loss: 0.4973
 Iteration [480/ 1000] | d_real_loss: 0.7688 | d_Y_loss: 1.0287 | d_X_loss: 0.9589 | d_fake_loss: 1.9875 | g_loss: 0.4875
 Iteration [490/ 1000] | d_real_loss: 0.7776 | d_Y_loss: 1.0218 | d_X_loss: 0.9827 | d_fake_loss: 2.0045 | g_loss: 0.4983
 Iteration [500/ 1000] | d_real_loss: 0.7633 | d_Y_loss: 1.0849 | d_X_loss: 0.9675 | d_fake_loss: 2.0524 | g_loss: 0.4748
 Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000500-X-Y.png
 Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000500-Y-X.png
 Iteration [510/ 1000] | d_real_loss: 0.7696 | d_Y_loss: 1.0451 | d_X_loss: 0.9712 | d_fake_loss: 2.0163 | g_loss: 0.4815
 Iteration [520/ 1000] | d_real_loss: 0.7500 | d_Y_loss: 1.0286 | d_X_loss: 0.9757 | d_fake_loss: 2.0043 | g_loss: 0.4902
 Iteration [530/ 1000] | d_real_loss: 0.7606 | d_Y_loss: 1.0583 | d_X_loss: 0.9880 | d_fake_loss: 2.0463 | g_loss: 0.4821
 Iteration [540/ 1000] | d_real_loss: 0.7613 | d_Y_loss: 1.0106 | d_X_loss: 0.9176 | d_fake_loss: 1.9282 | g_loss: 0.5012
 Iteration [550/ 1000] | d_real_loss: 0.7591 | d_Y_loss: 1.0283 | d_X_loss: 0.9461 | d_fake_loss: 1.9745 | g_loss: 0.4831
 Iteration [560/ 1000] | d_real_loss: 0.7702 | d_Y_loss: 1.0134 | d_X_loss: 0.9660 | d_fake_loss: 1.9795 | g_loss: 0.4967
 Iteration [570/ 1000] | d_real_loss: 0.7487 | d_Y_loss: 1.0302 | d_X_loss: 0.9468 | d_fake_loss: 1.9770 | g_loss: 0.4836
 Iteration [580/ 1000] | d_real_loss: 0.7553 | d_Y_loss: 1.0272 | d_X_loss: 0.9647 | d_fake_loss: 1.9919 | g_loss: 0.4957
 Iteration [590/ 1000] | d_real_loss: 0.7463 | d_Y_loss: 1.0426 | d_X_loss: 0.9502 | d_fake_loss: 1.9927 | g_loss: 0.4849
 Iteration [600/ 1000] | d_real_loss: 0.7203 | d_Y_loss: 1.0754 | d_X_loss: 0.9203 | d_fake_loss: 1.9957 | g_loss: 0.4767
 Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000600-X-Y.png
 Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000600-Y-X.png
 Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000600-X-Y.png
 Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000600-Y-X.png
 Iteration [610/ 1000] | d_real_loss: 0.7563 | d_Y_loss: 1.0650 | d_X_loss: 0.8748 | d_fake_loss: 1.9399 | g_loss: 0.4967
 Iteration [620/ 1000] | d_real_loss: 0.7138 | d_Y_loss: 1.0483 | d_X_loss: 0.8750 | d_fake_loss: 1.9234 | g_loss: 0.4966
 Iteration [630/ 1000] | d_real_loss: 0.7292 | d_Y_loss: 1.0735 | d_X_loss: 0.9488 | d_fake_loss: 2.0223 | g_loss: 0.4697
 Iteration [640/ 1000] | d_real_loss: 0.7421 | d_Y_loss: 1.0270 | d_X_loss: 0.8915 | d_fake_loss: 1.9184 | g_loss: 0.4956
 Iteration [650/ 1000] | d_real_loss: 0.7321 | d_Y_loss: 1.0030 | d_X_loss: 0.9051 | d_fake_loss: 1.9082 | g_loss: 0.5123
 Iteration [660/ 1000] | d_real_loss: 0.7505 | d_Y_loss: 1.0451 | d_X_loss: 0.8706 | d_fake_loss: 1.9156 | g_loss: 0.4942

```

Iteration [ 670/ 1000] | d_real_loss: 0.7462 | d_Y_loss: 1.0150 | d_X_loss:
0.9119 | d_fake_loss: 1.9269 | g_loss: 0.4901
Iteration [ 680/ 1000] | d_real_loss: 0.7399 | d_Y_loss: 1.0425 | d_X_loss:
0.8956 | d_fake_loss: 1.9382 | g_loss: 0.4838
Iteration [ 690/ 1000] | d_real_loss: 0.7453 | d_Y_loss: 0.9975 | d_X_loss:
0.9218 | d_fake_loss: 1.9194 | g_loss: 0.5131
Iteration [ 700/ 1000] | d_real_loss: 0.7224 | d_Y_loss: 1.0244 | d_X_loss:
0.8689 | d_fake_loss: 1.8933 | g_loss: 0.5029
Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000700-X-Y.png
Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000700-Y-X.png
Iteration [ 710/ 1000] | d_real_loss: 0.7601 | d_Y_loss: 1.0250 | d_X_loss:
0.8711 | d_fake_loss: 1.8960 | g_loss: 0.4970
Iteration [ 720/ 1000] | d_real_loss: 0.7502 | d_Y_loss: 1.0436 | d_X_loss:
0.9259 | d_fake_loss: 1.9694 | g_loss: 0.4864
Iteration [ 730/ 1000] | d_real_loss: 0.7140 | d_Y_loss: 1.0139 | d_X_loss:
0.8895 | d_fake_loss: 1.9034 | g_loss: 0.4994
Iteration [ 740/ 1000] | d_real_loss: 0.7510 | d_Y_loss: 1.0438 | d_X_loss:
0.8616 | d_fake_loss: 1.9054 | g_loss: 0.4945
Iteration [ 750/ 1000] | d_real_loss: 0.7405 | d_Y_loss: 0.9939 | d_X_loss:
0.9005 | d_fake_loss: 1.8945 | g_loss: 0.5101
Iteration [ 760/ 1000] | d_real_loss: 0.7531 | d_Y_loss: 1.0055 | d_X_loss:
0.8478 | d_fake_loss: 1.8534 | g_loss: 0.5126
Iteration [ 770/ 1000] | d_real_loss: 0.6870 | d_Y_loss: 0.9902 | d_X_loss:
0.8043 | d_fake_loss: 1.7946 | g_loss: 0.5215
Iteration [ 780/ 1000] | d_real_loss: 0.6880 | d_Y_loss: 1.0158 | d_X_loss:
0.8624 | d_fake_loss: 1.8782 | g_loss: 0.5085
Iteration [ 790/ 1000] | d_real_loss: 0.7397 | d_Y_loss: 1.0274 | d_X_loss:
0.8980 | d_fake_loss: 1.9254 | g_loss: 0.4997
Iteration [ 800/ 1000] | d_real_loss: 0.7005 | d_Y_loss: 1.0129 | d_X_loss:
0.8683 | d_fake_loss: 1.8812 | g_loss: 0.5109
Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000800-X-Y.png
Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000800-Y-X.png
Iteration [ 810/ 1000] | d_real_loss: 0.7292 | d_Y_loss: 0.9940 | d_X_loss:
0.8180 | d_fake_loss: 1.8120 | g_loss: 0.5295
Iteration [ 820/ 1000] | d_real_loss: 0.7240 | d_Y_loss: 1.0021 | d_X_loss:
0.8446 | d_fake_loss: 1.8468 | g_loss: 0.5052
Iteration [ 830/ 1000] | d_real_loss: 0.7326 | d_Y_loss: 1.0309 | d_X_loss:
0.7851 | d_fake_loss: 1.8160 | g_loss: 0.5033
Iteration [ 840/ 1000] | d_real_loss: 0.7098 | d_Y_loss: 1.0368 | d_X_loss:
0.7755 | d_fake_loss: 1.8124 | g_loss: 0.5043
Iteration [ 850/ 1000] | d_real_loss: 0.6758 | d_Y_loss: 0.9908 | d_X_loss:
0.7769 | d_fake_loss: 1.7677 | g_loss: 0.5144
Iteration [ 860/ 1000] | d_real_loss: 0.7385 | d_Y_loss: 1.0062 | d_X_loss:
0.9125 | d_fake_loss: 1.9187 | g_loss: 0.5120
Iteration [ 870/ 1000] | d_real_loss: 0.7187 | d_Y_loss: 0.9788 | d_X_loss:
0.7971 | d_fake_loss: 1.7758 | g_loss: 0.5180
Iteration [ 880/ 1000] | d_real_loss: 0.6814 | d_Y_loss: 0.9940 | d_X_loss:
0.8075 | d_fake_loss: 1.8015 | g_loss: 0.5181

```

```

Iteration [ 890/ 1000] | d_real_loss: 0.7252 | d_Y_loss: 0.9809 | d_X_loss:
0.8447 | d_fake_loss: 1.8256 | g_loss: 0.5237
Iteration [ 900/ 1000] | d_real_loss: 0.6655 | d_Y_loss: 1.0730 | d_X_loss:
0.8222 | d_fake_loss: 1.8952 | g_loss: 0.4793
Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000900-X-Y.png
Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-000900-Y-X.png
Iteration [ 910/ 1000] | d_real_loss: 0.6777 | d_Y_loss: 0.9953 | d_X_loss:
0.7545 | d_fake_loss: 1.7497 | g_loss: 0.5345
Iteration [ 920/ 1000] | d_real_loss: 0.6582 | d_Y_loss: 1.0096 | d_X_loss:
0.7194 | d_fake_loss: 1.7290 | g_loss: 0.5192
Iteration [ 930/ 1000] | d_real_loss: 0.6422 | d_Y_loss: 1.0275 | d_X_loss:
0.7175 | d_fake_loss: 1.7450 | g_loss: 0.5165
Iteration [ 940/ 1000] | d_real_loss: 0.6455 | d_Y_loss: 1.0096 | d_X_loss:
0.6805 | d_fake_loss: 1.6901 | g_loss: 0.5263
Iteration [ 950/ 1000] | d_real_loss: 0.6282 | d_Y_loss: 1.0359 | d_X_loss:
0.6637 | d_fake_loss: 1.6996 | g_loss: 0.5142
Iteration [ 960/ 1000] | d_real_loss: 0.6500 | d_Y_loss: 0.9412 | d_X_loss:
0.7646 | d_fake_loss: 1.7058 | g_loss: 0.5591
Iteration [ 970/ 1000] | d_real_loss: 0.6363 | d_Y_loss: 1.0094 | d_X_loss:
0.6770 | d_fake_loss: 1.6864 | g_loss: 0.5342
Iteration [ 980/ 1000] | d_real_loss: 0.6562 | d_Y_loss: 0.9989 | d_X_loss:
0.6660 | d_fake_loss: 1.6649 | g_loss: 0.5213
Iteration [ 990/ 1000] | d_real_loss: 0.6317 | d_Y_loss: 0.9950 | d_X_loss:
0.6202 | d_fake_loss: 1.6152 | g_loss: 0.5329
Iteration [ 1000/ 1000] | d_real_loss: 0.6495 | d_Y_loss: 0.9577 | d_X_loss:
0.6204 | d_fake_loss: 1.5781 | g_loss: 0.5469
Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-001000-X-Y.png
Saved output/cyclegan\cat_10deluxe_instance_dc_cycle_naive\sample-001000-Y-X.png

2025-04-18 18:28:31.759220: I tensorflow/core/util/port.cc:153] oneDNN custom
operations are on. You may see slightly different numerical results due to
floating-point round-off errors from different computation orders. To turn them
off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.
2025-04-18 18:28:32.579851: I tensorflow/core/util/port.cc:153] oneDNN custom
operations are on. You may see slightly different numerical results due to
floating-point round-off errors from different computation orders. To turn them
off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.

```

Cycle Consistency Loss

```
[29]: !python cycle_gan.py --use_cycle_consistency_loss
```

```

=====
                                Opts
-----
                                image_size: 64
                                disc: dc
                                gen: cycle
                                g_conv_dim: 32

```

```

        d_conv_dim: 32
        norm: instance
    use_cycle_consistency_loss: 1
        init_type: naive
    train_iters: 1000
    batch_size: 16
        lr: 0.0003
        beta1: 0.5
        beta2: 0.999
    lambda_cycle: 10
        X: cat/grumpifyAprocessed
        Y: cat/grumpifyBprocessed
        ext: *.png
    data_aug: deluxe
    checkpoint_dir: checkpoints_cyclegan
    sample_dir:
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle
        log_step: 10
        sample_every: 100
        checkpoint_every: 800
        gpu: 0

=====
data/cat/grumpifyAprocessed\*.png
75
data/cat/grumpifyBprocessed\*.png
204

                G_XtoY
-----

CycleGenerator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
    (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv2): Sequential(
    (0): Conv2d(32, 64, kernel_size=(3, 3), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (resnet_block): Sequential(
    (0): ResnetBlock(
      (conv_layer): Sequential(
        (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)

```

```

    )
    )
    (1): ResnetBlock(
      (conv_layer): Sequential(
        (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
      )
    )
    (2): ResnetBlock(
      (conv_layer): Sequential(
        (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
      )
    )
    )
    (deconv1): Sequential(
      (0): ConvTranspose2d(64, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1,
1), bias=False)
      (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (deconv2): Sequential(
      (0): Conv2d(32, 3, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
      (1): Tanh()
    )
  )
  -----
  G_YtoX
  -----
  CycleGenerator(
    (conv1): Sequential(
      (0): Conv2d(3, 32, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
      (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (conv2): Sequential(
      (0): Conv2d(32, 64, kernel_size=(3, 3), stride=(2, 2), padding=(1, 1),
bias=False)
      (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (resnet_block): Sequential(

```

```

(0): ResnetBlock(
  (conv_layer): Sequential(
    (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
)
(1): ResnetBlock(
  (conv_layer): Sequential(
    (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
)
(2): ResnetBlock(
  (conv_layer): Sequential(
    (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
)
)
(deconv1): Sequential(
  (0): ConvTranspose2d(64, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1,
1), bias=False)
  (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
)
(deconv2): Sequential(
  (0): Conv2d(32, 3, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
  (1): Tanh()
)
)
-----
D_X
-----
DCDiscriminator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
  )
  (conv2): Sequential(
    (0): Conv2d(32, 64, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)

```



```

        (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (conv3): Sequential(
        (0): Conv2d(64, 128, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(128, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (conv4): Sequential(
        (0): Conv2d(128, 256, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(256, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (conv5): Sequential(
        (0): AdaptiveAvgPool2d(output_size=1)
        (1): Conv2d(256, 1, kernel_size=(1, 1), stride=(1, 1), bias=False)
    )
)
-----
D_Y
-----
DCDiscriminator(
    (conv1): Sequential(
        (0): Conv2d(3, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    )
    (conv2): Sequential(
        (0): Conv2d(32, 64, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (conv3): Sequential(
        (0): Conv2d(64, 128, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(128, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (conv4): Sequential(
        (0): Conv2d(128, 256, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(256, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (conv5): Sequential(
        (0): AdaptiveAvgPool2d(output_size=1)

```

```

    (1): Conv2d(256, 1, kernel_size=(1, 1), stride=(1, 1), bias=False)
  )
)
-----
Models moved to GPU.
Iteration [ 10/ 1000] | d_real_loss: 1.0474 | d_Y_loss: 0.9054 | d_X_loss:
0.7463 | d_fake_loss: 1.6517 | g_loss: 2.8164
Iteration [ 20/ 1000] | d_real_loss: 0.9170 | d_Y_loss: 0.9073 | d_X_loss:
0.7567 | d_fake_loss: 1.6640 | g_loss: 2.5944
Iteration [ 30/ 1000] | d_real_loss: 0.8299 | d_Y_loss: 0.9058 | d_X_loss:
0.7284 | d_fake_loss: 1.6343 | g_loss: 2.5981
Iteration [ 40/ 1000] | d_real_loss: 0.7783 | d_Y_loss: 0.8626 | d_X_loss:
0.7020 | d_fake_loss: 1.5646 | g_loss: 2.3477
Iteration [ 50/ 1000] | d_real_loss: 0.7300 | d_Y_loss: 0.8327 | d_X_loss:
0.6902 | d_fake_loss: 1.5229 | g_loss: 2.4218
Iteration [ 60/ 1000] | d_real_loss: 0.7127 | d_Y_loss: 0.8113 | d_X_loss:
0.7187 | d_fake_loss: 1.5300 | g_loss: 2.2269
Iteration [ 70/ 1000] | d_real_loss: 0.6626 | d_Y_loss: 0.8105 | d_X_loss:
0.6969 | d_fake_loss: 1.5074 | g_loss: 2.7928
Iteration [ 80/ 1000] | d_real_loss: 0.6644 | d_Y_loss: 0.7716 | d_X_loss:
0.7969 | d_fake_loss: 1.5685 | g_loss: 2.1409
Iteration [ 90/ 1000] | d_real_loss: 0.6374 | d_Y_loss: 0.7660 | d_X_loss:
0.6879 | d_fake_loss: 1.4538 | g_loss: 2.3212
Iteration [ 100/ 1000] | d_real_loss: 0.6153 | d_Y_loss: 0.7430 | d_X_loss:
0.7082 | d_fake_loss: 1.4512 | g_loss: 2.3906
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000100-X-Y.png
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000100-Y-X.png
Iteration [ 110/ 1000] | d_real_loss: 0.5990 | d_Y_loss: 0.7272 | d_X_loss:
0.6854 | d_fake_loss: 1.4126 | g_loss: 2.3267
Iteration [ 120/ 1000] | d_real_loss: 0.5893 | d_Y_loss: 0.7141 | d_X_loss:
0.6779 | d_fake_loss: 1.3920 | g_loss: 2.5323
Iteration [ 130/ 1000] | d_real_loss: 0.5803 | d_Y_loss: 0.7166 | d_X_loss:
0.6847 | d_fake_loss: 1.4014 | g_loss: 2.2811
Iteration [ 140/ 1000] | d_real_loss: 0.5429 | d_Y_loss: 0.6873 | d_X_loss:
0.6427 | d_fake_loss: 1.3300 | g_loss: 2.2603
Iteration [ 150/ 1000] | d_real_loss: 0.5437 | d_Y_loss: 0.6674 | d_X_loss:
0.6856 | d_fake_loss: 1.3530 | g_loss: 2.2599
Iteration [ 160/ 1000] | d_real_loss: 0.5614 | d_Y_loss: 0.6531 | d_X_loss:
0.7238 | d_fake_loss: 1.3769 | g_loss: 2.1213
Iteration [ 170/ 1000] | d_real_loss: 0.5110 | d_Y_loss: 0.6430 | d_X_loss:
0.6134 | d_fake_loss: 1.2563 | g_loss: 2.1500
Iteration [ 180/ 1000] | d_real_loss: 0.5024 | d_Y_loss: 0.6328 | d_X_loss:
0.5872 | d_fake_loss: 1.2200 | g_loss: 2.1783
Iteration [ 190/ 1000] | d_real_loss: 0.5990 | d_Y_loss: 0.5990 | d_X_loss:
0.6561 | d_fake_loss: 1.2551 | g_loss: 2.3690
Iteration [ 200/ 1000] | d_real_loss: 0.5324 | d_Y_loss: 0.5952 | d_X_loss:

```

```

0.7221 | d_fake_loss: 1.3173 | g_loss: 2.5136
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000200-X-Y.png
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000200-Y-X.png
Iteration [ 210/ 1000] | d_real_loss: 0.5232 | d_Y_loss: 0.5792 | d_X_loss:
0.6212 | d_fake_loss: 1.2004 | g_loss: 2.0737
Iteration [ 220/ 1000] | d_real_loss: 0.4920 | d_Y_loss: 0.5745 | d_X_loss:
0.6291 | d_fake_loss: 1.2037 | g_loss: 2.2257
Iteration [ 230/ 1000] | d_real_loss: 0.4776 | d_Y_loss: 0.5706 | d_X_loss:
0.7682 | d_fake_loss: 1.3388 | g_loss: 2.2858
Iteration [ 240/ 1000] | d_real_loss: 0.4713 | d_Y_loss: 0.5756 | d_X_loss:
0.9225 | d_fake_loss: 1.4981 | g_loss: 2.4957
Iteration [ 250/ 1000] | d_real_loss: 0.5583 | d_Y_loss: 0.5285 | d_X_loss:
0.6188 | d_fake_loss: 1.1472 | g_loss: 2.2677
Iteration [ 260/ 1000] | d_real_loss: 0.4794 | d_Y_loss: 0.5192 | d_X_loss:
0.7693 | d_fake_loss: 1.2885 | g_loss: 2.1434
Iteration [ 270/ 1000] | d_real_loss: 0.4648 | d_Y_loss: 0.5367 | d_X_loss:
0.7402 | d_fake_loss: 1.2769 | g_loss: 2.1752
Iteration [ 280/ 1000] | d_real_loss: 0.4341 | d_Y_loss: 0.5341 | d_X_loss:
0.6570 | d_fake_loss: 1.1911 | g_loss: 2.5111
Iteration [ 290/ 1000] | d_real_loss: 0.4173 | d_Y_loss: 0.4993 | d_X_loss:
0.5742 | d_fake_loss: 1.0735 | g_loss: 2.2184
Iteration [ 300/ 1000] | d_real_loss: 0.5230 | d_Y_loss: 0.4585 | d_X_loss:
0.5768 | d_fake_loss: 1.0353 | g_loss: 2.1703
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000300-X-Y.png
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000300-Y-X.png
Iteration [ 310/ 1000] | d_real_loss: 0.4576 | d_Y_loss: 0.4968 | d_X_loss:
0.7454 | d_fake_loss: 1.2422 | g_loss: 2.2601
Iteration [ 320/ 1000] | d_real_loss: 0.4286 | d_Y_loss: 0.5022 | d_X_loss:
0.5502 | d_fake_loss: 1.0524 | g_loss: 2.1119
Iteration [ 330/ 1000] | d_real_loss: 0.4173 | d_Y_loss: 0.5578 | d_X_loss:
1.0342 | d_fake_loss: 1.5920 | g_loss: 2.1722
Iteration [ 340/ 1000] | d_real_loss: 0.4724 | d_Y_loss: 0.4932 | d_X_loss:
0.7065 | d_fake_loss: 1.1997 | g_loss: 2.2605
Iteration [ 350/ 1000] | d_real_loss: 0.4005 | d_Y_loss: 0.5164 | d_X_loss:
0.5962 | d_fake_loss: 1.1126 | g_loss: 2.3704
Iteration [ 360/ 1000] | d_real_loss: 0.4531 | d_Y_loss: 0.4699 | d_X_loss:
0.6409 | d_fake_loss: 1.1108 | g_loss: 2.5651
Iteration [ 370/ 1000] | d_real_loss: 0.4028 | d_Y_loss: 0.5177 | d_X_loss:
0.6031 | d_fake_loss: 1.1208 | g_loss: 2.2440
Iteration [ 380/ 1000] | d_real_loss: 0.4016 | d_Y_loss: 0.4662 | d_X_loss:
0.7360 | d_fake_loss: 1.2023 | g_loss: 2.3394
Iteration [ 390/ 1000] | d_real_loss: 0.3769 | d_Y_loss: 0.4669 | d_X_loss:
0.6023 | d_fake_loss: 1.0692 | g_loss: 2.2968
Iteration [ 400/ 1000] | d_real_loss: 0.3702 | d_Y_loss: 0.4354 | d_X_loss:

```

```

0.5705 | d_fake_loss: 1.0059 | g_loss: 3.0168
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000400-X-Y.png
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000400-Y-X.png
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000400-X-Y.png
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000400-Y-X.png
Iteration [ 410/ 1000] | d_real_loss: 0.3862 | d_Y_loss: 0.4483 | d_X_loss:
0.6797 | d_fake_loss: 1.1280 | g_loss: 2.3647
Iteration [ 420/ 1000] | d_real_loss: 0.3726 | d_Y_loss: 0.4135 | d_X_loss:
0.5733 | d_fake_loss: 0.9869 | g_loss: 2.4124
Iteration [ 430/ 1000] | d_real_loss: 0.3857 | d_Y_loss: 0.3786 | d_X_loss:
0.5352 | d_fake_loss: 0.9138 | g_loss: 2.3629
Iteration [ 440/ 1000] | d_real_loss: 0.5594 | d_Y_loss: 0.4030 | d_X_loss:
0.6733 | d_fake_loss: 1.0763 | g_loss: 2.4229
Iteration [ 450/ 1000] | d_real_loss: 0.3921 | d_Y_loss: 0.4275 | d_X_loss:
0.6534 | d_fake_loss: 1.0809 | g_loss: 2.7100
Iteration [ 460/ 1000] | d_real_loss: 0.4028 | d_Y_loss: 0.3734 | d_X_loss:
0.6715 | d_fake_loss: 1.0449 | g_loss: 2.3513
Iteration [ 470/ 1000] | d_real_loss: 0.3618 | d_Y_loss: 0.4008 | d_X_loss:
0.4975 | d_fake_loss: 0.8983 | g_loss: 2.5082
Iteration [ 480/ 1000] | d_real_loss: 0.3693 | d_Y_loss: 0.3583 | d_X_loss:
0.5559 | d_fake_loss: 0.9142 | g_loss: 2.4600
Iteration [ 490/ 1000] | d_real_loss: 0.3745 | d_Y_loss: 0.3523 | d_X_loss:
0.5911 | d_fake_loss: 0.9435 | g_loss: 2.3749
Iteration [ 500/ 1000] | d_real_loss: 0.3569 | d_Y_loss: 0.3813 | d_X_loss:
0.4923 | d_fake_loss: 0.8736 | g_loss: 2.3807
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000500-X-Y.png
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000500-Y-X.png
Iteration [ 510/ 1000] | d_real_loss: 0.3583 | d_Y_loss: 0.3530 | d_X_loss:
0.4782 | d_fake_loss: 0.8312 | g_loss: 2.4193
Iteration [ 520/ 1000] | d_real_loss: 0.3269 | d_Y_loss: 0.3652 | d_X_loss:
0.4875 | d_fake_loss: 0.8528 | g_loss: 2.6685
Iteration [ 530/ 1000] | d_real_loss: 0.3767 | d_Y_loss: 0.3307 | d_X_loss:
0.5741 | d_fake_loss: 0.9048 | g_loss: 2.7285
Iteration [ 540/ 1000] | d_real_loss: 0.3321 | d_Y_loss: 0.3419 | d_X_loss:
0.5077 | d_fake_loss: 0.8496 | g_loss: 2.5261
Iteration [ 550/ 1000] | d_real_loss: 0.3481 | d_Y_loss: 0.3051 | d_X_loss:
0.5079 | d_fake_loss: 0.8131 | g_loss: 2.6239
Iteration [ 560/ 1000] | d_real_loss: 0.3302 | d_Y_loss: 0.3242 | d_X_loss:
0.6342 | d_fake_loss: 0.9584 | g_loss: 2.7502
Iteration [ 570/ 1000] | d_real_loss: 0.3274 | d_Y_loss: 0.3355 | d_X_loss:
0.5251 | d_fake_loss: 0.8606 | g_loss: 2.5935
Iteration [ 580/ 1000] | d_real_loss: 0.3505 | d_Y_loss: 0.5110 | d_X_loss:

```

```

0.4040 | d_fake_loss: 0.9150 | g_loss: 2.7832
Iteration [ 590/ 1000] | d_real_loss: 0.3489 | d_Y_loss: 0.4041 | d_X_loss:
0.3919 | d_fake_loss: 0.7960 | g_loss: 2.4419
Iteration [ 600/ 1000] | d_real_loss: 0.3821 | d_Y_loss: 0.3380 | d_X_loss:
0.7064 | d_fake_loss: 1.0444 | g_loss: 2.5822
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000600-X-Y.png
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000600-Y-X.png
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000600-X-Y.png
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000600-Y-X.png
Iteration [ 610/ 1000] | d_real_loss: 0.3337 | d_Y_loss: 0.3050 | d_X_loss:
0.4317 | d_fake_loss: 0.7366 | g_loss: 2.5690
Iteration [ 620/ 1000] | d_real_loss: 0.3413 | d_Y_loss: 0.3361 | d_X_loss:
0.4990 | d_fake_loss: 0.8351 | g_loss: 2.6367
Iteration [ 630/ 1000] | d_real_loss: 0.3097 | d_Y_loss: 0.3210 | d_X_loss:
0.4202 | d_fake_loss: 0.7412 | g_loss: 2.6932
Iteration [ 640/ 1000] | d_real_loss: 0.3100 | d_Y_loss: 0.2768 | d_X_loss:
0.8271 | d_fake_loss: 1.1039 | g_loss: 2.8348
Iteration [ 650/ 1000] | d_real_loss: 0.4519 | d_Y_loss: 0.2880 | d_X_loss:
0.6647 | d_fake_loss: 0.9527 | g_loss: 2.5505
Iteration [ 660/ 1000] | d_real_loss: 0.4479 | d_Y_loss: 0.3097 | d_X_loss:
0.5293 | d_fake_loss: 0.8390 | g_loss: 2.8034
Iteration [ 670/ 1000] | d_real_loss: 0.3767 | d_Y_loss: 0.3540 | d_X_loss:
0.4939 | d_fake_loss: 0.8479 | g_loss: 2.7103
Iteration [ 680/ 1000] | d_real_loss: 0.3073 | d_Y_loss: 0.2798 | d_X_loss:
0.5015 | d_fake_loss: 0.7814 | g_loss: 2.7638
Iteration [ 690/ 1000] | d_real_loss: 0.3644 | d_Y_loss: 0.2690 | d_X_loss:
0.5019 | d_fake_loss: 0.7710 | g_loss: 2.8466
Iteration [ 700/ 1000] | d_real_loss: 0.3071 | d_Y_loss: 0.2771 | d_X_loss:
0.8733 | d_fake_loss: 1.1503 | g_loss: 2.6703
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000700-X-Y.png
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000700-Y-X.png
Iteration [ 710/ 1000] | d_real_loss: 0.3535 | d_Y_loss: 0.2852 | d_X_loss:
0.5155 | d_fake_loss: 0.8007 | g_loss: 2.8442
Iteration [ 720/ 1000] | d_real_loss: 0.3144 | d_Y_loss: 0.2484 | d_X_loss:
0.4786 | d_fake_loss: 0.7271 | g_loss: 2.8756
Iteration [ 730/ 1000] | d_real_loss: 0.2636 | d_Y_loss: 0.2738 | d_X_loss:
0.4696 | d_fake_loss: 0.7435 | g_loss: 2.7265
Iteration [ 740/ 1000] | d_real_loss: 0.2691 | d_Y_loss: 0.2877 | d_X_loss:
0.4260 | d_fake_loss: 0.7137 | g_loss: 3.1273
Iteration [ 750/ 1000] | d_real_loss: 0.2719 | d_Y_loss: 0.2582 | d_X_loss:
0.6419 | d_fake_loss: 0.9001 | g_loss: 2.8034
Iteration [ 760/ 1000] | d_real_loss: 0.2519 | d_Y_loss: 0.2497 | d_X_loss:

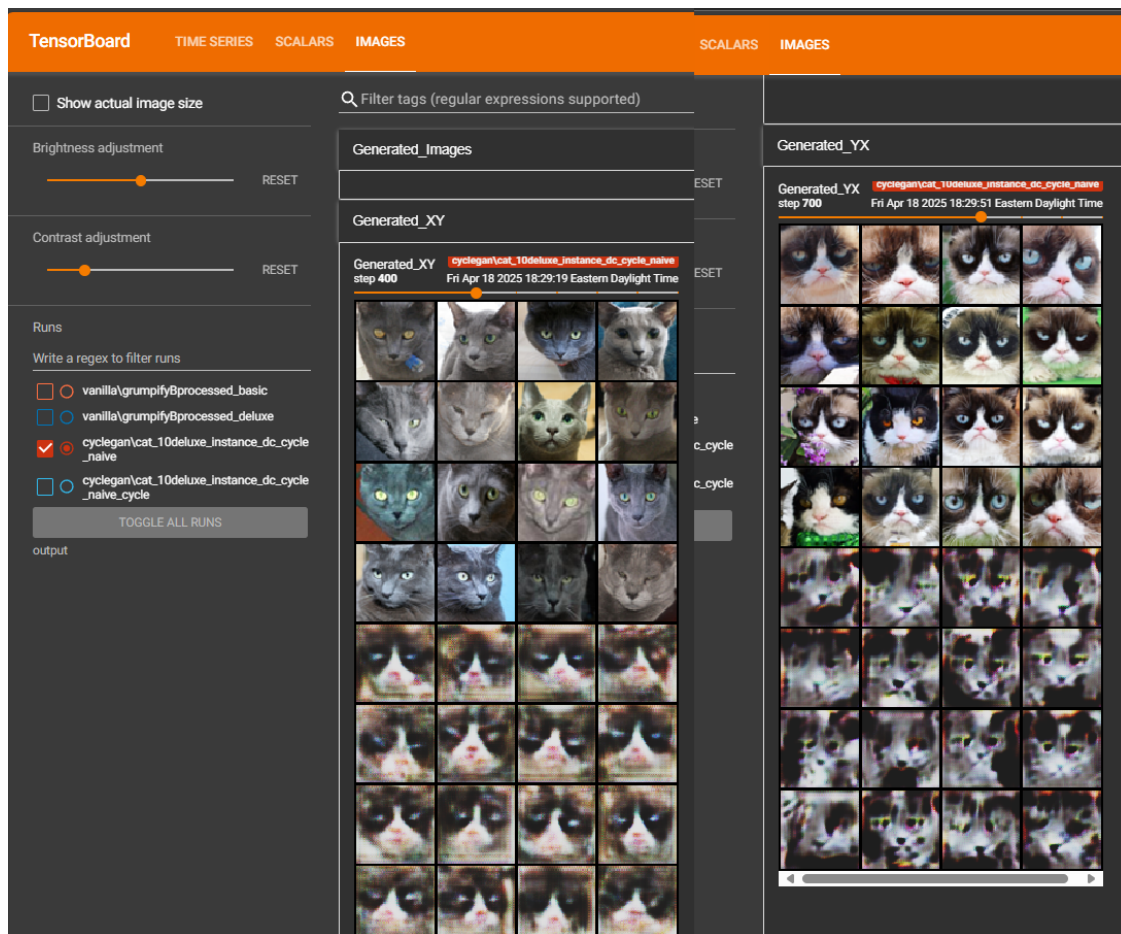
```

```

0.4840 | d_fake_loss: 0.7337 | g_loss: 2.8621
Iteration [ 770/ 1000] | d_real_loss: 0.2474 | d_Y_loss: 0.2622 | d_X_loss:
0.3791 | d_fake_loss: 0.6413 | g_loss: 2.8352
Iteration [ 780/ 1000] | d_real_loss: 0.2494 | d_Y_loss: 0.2401 | d_X_loss:
0.4055 | d_fake_loss: 0.6456 | g_loss: 2.9111
Iteration [ 790/ 1000] | d_real_loss: 0.2360 | d_Y_loss: 0.2208 | d_X_loss:
0.3879 | d_fake_loss: 0.6088 | g_loss: 2.9050
Iteration [ 800/ 1000] | d_real_loss: 0.2333 | d_Y_loss: 0.2261 | d_X_loss:
0.3731 | d_fake_loss: 0.5992 | g_loss: 2.7872
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000800-X-Y.png
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000800-Y-X.png
Iteration [ 810/ 1000] | d_real_loss: 0.2222 | d_Y_loss: 0.2288 | d_X_loss:
0.3816 | d_fake_loss: 0.6104 | g_loss: 2.9404
Iteration [ 820/ 1000] | d_real_loss: 0.2183 | d_Y_loss: 0.2189 | d_X_loss:
0.3441 | d_fake_loss: 0.5630 | g_loss: 3.0562
Iteration [ 830/ 1000] | d_real_loss: 0.2304 | d_Y_loss: 0.2174 | d_X_loss:
0.3550 | d_fake_loss: 0.5723 | g_loss: 2.8922
Iteration [ 840/ 1000] | d_real_loss: 0.2278 | d_Y_loss: 0.2233 | d_X_loss:
0.3274 | d_fake_loss: 0.5507 | g_loss: 2.9491
Iteration [ 850/ 1000] | d_real_loss: 0.2229 | d_Y_loss: 0.1965 | d_X_loss:
0.3131 | d_fake_loss: 0.5096 | g_loss: 3.0079
Iteration [ 860/ 1000] | d_real_loss: 0.2386 | d_Y_loss: 0.1997 | d_X_loss:
0.8347 | d_fake_loss: 1.0343 | g_loss: 3.0222
Iteration [ 870/ 1000] | d_real_loss: 0.3227 | d_Y_loss: 0.1943 | d_X_loss:
0.4915 | d_fake_loss: 0.6858 | g_loss: 2.9925
Iteration [ 880/ 1000] | d_real_loss: 0.2722 | d_Y_loss: 0.1830 | d_X_loss:
0.4104 | d_fake_loss: 0.5934 | g_loss: 2.9875
Iteration [ 890/ 1000] | d_real_loss: 0.2413 | d_Y_loss: 0.2199 | d_X_loss:
0.4459 | d_fake_loss: 0.6657 | g_loss: 3.0877
Iteration [ 900/ 1000] | d_real_loss: 0.2591 | d_Y_loss: 0.1923 | d_X_loss:
0.3517 | d_fake_loss: 0.5440 | g_loss: 2.9474
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000900-X-Y.png
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000900-Y-X.png
Iteration [ 910/ 1000] | d_real_loss: 0.2773 | d_Y_loss: 0.2489 | d_X_loss:
0.4448 | d_fake_loss: 0.6938 | g_loss: 3.1163
Iteration [ 920/ 1000] | d_real_loss: 0.2709 | d_Y_loss: 0.2814 | d_X_loss:
0.3869 | d_fake_loss: 0.6683 | g_loss: 2.8898
Iteration [ 930/ 1000] | d_real_loss: 0.2392 | d_Y_loss: 0.2446 | d_X_loss:
0.3869 | d_fake_loss: 0.6315 | g_loss: 3.0104
Iteration [ 940/ 1000] | d_real_loss: 0.2291 | d_Y_loss: 0.1970 | d_X_loss:
0.3666 | d_fake_loss: 0.5635 | g_loss: 2.9366
Iteration [ 950/ 1000] | d_real_loss: 0.2178 | d_Y_loss: 0.2288 | d_X_loss:
0.3533 | d_fake_loss: 0.5821 | g_loss: 3.0475
Iteration [ 960/ 1000] | d_real_loss: 0.2130 | d_Y_loss: 0.1916 | d_X_loss:

```

```
0.3391 | d_fake_loss: 0.5306 | g_loss: 2.9782
Iteration [ 970/ 1000] | d_real_loss: 0.2275 | d_Y_loss: 0.2356 | d_X_loss:
0.4238 | d_fake_loss: 0.6594 | g_loss: 3.1331
Iteration [ 980/ 1000] | d_real_loss: 0.2621 | d_Y_loss: 0.2091 | d_X_loss:
0.3310 | d_fake_loss: 0.5402 | g_loss: 3.1214
Iteration [ 990/ 1000] | d_real_loss: 0.2365 | d_Y_loss: 0.1762 | d_X_loss:
0.4147 | d_fake_loss: 0.5909 | g_loss: 3.0561
Iteration [ 1000/ 1000] | d_real_loss: 0.2064 | d_Y_loss: 0.1699 | d_X_loss:
0.3013 | d_fake_loss: 0.4712 | g_loss: 3.2445
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001000-X-Y.png
Saved
output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001000-Y-X.png
2025-04-18 18:30:31.430723: I tensorflow/core/util/port.cc:153] oneDNN custom
operations are on. You may see slightly different numerical results due to
floating-point round-off errors from different computation orders. To turn them
off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.
2025-04-18 18:30:32.267991: I tensorflow/core/util/port.cc:153] oneDNN custom
operations are on. You may see slightly different numerical results due to
floating-point round-off errors from different computation orders. To turn them
off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.
```



Images Looking at the images, we can see that the ones from step 400 may be somewhat similar to the ones from step 700, although they change and look somewhat better. This is probably because when the training has just started the generator has not learned very well how to change the first type of image to look like the second type. Now, in this case, both images may not be very well created and we could at a glance identify which are fake and which are real, since if we look at step 700, even though the network tries to get better at making the images look like the other type, it may not be enough to have better textures, match colors and look more real. So we may still see some problems or things that don't look quite right because the model is still learning and trying to improve in the next steps. Something that could be improved if we revisit images in later steps in the training.

Execution 10000 Iterations

```
[31]: !python cycle_gan.py --train_iters=10000 --sample_dir=cycle_gan_10000
```

```
=====
                                Opts
-----
image_size: 64
      disc: dc
      gen: cycle
g_conv_dim: 32
```



```

        d_conv_dim: 32
        norm: instance
        init_type: naive
        train_iters: 10000
        batch_size: 16
        lr: 0.0003
        beta1: 0.5
        beta2: 0.999
        lambda_cycle: 10
        X: cat/grumpifyAprocessed
        Y: cat/grumpifyBprocessed
        ext: *.png
        data_aug: deluxe
        checkpoint_dir: checkpoints_cyclegan
        sample_dir:
output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive
        log_step: 10
        sample_every: 100
        checkpoint_every: 800
        gpu: 0
=====
data/cat/grumpifyAprocessed\*.png
75
data/cat/grumpifyBprocessed\*.png
204
                G_XtoY
-----
CycleGenerator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
    (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv2): Sequential(
    (0): Conv2d(32, 64, kernel_size=(3, 3), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (resnet_block): Sequential(
    (0): ResnetBlock(
      (conv_layer): Sequential(
        (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
      )
    )
  )
)

```

```

    )
    (1): ResnetBlock(
      (conv_layer): Sequential(
        (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
      )
    )
    (2): ResnetBlock(
      (conv_layer): Sequential(
        (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
      )
    )
    (deconv1): Sequential(
      (0): ConvTranspose2d(64, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1,
1), bias=False)
      (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (deconv2): Sequential(
      (0): Conv2d(32, 3, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
      (1): Tanh()
    )
  )
  -----
  G_YtoX
  -----
CycleGenerator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
    (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv2): Sequential(
    (0): Conv2d(32, 64, kernel_size=(3, 3), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (resnet_block): Sequential(
    (0): ResnetBlock(

```

```

        (conv_layer): Sequential(
          (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
          (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
        )
      )
      (1): ResnetBlock(
        (conv_layer): Sequential(
          (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
          (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
        )
      )
      (2): ResnetBlock(
        (conv_layer): Sequential(
          (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
          (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
        )
      )
    )
    (deconv1): Sequential(
      (0): ConvTranspose2d(64, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1,
1), bias=False)
      (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (deconv2): Sequential(
      (0): Conv2d(32, 3, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
      (1): Tanh()
    )
  )

```

D_X

```

DCDiscriminator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
  )
  (conv2): Sequential(
    (0): Conv2d(32, 64, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,

```

```

track_running_stats=False)
    )
    (conv3): Sequential(
      (0): Conv2d(64, 128, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
      (1): InstanceNorm2d(128, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (conv4): Sequential(
      (0): Conv2d(128, 256, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
      (1): InstanceNorm2d(256, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (conv5): Sequential(
      (0): AdaptiveAvgPool2d(output_size=1)
      (1): Conv2d(256, 1, kernel_size=(1, 1), stride=(1, 1), bias=False)
    )
  )
  -----
  D_Y
  -----
DCDiscriminator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
  )
  (conv2): Sequential(
    (0): Conv2d(32, 64, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv3): Sequential(
    (0): Conv2d(64, 128, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(128, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv4): Sequential(
    (0): Conv2d(128, 256, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(256, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv5): Sequential(
    (0): AdaptiveAvgPool2d(output_size=1)
    (1): Conv2d(256, 1, kernel_size=(1, 1), stride=(1, 1), bias=False)
  )
)

```

```

)
)
-----
Models moved to GPU.
Iteration [ 10/10000] | d_real_loss: 1.0452 | d_Y_loss: 0.9088 | d_X_loss:
0.7671 | d_fake_loss: 1.6759 | g_loss: 0.5534
Iteration [ 20/10000] | d_real_loss: 0.9188 | d_Y_loss: 0.9230 | d_X_loss:
0.8122 | d_fake_loss: 1.7351 | g_loss: 0.5376
Iteration [ 30/10000] | d_real_loss: 0.8489 | d_Y_loss: 0.9260 | d_X_loss:
0.8686 | d_fake_loss: 1.7946 | g_loss: 0.5391
Iteration [ 40/10000] | d_real_loss: 0.8072 | d_Y_loss: 0.9159 | d_X_loss:
0.8798 | d_fake_loss: 1.7957 | g_loss: 0.5454
Iteration [ 50/10000] | d_real_loss: 0.7659 | d_Y_loss: 0.8750 | d_X_loss:
0.8986 | d_fake_loss: 1.7736 | g_loss: 0.5736
Iteration [ 60/10000] | d_real_loss: 0.7464 | d_Y_loss: 0.9180 | d_X_loss:
0.8791 | d_fake_loss: 1.7971 | g_loss: 0.5477
Iteration [ 70/10000] | d_real_loss: 0.7229 | d_Y_loss: 0.9258 | d_X_loss:
0.9140 | d_fake_loss: 1.8398 | g_loss: 0.5499
Iteration [ 80/10000] | d_real_loss: 0.7719 | d_Y_loss: 0.9687 | d_X_loss:
0.9487 | d_fake_loss: 1.9174 | g_loss: 0.5238
Iteration [ 90/10000] | d_real_loss: 0.7508 | d_Y_loss: 0.9564 | d_X_loss:
0.9444 | d_fake_loss: 1.9007 | g_loss: 0.5259
Iteration [ 100/10000] | d_real_loss: 0.7361 | d_Y_loss: 0.9918 | d_X_loss:
0.9117 | d_fake_loss: 1.9035 | g_loss: 0.5126
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000100-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000100-
Y-X.png
Iteration [ 110/10000] | d_real_loss: 0.7149 | d_Y_loss: 0.9871 | d_X_loss:
0.8870 | d_fake_loss: 1.8742 | g_loss: 0.5057
Iteration [ 120/10000] | d_real_loss: 0.7293 | d_Y_loss: 1.0033 | d_X_loss:
0.8839 | d_fake_loss: 1.8871 | g_loss: 0.5140
Iteration [ 130/10000] | d_real_loss: 0.7464 | d_Y_loss: 1.0385 | d_X_loss:
0.8834 | d_fake_loss: 1.9219 | g_loss: 0.4985
Iteration [ 140/10000] | d_real_loss: 0.6982 | d_Y_loss: 0.9578 | d_X_loss:
0.8839 | d_fake_loss: 1.8417 | g_loss: 0.5380
Iteration [ 150/10000] | d_real_loss: 0.7219 | d_Y_loss: 1.0311 | d_X_loss:
0.8950 | d_fake_loss: 1.9261 | g_loss: 0.5062
Iteration [ 160/10000] | d_real_loss: 0.7532 | d_Y_loss: 1.0480 | d_X_loss:
0.8831 | d_fake_loss: 1.9311 | g_loss: 0.4738
Iteration [ 170/10000] | d_real_loss: 0.7234 | d_Y_loss: 1.0058 | d_X_loss:
0.8626 | d_fake_loss: 1.8684 | g_loss: 0.5038
Iteration [ 180/10000] | d_real_loss: 0.7016 | d_Y_loss: 1.0710 | d_X_loss:
0.8295 | d_fake_loss: 1.9005 | g_loss: 0.4651
Iteration [ 190/10000] | d_real_loss: 0.7076 | d_Y_loss: 1.0230 | d_X_loss:
0.8165 | d_fake_loss: 1.8394 | g_loss: 0.4958
Iteration [ 200/10000] | d_real_loss: 0.7365 | d_Y_loss: 1.0536 | d_X_loss:
0.8859 | d_fake_loss: 1.9395 | g_loss: 0.4784

```

Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000200-X-Y.png

Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000200-Y-X.png

Iteration [210/10000] | d_real_loss: 0.7570 | d_Y_loss: 1.0461 | d_X_loss: 0.8676 | d_fake_loss: 1.9137 | g_loss: 0.4926

Iteration [220/10000] | d_real_loss: 0.7162 | d_Y_loss: 1.0284 | d_X_loss: 0.8481 | d_fake_loss: 1.8765 | g_loss: 0.4967

Iteration [230/10000] | d_real_loss: 0.7301 | d_Y_loss: 1.0521 | d_X_loss: 0.8270 | d_fake_loss: 1.8791 | g_loss: 0.4776

Iteration [240/10000] | d_real_loss: 0.6881 | d_Y_loss: 1.0936 | d_X_loss: 0.8111 | d_fake_loss: 1.9046 | g_loss: 0.4500

Iteration [250/10000] | d_real_loss: 0.8115 | d_Y_loss: 1.0585 | d_X_loss: 0.9253 | d_fake_loss: 1.9838 | g_loss: 0.4875

Iteration [260/10000] | d_real_loss: 0.7911 | d_Y_loss: 1.0318 | d_X_loss: 0.9315 | d_fake_loss: 1.9633 | g_loss: 0.4848

Iteration [270/10000] | d_real_loss: 0.8263 | d_Y_loss: 1.0714 | d_X_loss: 0.9129 | d_fake_loss: 1.9843 | g_loss: 0.4726

Iteration [280/10000] | d_real_loss: 0.7854 | d_Y_loss: 1.0307 | d_X_loss: 0.9042 | d_fake_loss: 1.9348 | g_loss: 0.4904

Iteration [290/10000] | d_real_loss: 0.7612 | d_Y_loss: 1.0337 | d_X_loss: 0.9324 | d_fake_loss: 1.9661 | g_loss: 0.4871

Iteration [300/10000] | d_real_loss: 0.7610 | d_Y_loss: 1.0643 | d_X_loss: 0.9728 | d_fake_loss: 2.0371 | g_loss: 0.4776

Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000300-X-Y.png

Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000300-Y-X.png

Iteration [310/10000] | d_real_loss: 0.8163 | d_Y_loss: 1.0433 | d_X_loss: 0.9592 | d_fake_loss: 2.0025 | g_loss: 0.4719

Iteration [320/10000] | d_real_loss: 0.7618 | d_Y_loss: 1.0946 | d_X_loss: 0.9276 | d_fake_loss: 2.0222 | g_loss: 0.4532

Iteration [330/10000] | d_real_loss: 0.7765 | d_Y_loss: 1.0568 | d_X_loss: 1.0435 | d_fake_loss: 2.1003 | g_loss: 0.4727

Iteration [340/10000] | d_real_loss: 0.8103 | d_Y_loss: 1.0507 | d_X_loss: 1.0083 | d_fake_loss: 2.0589 | g_loss: 0.4766

Iteration [350/10000] | d_real_loss: 0.7695 | d_Y_loss: 1.0879 | d_X_loss: 0.9590 | d_fake_loss: 2.0468 | g_loss: 0.4595

Iteration [360/10000] | d_real_loss: 0.7944 | d_Y_loss: 1.0381 | d_X_loss: 0.9854 | d_fake_loss: 2.0235 | g_loss: 0.4831

Iteration [370/10000] | d_real_loss: 0.8169 | d_Y_loss: 1.0447 | d_X_loss: 0.9860 | d_fake_loss: 2.0306 | g_loss: 0.4804

Iteration [380/10000] | d_real_loss: 0.7910 | d_Y_loss: 1.0571 | d_X_loss: 0.9854 | d_fake_loss: 2.0425 | g_loss: 0.4770

Iteration [390/10000] | d_real_loss: 0.7821 | d_Y_loss: 1.0527 | d_X_loss: 0.9708 | d_fake_loss: 2.0235 | g_loss: 0.4780

Iteration [400/10000] | d_real_loss: 0.7670 | d_Y_loss: 1.0603 | d_X_loss: 0.9601 | d_fake_loss: 2.0204 | g_loss: 0.4766

Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000400-X-Y.png

Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000400-Y-X.png

Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000400-X-Y.png

Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000400-Y-X.png

Iteration [410/10000] | d_real_loss: 0.7965 | d_Y_loss: 1.0340 | d_X_loss: 0.9404 | d_fake_loss: 1.9744 | g_loss: 0.4849

Iteration [420/10000] | d_real_loss: 0.7589 | d_Y_loss: 1.0631 | d_X_loss: 1.0008 | d_fake_loss: 2.0639 | g_loss: 0.4788

Iteration [430/10000] | d_real_loss: 0.7844 | d_Y_loss: 1.0592 | d_X_loss: 0.9497 | d_fake_loss: 2.0090 | g_loss: 0.4857

Iteration [440/10000] | d_real_loss: 0.8502 | d_Y_loss: 1.0425 | d_X_loss: 0.9228 | d_fake_loss: 1.9653 | g_loss: 0.4931

Iteration [450/10000] | d_real_loss: 0.7683 | d_Y_loss: 1.0250 | d_X_loss: 0.9920 | d_fake_loss: 2.0170 | g_loss: 0.4926

Iteration [460/10000] | d_real_loss: 0.7572 | d_Y_loss: 1.0304 | d_X_loss: 0.9195 | d_fake_loss: 1.9500 | g_loss: 0.4932

Iteration [470/10000] | d_real_loss: 0.7242 | d_Y_loss: 1.0544 | d_X_loss: 0.9715 | d_fake_loss: 2.0259 | g_loss: 0.4906

Iteration [480/10000] | d_real_loss: 0.7447 | d_Y_loss: 1.0391 | d_X_loss: 0.9589 | d_fake_loss: 1.9980 | g_loss: 0.5234

Iteration [490/10000] | d_real_loss: 0.7668 | d_Y_loss: 1.0485 | d_X_loss: 0.9407 | d_fake_loss: 1.9892 | g_loss: 0.4758

Iteration [500/10000] | d_real_loss: 0.7610 | d_Y_loss: 1.1051 | d_X_loss: 0.9808 | d_fake_loss: 2.0859 | g_loss: 0.4577

Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000500-X-Y.png

Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000500-Y-X.png

Iteration [510/10000] | d_real_loss: 0.7635 | d_Y_loss: 1.0594 | d_X_loss: 0.8635 | d_fake_loss: 1.9229 | g_loss: 0.4792

Iteration [520/10000] | d_real_loss: 0.7499 | d_Y_loss: 1.0280 | d_X_loss: 0.9771 | d_fake_loss: 2.0051 | g_loss: 0.4851

Iteration [530/10000] | d_real_loss: 0.7619 | d_Y_loss: 1.0648 | d_X_loss: 0.9628 | d_fake_loss: 2.0276 | g_loss: 0.4759

Iteration [540/10000] | d_real_loss: 0.7559 | d_Y_loss: 1.0079 | d_X_loss: 0.9133 | d_fake_loss: 1.9212 | g_loss: 0.4999

Iteration [550/10000] | d_real_loss: 0.7483 | d_Y_loss: 1.0148 | d_X_loss: 0.9194 | d_fake_loss: 1.9342 | g_loss: 0.4927

Iteration [560/10000] | d_real_loss: 0.7747 | d_Y_loss: 1.0187 | d_X_loss: 0.9468 | d_fake_loss: 1.9655 | g_loss: 0.4936

Iteration [570/10000] | d_real_loss: 0.7426 | d_Y_loss: 1.0310 | d_X_loss: 0.9152 | d_fake_loss: 1.9462 | g_loss: 0.4853

Iteration [580/10000] | d_real_loss: 0.7619 | d_Y_loss: 1.0453 | d_X_loss: 0.9368 | d_fake_loss: 1.9820 | g_loss: 0.4947

Iteration [590/10000] | d_real_loss: 0.7322 | d_Y_loss: 1.0585 | d_X_loss: 0.8618 | d_fake_loss: 1.9203 | g_loss: 0.4762
 Iteration [600/10000] | d_real_loss: 0.7098 | d_Y_loss: 1.0801 | d_X_loss: 0.9419 | d_fake_loss: 2.0220 | g_loss: 0.4729
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000600-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000600-Y-X.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000600-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000600-Y-X.png
 Iteration [610/10000] | d_real_loss: 0.7499 | d_Y_loss: 1.0375 | d_X_loss: 0.8390 | d_fake_loss: 1.8764 | g_loss: 0.4937
 Iteration [620/10000] | d_real_loss: 0.7337 | d_Y_loss: 1.0226 | d_X_loss: 0.8519 | d_fake_loss: 1.8746 | g_loss: 0.4924
 Iteration [630/10000] | d_real_loss: 0.7204 | d_Y_loss: 1.0517 | d_X_loss: 0.9048 | d_fake_loss: 1.9565 | g_loss: 0.4848
 Iteration [640/10000] | d_real_loss: 0.7188 | d_Y_loss: 1.0027 | d_X_loss: 0.9050 | d_fake_loss: 1.9077 | g_loss: 0.5088
 Iteration [650/10000] | d_real_loss: 0.7636 | d_Y_loss: 1.0278 | d_X_loss: 0.8641 | d_fake_loss: 1.8920 | g_loss: 0.4952
 Iteration [660/10000] | d_real_loss: 0.7400 | d_Y_loss: 1.0412 | d_X_loss: 0.9824 | d_fake_loss: 2.0235 | g_loss: 0.4923
 Iteration [670/10000] | d_real_loss: 0.6974 | d_Y_loss: 1.0445 | d_X_loss: 0.8379 | d_fake_loss: 1.8823 | g_loss: 0.4790
 Iteration [680/10000] | d_real_loss: 0.6947 | d_Y_loss: 1.0627 | d_X_loss: 0.8156 | d_fake_loss: 1.8783 | g_loss: 0.4806
 Iteration [690/10000] | d_real_loss: 0.7214 | d_Y_loss: 0.9940 | d_X_loss: 0.8148 | d_fake_loss: 1.8088 | g_loss: 0.5170
 Iteration [700/10000] | d_real_loss: 0.6991 | d_Y_loss: 1.0629 | d_X_loss: 0.9207 | d_fake_loss: 1.9836 | g_loss: 0.4899
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000700-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000700-Y-X.png
 Iteration [710/10000] | d_real_loss: 0.7433 | d_Y_loss: 1.0418 | d_X_loss: 0.7791 | d_fake_loss: 1.8209 | g_loss: 0.4878
 Iteration [720/10000] | d_real_loss: 0.7355 | d_Y_loss: 1.0467 | d_X_loss: 0.8726 | d_fake_loss: 1.9193 | g_loss: 0.4915
 Iteration [730/10000] | d_real_loss: 0.7529 | d_Y_loss: 0.9967 | d_X_loss: 0.8563 | d_fake_loss: 1.8530 | g_loss: 0.5106
 Iteration [740/10000] | d_real_loss: 0.7091 | d_Y_loss: 1.0134 | d_X_loss: 0.8214 | d_fake_loss: 1.8349 | g_loss: 0.5136
 Iteration [750/10000] | d_real_loss: 0.7545 | d_Y_loss: 0.9923 | d_X_loss: 0.8612 | d_fake_loss: 1.8535 | g_loss: 0.5105
 Iteration [760/10000] | d_real_loss: 0.7232 | d_Y_loss: 1.0174 | d_X_loss: 0.8256 | d_fake_loss: 1.8430 | g_loss: 0.5177

Iteration [770/10000] | d_real_loss: 0.6920 | d_Y_loss: 1.0449 | d_X_loss: 0.8422 | d_fake_loss: 1.8870 | g_loss: 0.5033
 Iteration [780/10000] | d_real_loss: 0.6867 | d_Y_loss: 0.9990 | d_X_loss: 0.8692 | d_fake_loss: 1.8682 | g_loss: 0.5158
 Iteration [790/10000] | d_real_loss: 0.7307 | d_Y_loss: 1.0152 | d_X_loss: 0.8046 | d_fake_loss: 1.8198 | g_loss: 0.5063
 Iteration [800/10000] | d_real_loss: 0.6828 | d_Y_loss: 0.9902 | d_X_loss: 0.7333 | d_fake_loss: 1.7235 | g_loss: 0.5158
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000800-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000800-Y-X.png
 Iteration [810/10000] | d_real_loss: 0.6728 | d_Y_loss: 1.0552 | d_X_loss: 0.7807 | d_fake_loss: 1.8359 | g_loss: 0.5080
 Iteration [820/10000] | d_real_loss: 0.7055 | d_Y_loss: 1.0185 | d_X_loss: 0.8095 | d_fake_loss: 1.8280 | g_loss: 0.5052
 Iteration [830/10000] | d_real_loss: 0.7288 | d_Y_loss: 1.0406 | d_X_loss: 0.8246 | d_fake_loss: 1.8651 | g_loss: 0.5065
 Iteration [840/10000] | d_real_loss: 0.6562 | d_Y_loss: 0.9840 | d_X_loss: 0.8007 | d_fake_loss: 1.7847 | g_loss: 0.5316
 Iteration [850/10000] | d_real_loss: 0.7294 | d_Y_loss: 1.0283 | d_X_loss: 0.8205 | d_fake_loss: 1.8488 | g_loss: 0.5052
 Iteration [860/10000] | d_real_loss: 0.7093 | d_Y_loss: 1.0269 | d_X_loss: 0.8887 | d_fake_loss: 1.9156 | g_loss: 0.5033
 Iteration [870/10000] | d_real_loss: 0.7204 | d_Y_loss: 0.9586 | d_X_loss: 0.8009 | d_fake_loss: 1.7595 | g_loss: 0.5317
 Iteration [880/10000] | d_real_loss: 0.6724 | d_Y_loss: 0.9880 | d_X_loss: 0.8318 | d_fake_loss: 1.8198 | g_loss: 0.5341
 Iteration [890/10000] | d_real_loss: 0.7385 | d_Y_loss: 0.9865 | d_X_loss: 0.7480 | d_fake_loss: 1.7344 | g_loss: 0.5166
 Iteration [900/10000] | d_real_loss: 0.6804 | d_Y_loss: 1.0336 | d_X_loss: 0.8274 | d_fake_loss: 1.8610 | g_loss: 0.5206
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000900-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-000900-Y-X.png
 Iteration [910/10000] | d_real_loss: 0.7099 | d_Y_loss: 0.9853 | d_X_loss: 0.7227 | d_fake_loss: 1.7080 | g_loss: 0.5436
 Iteration [920/10000] | d_real_loss: 0.6802 | d_Y_loss: 1.0132 | d_X_loss: 0.7637 | d_fake_loss: 1.7769 | g_loss: 0.5316
 Iteration [930/10000] | d_real_loss: 0.6840 | d_Y_loss: 1.0474 | d_X_loss: 0.7695 | d_fake_loss: 1.8169 | g_loss: 0.5131
 Iteration [940/10000] | d_real_loss: 0.6555 | d_Y_loss: 0.9713 | d_X_loss: 0.7815 | d_fake_loss: 1.7528 | g_loss: 0.5370
 Iteration [950/10000] | d_real_loss: 0.7065 | d_Y_loss: 1.0150 | d_X_loss: 0.8435 | d_fake_loss: 1.8585 | g_loss: 0.5244
 Iteration [960/10000] | d_real_loss: 0.7244 | d_Y_loss: 0.9436 | d_X_loss: 0.7419 | d_fake_loss: 1.6855 | g_loss: 0.5451

```

Iteration [ 970/10000] | d_real_loss: 0.7174 | d_Y_loss: 0.9541 | d_X_loss:
0.8236 | d_fake_loss: 1.7777 | g_loss: 0.5463
Iteration [ 980/10000] | d_real_loss: 0.6874 | d_Y_loss: 1.0250 | d_X_loss:
0.7034 | d_fake_loss: 1.7284 | g_loss: 0.5189
Iteration [ 990/10000] | d_real_loss: 0.6979 | d_Y_loss: 0.9773 | d_X_loss:
0.7897 | d_fake_loss: 1.7670 | g_loss: 0.5396
Iteration [ 1000/10000] | d_real_loss: 0.6577 | d_Y_loss: 0.9119 | d_X_loss:
0.8299 | d_fake_loss: 1.7418 | g_loss: 0.5674
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001000-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001000-
Y-X.png
Iteration [ 1010/10000] | d_real_loss: 0.6855 | d_Y_loss: 0.9646 | d_X_loss:
0.7746 | d_fake_loss: 1.7391 | g_loss: 0.5431
Iteration [ 1020/10000] | d_real_loss: 0.6788 | d_Y_loss: 1.0002 | d_X_loss:
0.8189 | d_fake_loss: 1.8191 | g_loss: 0.5428
Iteration [ 1030/10000] | d_real_loss: 0.7015 | d_Y_loss: 0.9863 | d_X_loss:
0.7322 | d_fake_loss: 1.7185 | g_loss: 0.5325
Iteration [ 1040/10000] | d_real_loss: 0.7059 | d_Y_loss: 0.9606 | d_X_loss:
0.8480 | d_fake_loss: 1.8086 | g_loss: 0.5659
Iteration [ 1050/10000] | d_real_loss: 0.6876 | d_Y_loss: 0.9336 | d_X_loss:
0.8412 | d_fake_loss: 1.7748 | g_loss: 0.5574
Iteration [ 1060/10000] | d_real_loss: 0.6675 | d_Y_loss: 0.9372 | d_X_loss:
0.7801 | d_fake_loss: 1.7173 | g_loss: 0.5515
Iteration [ 1070/10000] | d_real_loss: 0.7012 | d_Y_loss: 0.9724 | d_X_loss:
0.8660 | d_fake_loss: 1.8384 | g_loss: 0.5457
Iteration [ 1080/10000] | d_real_loss: 0.6493 | d_Y_loss: 0.9456 | d_X_loss:
0.7045 | d_fake_loss: 1.6502 | g_loss: 0.5599
Iteration [ 1090/10000] | d_real_loss: 0.6345 | d_Y_loss: 0.9599 | d_X_loss:
0.7392 | d_fake_loss: 1.6990 | g_loss: 0.5606
Iteration [ 1100/10000] | d_real_loss: 0.7008 | d_Y_loss: 0.9138 | d_X_loss:
0.8362 | d_fake_loss: 1.7500 | g_loss: 0.5592
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001100-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001100-
Y-X.png
Iteration [ 1110/10000] | d_real_loss: 0.5981 | d_Y_loss: 0.9288 | d_X_loss:
0.7135 | d_fake_loss: 1.6424 | g_loss: 0.5691
Iteration [ 1120/10000] | d_real_loss: 0.6131 | d_Y_loss: 0.8784 | d_X_loss:
0.6128 | d_fake_loss: 1.4912 | g_loss: 0.5856
Iteration [ 1130/10000] | d_real_loss: 0.6100 | d_Y_loss: 0.9500 | d_X_loss:
0.5738 | d_fake_loss: 1.5238 | g_loss: 0.5607
Iteration [ 1140/10000] | d_real_loss: 0.6081 | d_Y_loss: 0.8384 | d_X_loss:
0.7398 | d_fake_loss: 1.5781 | g_loss: 0.5974
Iteration [ 1150/10000] | d_real_loss: 0.6746 | d_Y_loss: 0.8627 | d_X_loss:
0.7528 | d_fake_loss: 1.6155 | g_loss: 0.5923
Iteration [ 1160/10000] | d_real_loss: 0.6475 | d_Y_loss: 1.0131 | d_X_loss:
0.6656 | d_fake_loss: 1.6787 | g_loss: 0.5613

```

Iteration [1170/10000] | d_real_loss: 0.6154 | d_Y_loss: 0.8570 | d_X_loss: 0.6419 | d_fake_loss: 1.4989 | g_loss: 0.6010
 Iteration [1180/10000] | d_real_loss: 0.6413 | d_Y_loss: 0.9081 | d_X_loss: 0.6113 | d_fake_loss: 1.5194 | g_loss: 0.5888
 Iteration [1190/10000] | d_real_loss: 0.6029 | d_Y_loss: 0.8108 | d_X_loss: 0.6374 | d_fake_loss: 1.4481 | g_loss: 0.6267
 Iteration [1200/10000] | d_real_loss: 0.5594 | d_Y_loss: 0.8942 | d_X_loss: 0.7104 | d_fake_loss: 1.6046 | g_loss: 0.6007
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001200-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001200-Y-X.png
 Iteration [1210/10000] | d_real_loss: 0.6038 | d_Y_loss: 0.9266 | d_X_loss: 0.7867 | d_fake_loss: 1.7132 | g_loss: 0.6125
 Iteration [1220/10000] | d_real_loss: 0.6314 | d_Y_loss: 0.9847 | d_X_loss: 0.6552 | d_fake_loss: 1.6399 | g_loss: 0.6035
 Iteration [1230/10000] | d_real_loss: 0.6641 | d_Y_loss: 0.9235 | d_X_loss: 0.7686 | d_fake_loss: 1.6921 | g_loss: 0.6231
 Iteration [1240/10000] | d_real_loss: 0.6450 | d_Y_loss: 0.9599 | d_X_loss: 0.7893 | d_fake_loss: 1.7493 | g_loss: 0.6321
 Iteration [1250/10000] | d_real_loss: 0.6640 | d_Y_loss: 0.9082 | d_X_loss: 0.7120 | d_fake_loss: 1.6202 | g_loss: 0.6194
 Iteration [1260/10000] | d_real_loss: 0.5869 | d_Y_loss: 0.7933 | d_X_loss: 0.7170 | d_fake_loss: 1.5102 | g_loss: 0.6377
 Iteration [1270/10000] | d_real_loss: 0.6365 | d_Y_loss: 0.8726 | d_X_loss: 0.6816 | d_fake_loss: 1.5542 | g_loss: 0.6230
 Iteration [1280/10000] | d_real_loss: 0.6662 | d_Y_loss: 0.8944 | d_X_loss: 0.6624 | d_fake_loss: 1.5567 | g_loss: 0.6104
 Iteration [1290/10000] | d_real_loss: 0.5891 | d_Y_loss: 0.8089 | d_X_loss: 0.7140 | d_fake_loss: 1.5229 | g_loss: 0.6673
 Iteration [1300/10000] | d_real_loss: 0.6590 | d_Y_loss: 0.8326 | d_X_loss: 0.6710 | d_fake_loss: 1.5036 | g_loss: 0.6642
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001300-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001300-Y-X.png
 Iteration [1310/10000] | d_real_loss: 0.6129 | d_Y_loss: 0.8900 | d_X_loss: 0.7042 | d_fake_loss: 1.5942 | g_loss: 0.6516
 Iteration [1320/10000] | d_real_loss: 0.6772 | d_Y_loss: 0.8642 | d_X_loss: 0.5822 | d_fake_loss: 1.4464 | g_loss: 0.6375
 Iteration [1330/10000] | d_real_loss: 0.5965 | d_Y_loss: 0.8353 | d_X_loss: 0.7324 | d_fake_loss: 1.5677 | g_loss: 0.6544
 Iteration [1340/10000] | d_real_loss: 0.6831 | d_Y_loss: 0.7866 | d_X_loss: 0.7766 | d_fake_loss: 1.5632 | g_loss: 0.6731
 Iteration [1350/10000] | d_real_loss: 0.6336 | d_Y_loss: 0.8337 | d_X_loss: 0.6741 | d_fake_loss: 1.5077 | g_loss: 0.6711
 Iteration [1360/10000] | d_real_loss: 0.6377 | d_Y_loss: 0.8423 | d_X_loss: 0.6752 | d_fake_loss: 1.5174 | g_loss: 0.6603

Iteration [1370/10000] | d_real_loss: 0.5616 | d_Y_loss: 0.7848 | d_X_loss: 0.5545 | d_fake_loss: 1.3393 | g_loss: 0.6732
 Iteration [1380/10000] | d_real_loss: 0.6471 | d_Y_loss: 0.8729 | d_X_loss: 0.6098 | d_fake_loss: 1.4827 | g_loss: 0.6392
 Iteration [1390/10000] | d_real_loss: 0.5551 | d_Y_loss: 0.7594 | d_X_loss: 0.7380 | d_fake_loss: 1.4973 | g_loss: 0.6931
 Iteration [1400/10000] | d_real_loss: 0.5707 | d_Y_loss: 0.9846 | d_X_loss: 0.6562 | d_fake_loss: 1.6408 | g_loss: 0.6413
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001400-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001400-Y-X.png
 Iteration [1410/10000] | d_real_loss: 0.6092 | d_Y_loss: 0.8194 | d_X_loss: 0.5471 | d_fake_loss: 1.3664 | g_loss: 0.6737
 Iteration [1420/10000] | d_real_loss: 0.5582 | d_Y_loss: 0.7722 | d_X_loss: 0.6111 | d_fake_loss: 1.3832 | g_loss: 0.6886
 Iteration [1430/10000] | d_real_loss: 0.6741 | d_Y_loss: 0.9612 | d_X_loss: 0.5404 | d_fake_loss: 1.5015 | g_loss: 0.5741
 Iteration [1440/10000] | d_real_loss: 0.5745 | d_Y_loss: 0.8989 | d_X_loss: 0.8750 | d_fake_loss: 1.7740 | g_loss: 0.6627
 Iteration [1450/10000] | d_real_loss: 0.6353 | d_Y_loss: 0.8896 | d_X_loss: 0.7293 | d_fake_loss: 1.6189 | g_loss: 0.6553
 Iteration [1460/10000] | d_real_loss: 0.5747 | d_Y_loss: 0.8119 | d_X_loss: 0.6145 | d_fake_loss: 1.4264 | g_loss: 0.6764
 Iteration [1470/10000] | d_real_loss: 0.5404 | d_Y_loss: 0.9090 | d_X_loss: 0.7539 | d_fake_loss: 1.6629 | g_loss: 0.6650
 Iteration [1480/10000] | d_real_loss: 0.6070 | d_Y_loss: 0.9019 | d_X_loss: 0.7038 | d_fake_loss: 1.6056 | g_loss: 0.6825
 Iteration [1490/10000] | d_real_loss: 0.5762 | d_Y_loss: 0.7742 | d_X_loss: 0.6065 | d_fake_loss: 1.3806 | g_loss: 0.6831
 Iteration [1500/10000] | d_real_loss: 0.6788 | d_Y_loss: 0.8661 | d_X_loss: 0.7033 | d_fake_loss: 1.5694 | g_loss: 0.6797
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001500-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001500-Y-X.png
 Iteration [1510/10000] | d_real_loss: 0.5400 | d_Y_loss: 0.8097 | d_X_loss: 0.5627 | d_fake_loss: 1.3723 | g_loss: 0.6732
 Iteration [1520/10000] | d_real_loss: 0.5077 | d_Y_loss: 0.6930 | d_X_loss: 0.5534 | d_fake_loss: 1.2464 | g_loss: 0.7444
 Iteration [1530/10000] | d_real_loss: 0.5616 | d_Y_loss: 0.7739 | d_X_loss: 0.5492 | d_fake_loss: 1.3230 | g_loss: 0.7002
 Iteration [1540/10000] | d_real_loss: 0.6029 | d_Y_loss: 0.8368 | d_X_loss: 0.6951 | d_fake_loss: 1.5319 | g_loss: 0.6978
 Iteration [1550/10000] | d_real_loss: 0.5409 | d_Y_loss: 0.7459 | d_X_loss: 0.5272 | d_fake_loss: 1.2731 | g_loss: 0.7130
 Iteration [1560/10000] | d_real_loss: 0.5043 | d_Y_loss: 0.8015 | d_X_loss: 0.5283 | d_fake_loss: 1.3298 | g_loss: 0.6958

Iteration [1570/10000] | d_real_loss: 0.5172 | d_Y_loss: 0.8243 | d_X_loss: 0.5534 | d_fake_loss: 1.3777 | g_loss: 0.6886
 Iteration [1580/10000] | d_real_loss: 0.6387 | d_Y_loss: 0.7604 | d_X_loss: 0.6987 | d_fake_loss: 1.4590 | g_loss: 0.7371
 Iteration [1590/10000] | d_real_loss: 0.5128 | d_Y_loss: 0.7933 | d_X_loss: 0.5572 | d_fake_loss: 1.3505 | g_loss: 0.7301
 Iteration [1600/10000] | d_real_loss: 0.5573 | d_Y_loss: 0.8593 | d_X_loss: 0.4699 | d_fake_loss: 1.3292 | g_loss: 0.7080
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001600-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001600-Y-X.png
 Iteration [1610/10000] | d_real_loss: 0.6190 | d_Y_loss: 0.7616 | d_X_loss: 0.7177 | d_fake_loss: 1.4793 | g_loss: 0.7205
 Iteration [1620/10000] | d_real_loss: 0.5829 | d_Y_loss: 0.9204 | d_X_loss: 0.7227 | d_fake_loss: 1.6431 | g_loss: 0.6695
 Iteration [1630/10000] | d_real_loss: 0.5447 | d_Y_loss: 0.7649 | d_X_loss: 0.5138 | d_fake_loss: 1.2787 | g_loss: 0.7363
 Iteration [1640/10000] | d_real_loss: 0.5110 | d_Y_loss: 0.7343 | d_X_loss: 0.5777 | d_fake_loss: 1.3120 | g_loss: 0.7653
 Iteration [1650/10000] | d_real_loss: 0.5041 | d_Y_loss: 0.8026 | d_X_loss: 0.5153 | d_fake_loss: 1.3179 | g_loss: 0.7269
 Iteration [1660/10000] | d_real_loss: 0.4989 | d_Y_loss: 0.7789 | d_X_loss: 0.7027 | d_fake_loss: 1.4816 | g_loss: 0.7452
 Iteration [1670/10000] | d_real_loss: 0.5728 | d_Y_loss: 0.7097 | d_X_loss: 0.6719 | d_fake_loss: 1.3817 | g_loss: 0.7411
 Iteration [1680/10000] | d_real_loss: 0.5499 | d_Y_loss: 0.7923 | d_X_loss: 0.5902 | d_fake_loss: 1.3825 | g_loss: 0.7186
 Iteration [1690/10000] | d_real_loss: 0.5206 | d_Y_loss: 0.7533 | d_X_loss: 0.6226 | d_fake_loss: 1.3759 | g_loss: 0.7844
 Iteration [1700/10000] | d_real_loss: 0.4995 | d_Y_loss: 0.7484 | d_X_loss: 0.6586 | d_fake_loss: 1.4070 | g_loss: 0.7752
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001700-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001700-Y-X.png
 Iteration [1710/10000] | d_real_loss: 0.5284 | d_Y_loss: 0.8380 | d_X_loss: 0.7188 | d_fake_loss: 1.5567 | g_loss: 0.7783
 Iteration [1720/10000] | d_real_loss: 0.5440 | d_Y_loss: 0.7050 | d_X_loss: 0.6255 | d_fake_loss: 1.3304 | g_loss: 0.7619
 Iteration [1730/10000] | d_real_loss: 0.5477 | d_Y_loss: 0.6596 | d_X_loss: 0.6288 | d_fake_loss: 1.2884 | g_loss: 0.8145
 Iteration [1740/10000] | d_real_loss: 0.6066 | d_Y_loss: 0.6879 | d_X_loss: 0.5113 | d_fake_loss: 1.1991 | g_loss: 0.7829
 Iteration [1750/10000] | d_real_loss: 0.4348 | d_Y_loss: 0.6518 | d_X_loss: 0.7744 | d_fake_loss: 1.4262 | g_loss: 0.7857
 Iteration [1760/10000] | d_real_loss: 0.4328 | d_Y_loss: 0.6493 | d_X_loss: 0.6575 | d_fake_loss: 1.3068 | g_loss: 0.7924

Iteration [1770/10000] | d_real_loss: 0.4061 | d_Y_loss: 0.6406 | d_X_loss: 0.5454 | d_fake_loss: 1.1860 | g_loss: 0.8049
 Iteration [1780/10000] | d_real_loss: 0.4526 | d_Y_loss: 0.6259 | d_X_loss: 0.4964 | d_fake_loss: 1.1223 | g_loss: 0.8237
 Iteration [1790/10000] | d_real_loss: 0.4762 | d_Y_loss: 0.6061 | d_X_loss: 0.5267 | d_fake_loss: 1.1329 | g_loss: 0.8525
 Iteration [1800/10000] | d_real_loss: 0.5212 | d_Y_loss: 0.6045 | d_X_loss: 0.7706 | d_fake_loss: 1.3751 | g_loss: 0.8524
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001800-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001800-Y-X.png
 Iteration [1810/10000] | d_real_loss: 0.4727 | d_Y_loss: 0.5992 | d_X_loss: 0.6860 | d_fake_loss: 1.2852 | g_loss: 0.8609
 Iteration [1820/10000] | d_real_loss: 0.4884 | d_Y_loss: 0.5948 | d_X_loss: 0.5828 | d_fake_loss: 1.1776 | g_loss: 0.8916
 Iteration [1830/10000] | d_real_loss: 0.4148 | d_Y_loss: 0.5539 | d_X_loss: 0.7083 | d_fake_loss: 1.2621 | g_loss: 0.9162
 Iteration [1840/10000] | d_real_loss: 0.4208 | d_Y_loss: 0.5570 | d_X_loss: 0.4611 | d_fake_loss: 1.0182 | g_loss: 0.9180
 Iteration [1850/10000] | d_real_loss: 0.4476 | d_Y_loss: 0.5568 | d_X_loss: 0.5392 | d_fake_loss: 1.0960 | g_loss: 0.9226
 Iteration [1860/10000] | d_real_loss: 0.4575 | d_Y_loss: 0.5338 | d_X_loss: 0.6043 | d_fake_loss: 1.1381 | g_loss: 0.9444
 Iteration [1870/10000] | d_real_loss: 0.4549 | d_Y_loss: 0.5207 | d_X_loss: 0.5238 | d_fake_loss: 1.0445 | g_loss: 0.9598
 Iteration [1880/10000] | d_real_loss: 0.4190 | d_Y_loss: 0.5176 | d_X_loss: 0.4202 | d_fake_loss: 0.9378 | g_loss: 0.9717
 Iteration [1890/10000] | d_real_loss: 0.4068 | d_Y_loss: 0.5144 | d_X_loss: 0.4093 | d_fake_loss: 0.9236 | g_loss: 0.9918
 Iteration [1900/10000] | d_real_loss: 0.4307 | d_Y_loss: 0.5380 | d_X_loss: 0.4535 | d_fake_loss: 0.9916 | g_loss: 0.9909
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001900-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-001900-Y-X.png
 Iteration [1910/10000] | d_real_loss: 0.3667 | d_Y_loss: 0.5073 | d_X_loss: 0.3499 | d_fake_loss: 0.8572 | g_loss: 0.9947
 Iteration [1920/10000] | d_real_loss: 0.3666 | d_Y_loss: 0.5140 | d_X_loss: 0.3430 | d_fake_loss: 0.8571 | g_loss: 1.0096
 Iteration [1930/10000] | d_real_loss: 0.3654 | d_Y_loss: 0.4851 | d_X_loss: 0.4055 | d_fake_loss: 0.8906 | g_loss: 1.0217
 Iteration [1940/10000] | d_real_loss: 0.3730 | d_Y_loss: 0.4790 | d_X_loss: 0.3900 | d_fake_loss: 0.8690 | g_loss: 1.0281
 Iteration [1950/10000] | d_real_loss: 0.6808 | d_Y_loss: 0.6478 | d_X_loss: 0.6491 | d_fake_loss: 1.2969 | g_loss: 1.0040
 Iteration [1960/10000] | d_real_loss: 0.5230 | d_Y_loss: 0.7011 | d_X_loss: 0.5780 | d_fake_loss: 1.2791 | g_loss: 0.9783

Iteration [1970/10000] | d_real_loss: 0.6515 | d_Y_loss: 0.4540 | d_X_loss: 0.5841 | d_fake_loss: 1.0381 | g_loss: 1.0707
 Iteration [1980/10000] | d_real_loss: 0.5415 | d_Y_loss: 1.0546 | d_X_loss: 0.4655 | d_fake_loss: 1.5201 | g_loss: 0.7199
 Iteration [1990/10000] | d_real_loss: 0.4089 | d_Y_loss: 0.7374 | d_X_loss: 0.5173 | d_fake_loss: 1.2546 | g_loss: 0.9617
 Iteration [2000/10000] | d_real_loss: 0.5538 | d_Y_loss: 0.6600 | d_X_loss: 0.6404 | d_fake_loss: 1.3004 | g_loss: 0.9814
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002000-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002000-Y-X.png
 Iteration [2010/10000] | d_real_loss: 0.4309 | d_Y_loss: 0.4803 | d_X_loss: 0.6731 | d_fake_loss: 1.1534 | g_loss: 1.0220
 Iteration [2020/10000] | d_real_loss: 0.4095 | d_Y_loss: 0.4730 | d_X_loss: 0.4161 | d_fake_loss: 0.8891 | g_loss: 1.0318
 Iteration [2030/10000] | d_real_loss: 0.3810 | d_Y_loss: 0.4448 | d_X_loss: 0.4740 | d_fake_loss: 0.9187 | g_loss: 1.0784
 Iteration [2040/10000] | d_real_loss: 0.4191 | d_Y_loss: 0.4467 | d_X_loss: 0.4267 | d_fake_loss: 0.8734 | g_loss: 1.0788
 Iteration [2050/10000] | d_real_loss: 0.3482 | d_Y_loss: 0.4321 | d_X_loss: 0.3615 | d_fake_loss: 0.7936 | g_loss: 1.1041
 Iteration [2060/10000] | d_real_loss: 0.3483 | d_Y_loss: 0.4352 | d_X_loss: 0.4499 | d_fake_loss: 0.8851 | g_loss: 1.1044
 Iteration [2070/10000] | d_real_loss: 0.3723 | d_Y_loss: 0.4239 | d_X_loss: 0.4907 | d_fake_loss: 0.9146 | g_loss: 1.1248
 Iteration [2080/10000] | d_real_loss: 0.3585 | d_Y_loss: 0.4396 | d_X_loss: 0.4409 | d_fake_loss: 0.8804 | g_loss: 1.1087
 Iteration [2090/10000] | d_real_loss: 0.3689 | d_Y_loss: 0.4195 | d_X_loss: 0.3671 | d_fake_loss: 0.7867 | g_loss: 1.1446
 Iteration [2100/10000] | d_real_loss: 0.3559 | d_Y_loss: 0.4196 | d_X_loss: 0.4728 | d_fake_loss: 0.8924 | g_loss: 1.1603
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002100-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002100-Y-X.png
 Iteration [2110/10000] | d_real_loss: 0.3757 | d_Y_loss: 0.4083 | d_X_loss: 0.4481 | d_fake_loss: 0.8564 | g_loss: 1.1729
 Iteration [2120/10000] | d_real_loss: 0.3747 | d_Y_loss: 0.4153 | d_X_loss: 0.4564 | d_fake_loss: 0.8717 | g_loss: 1.1904
 Iteration [2130/10000] | d_real_loss: 0.4393 | d_Y_loss: 0.4338 | d_X_loss: 0.3944 | d_fake_loss: 0.8282 | g_loss: 1.1981
 Iteration [2140/10000] | d_real_loss: 0.4155 | d_Y_loss: 0.4150 | d_X_loss: 0.5625 | d_fake_loss: 0.9775 | g_loss: 1.2340
 Iteration [2150/10000] | d_real_loss: 0.5388 | d_Y_loss: 0.6731 | d_X_loss: 0.5964 | d_fake_loss: 1.2695 | g_loss: 1.1000
 Iteration [2160/10000] | d_real_loss: 0.4744 | d_Y_loss: 0.8073 | d_X_loss: 0.3789 | d_fake_loss: 1.1862 | g_loss: 1.0872

Iteration [2170/10000] | d_real_loss: 0.5095 | d_Y_loss: 0.9781 | d_X_loss: 0.3602 | d_fake_loss: 1.3383 | g_loss: 0.8330
 Iteration [2180/10000] | d_real_loss: 0.4705 | d_Y_loss: 0.6284 | d_X_loss: 0.3128 | d_fake_loss: 0.9412 | g_loss: 1.0467
 Iteration [2190/10000] | d_real_loss: 0.3445 | d_Y_loss: 0.5211 | d_X_loss: 0.3207 | d_fake_loss: 0.8419 | g_loss: 1.1353
 Iteration [2200/10000] | d_real_loss: 0.4536 | d_Y_loss: 0.4414 | d_X_loss: 0.3630 | d_fake_loss: 0.8044 | g_loss: 1.1636
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002200-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002200-Y-X.png
 Iteration [2210/10000] | d_real_loss: 0.4688 | d_Y_loss: 0.9360 | d_X_loss: 0.2824 | d_fake_loss: 1.2184 | g_loss: 0.9310
 Iteration [2220/10000] | d_real_loss: 0.4210 | d_Y_loss: 0.7741 | d_X_loss: 0.2448 | d_fake_loss: 1.0189 | g_loss: 1.0150
 Iteration [2230/10000] | d_real_loss: 0.3376 | d_Y_loss: 0.9284 | d_X_loss: 0.2318 | d_fake_loss: 1.1602 | g_loss: 1.0227
 Iteration [2240/10000] | d_real_loss: 0.3647 | d_Y_loss: 0.8018 | d_X_loss: 0.2291 | d_fake_loss: 1.0309 | g_loss: 0.9944
 Iteration [2250/10000] | d_real_loss: 0.3182 | d_Y_loss: 0.4213 | d_X_loss: 0.2142 | d_fake_loss: 0.6355 | g_loss: 1.1592
 Iteration [2260/10000] | d_real_loss: 0.3176 | d_Y_loss: 0.4226 | d_X_loss: 0.2006 | d_fake_loss: 0.6232 | g_loss: 1.1858
 Iteration [2270/10000] | d_real_loss: 0.2945 | d_Y_loss: 0.7880 | d_X_loss: 0.2218 | d_fake_loss: 1.0098 | g_loss: 1.0857
 Iteration [2280/10000] | d_real_loss: 0.4042 | d_Y_loss: 0.7598 | d_X_loss: 0.2251 | d_fake_loss: 0.9849 | g_loss: 0.9872
 Iteration [2290/10000] | d_real_loss: 0.3461 | d_Y_loss: 0.7437 | d_X_loss: 0.2057 | d_fake_loss: 0.9494 | g_loss: 1.0294
 Iteration [2300/10000] | d_real_loss: 0.3507 | d_Y_loss: 0.4588 | d_X_loss: 0.2434 | d_fake_loss: 0.7023 | g_loss: 1.1684
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002300-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002300-Y-X.png
 Iteration [2310/10000] | d_real_loss: 0.3689 | d_Y_loss: 1.0602 | d_X_loss: 0.2100 | d_fake_loss: 1.2702 | g_loss: 0.8653
 Iteration [2320/10000] | d_real_loss: 0.3469 | d_Y_loss: 0.5048 | d_X_loss: 0.2131 | d_fake_loss: 0.7180 | g_loss: 1.0990
 Iteration [2330/10000] | d_real_loss: 0.3783 | d_Y_loss: 0.6221 | d_X_loss: 0.2045 | d_fake_loss: 0.8265 | g_loss: 1.0724
 Iteration [2340/10000] | d_real_loss: 0.4388 | d_Y_loss: 0.9044 | d_X_loss: 0.2225 | d_fake_loss: 1.1269 | g_loss: 0.9804
 Iteration [2350/10000] | d_real_loss: 0.4065 | d_Y_loss: 0.5365 | d_X_loss: 0.2187 | d_fake_loss: 0.7553 | g_loss: 1.0452
 Iteration [2360/10000] | d_real_loss: 0.3244 | d_Y_loss: 0.4590 | d_X_loss: 0.1826 | d_fake_loss: 0.6417 | g_loss: 1.2015

Iteration [2370/10000] | d_real_loss: 0.4393 | d_Y_loss: 0.6412 | d_X_loss: 0.2869 | d_fake_loss: 0.9281 | g_loss: 1.1353
 Iteration [2380/10000] | d_real_loss: 0.3496 | d_Y_loss: 0.7208 | d_X_loss: 0.3286 | d_fake_loss: 1.0494 | g_loss: 1.0302
 Iteration [2390/10000] | d_real_loss: 0.3592 | d_Y_loss: 0.6029 | d_X_loss: 0.2789 | d_fake_loss: 0.8818 | g_loss: 1.0868
 Iteration [2400/10000] | d_real_loss: 0.3709 | d_Y_loss: 0.4649 | d_X_loss: 0.3698 | d_fake_loss: 0.8347 | g_loss: 1.1584
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002400-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002400-Y-X.png
 Iteration [2410/10000] | d_real_loss: 0.3295 | d_Y_loss: 0.5304 | d_X_loss: 0.2362 | d_fake_loss: 0.7667 | g_loss: 1.1164
 Iteration [2420/10000] | d_real_loss: 0.3208 | d_Y_loss: 0.3943 | d_X_loss: 0.3408 | d_fake_loss: 0.7351 | g_loss: 1.2386
 Iteration [2430/10000] | d_real_loss: 0.2431 | d_Y_loss: 0.3857 | d_X_loss: 0.2207 | d_fake_loss: 0.6064 | g_loss: 1.2112
 Iteration [2440/10000] | d_real_loss: 0.2428 | d_Y_loss: 0.3840 | d_X_loss: 0.4266 | d_fake_loss: 0.8106 | g_loss: 1.2138
 Iteration [2450/10000] | d_real_loss: 0.2456 | d_Y_loss: 0.3472 | d_X_loss: 0.4025 | d_fake_loss: 0.7497 | g_loss: 1.2915
 Iteration [2460/10000] | d_real_loss: 0.3321 | d_Y_loss: 0.3135 | d_X_loss: 0.2910 | d_fake_loss: 0.6045 | g_loss: 1.3648
 Iteration [2470/10000] | d_real_loss: 0.2986 | d_Y_loss: 0.3318 | d_X_loss: 0.2403 | d_fake_loss: 0.5721 | g_loss: 1.3316
 Iteration [2480/10000] | d_real_loss: 0.2339 | d_Y_loss: 0.3428 | d_X_loss: 0.2765 | d_fake_loss: 0.6193 | g_loss: 1.3135
 Iteration [2490/10000] | d_real_loss: 0.2429 | d_Y_loss: 0.3329 | d_X_loss: 0.2842 | d_fake_loss: 0.6171 | g_loss: 1.3587
 Iteration [2500/10000] | d_real_loss: 0.2763 | d_Y_loss: 0.3147 | d_X_loss: 0.4160 | d_fake_loss: 0.7307 | g_loss: 1.3965
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002500-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002500-Y-X.png
 Iteration [2510/10000] | d_real_loss: 0.2955 | d_Y_loss: 0.2965 | d_X_loss: 0.2569 | d_fake_loss: 0.5534 | g_loss: 1.4239
 Iteration [2520/10000] | d_real_loss: 0.3130 | d_Y_loss: 0.3163 | d_X_loss: 0.3436 | d_fake_loss: 0.6599 | g_loss: 1.4095
 Iteration [2530/10000] | d_real_loss: 0.2283 | d_Y_loss: 0.2857 | d_X_loss: 0.2003 | d_fake_loss: 0.4861 | g_loss: 1.4743
 Iteration [2540/10000] | d_real_loss: 0.2187 | d_Y_loss: 0.2992 | d_X_loss: 0.1664 | d_fake_loss: 0.4656 | g_loss: 1.4497
 Iteration [2550/10000] | d_real_loss: 0.2024 | d_Y_loss: 0.2979 | d_X_loss: 0.1521 | d_fake_loss: 0.4500 | g_loss: 1.4641
 Iteration [2560/10000] | d_real_loss: 0.2255 | d_Y_loss: 0.3045 | d_X_loss: 0.1486 | d_fake_loss: 0.4531 | g_loss: 1.4945

```

Iteration [ 2570/10000] | d_real_loss: 0.3267 | d_Y_loss: 0.2707 | d_X_loss:
0.1461 | d_fake_loss: 0.4169 | g_loss: 1.5278
Iteration [ 2580/10000] | d_real_loss: 0.1889 | d_Y_loss: 0.2766 | d_X_loss:
0.1455 | d_fake_loss: 0.4221 | g_loss: 1.5322
Iteration [ 2590/10000] | d_real_loss: 0.2132 | d_Y_loss: 0.2557 | d_X_loss:
0.1434 | d_fake_loss: 0.3991 | g_loss: 1.5782
Iteration [ 2600/10000] | d_real_loss: 0.1946 | d_Y_loss: 0.2528 | d_X_loss:
0.1409 | d_fake_loss: 0.3937 | g_loss: 1.5938
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002600-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002600-
Y-X.png
Iteration [ 2610/10000] | d_real_loss: 0.1934 | d_Y_loss: 0.2176 | d_X_loss:
0.1490 | d_fake_loss: 0.3666 | g_loss: 1.6916
Iteration [ 2620/10000] | d_real_loss: 0.1832 | d_Y_loss: 0.2251 | d_X_loss:
0.1792 | d_fake_loss: 0.4043 | g_loss: 1.6640
Iteration [ 2630/10000] | d_real_loss: 0.1722 | d_Y_loss: 0.2289 | d_X_loss:
0.1565 | d_fake_loss: 0.3854 | g_loss: 1.6612
Iteration [ 2640/10000] | d_real_loss: 0.1900 | d_Y_loss: 0.2292 | d_X_loss:
0.2275 | d_fake_loss: 0.4567 | g_loss: 1.6699
Iteration [ 2650/10000] | d_real_loss: 0.1997 | d_Y_loss: 0.2034 | d_X_loss:
0.2090 | d_fake_loss: 0.4123 | g_loss: 1.7515
Iteration [ 2660/10000] | d_real_loss: 0.1835 | d_Y_loss: 0.2320 | d_X_loss:
0.1994 | d_fake_loss: 0.4315 | g_loss: 1.6614
Iteration [ 2670/10000] | d_real_loss: 0.2232 | d_Y_loss: 0.2002 | d_X_loss:
0.2024 | d_fake_loss: 0.4026 | g_loss: 1.7653
Iteration [ 2680/10000] | d_real_loss: 0.2255 | d_Y_loss: 0.3553 | d_X_loss:
0.1539 | d_fake_loss: 0.5092 | g_loss: 1.7202
Iteration [ 2690/10000] | d_real_loss: 0.2665 | d_Y_loss: 0.3173 | d_X_loss:
0.2723 | d_fake_loss: 0.5895 | g_loss: 1.6657
Iteration [ 2700/10000] | d_real_loss: 0.3208 | d_Y_loss: 0.4675 | d_X_loss:
0.7738 | d_fake_loss: 1.2413 | g_loss: 1.4512
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002700-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002700-
Y-X.png
Iteration [ 2710/10000] | d_real_loss: 0.2788 | d_Y_loss: 0.3167 | d_X_loss:
0.5928 | d_fake_loss: 0.9095 | g_loss: 1.5808
Iteration [ 2720/10000] | d_real_loss: 0.6310 | d_Y_loss: 0.5391 | d_X_loss:
0.4216 | d_fake_loss: 0.9606 | g_loss: 1.5389
Iteration [ 2730/10000] | d_real_loss: 0.3842 | d_Y_loss: 0.8673 | d_X_loss:
0.2850 | d_fake_loss: 1.1523 | g_loss: 1.0549
Iteration [ 2740/10000] | d_real_loss: 0.4142 | d_Y_loss: 0.9120 | d_X_loss:
0.4907 | d_fake_loss: 1.4027 | g_loss: 1.1250
Iteration [ 2750/10000] | d_real_loss: 0.4354 | d_Y_loss: 0.6907 | d_X_loss:
0.2380 | d_fake_loss: 0.9288 | g_loss: 1.3087
Iteration [ 2760/10000] | d_real_loss: 0.4832 | d_Y_loss: 0.8922 | d_X_loss:
0.6411 | d_fake_loss: 1.5332 | g_loss: 1.0965

```

```

Iteration [ 2770/10000] | d_real_loss: 0.3933 | d_Y_loss: 0.6576 | d_X_loss:
0.4730 | d_fake_loss: 1.1306 | g_loss: 1.4437
Iteration [ 2780/10000] | d_real_loss: 0.3782 | d_Y_loss: 0.5229 | d_X_loss:
0.2985 | d_fake_loss: 0.8214 | g_loss: 1.4050
Iteration [ 2790/10000] | d_real_loss: 0.3785 | d_Y_loss: 0.6633 | d_X_loss:
0.4321 | d_fake_loss: 1.0954 | g_loss: 1.3063
Iteration [ 2800/10000] | d_real_loss: 0.4507 | d_Y_loss: 0.7655 | d_X_loss:
0.4783 | d_fake_loss: 1.2438 | g_loss: 1.2078
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002800-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002800-
Y-X.png
Iteration [ 2810/10000] | d_real_loss: 0.5312 | d_Y_loss: 0.7495 | d_X_loss:
0.4379 | d_fake_loss: 1.1874 | g_loss: 1.3291
Iteration [ 2820/10000] | d_real_loss: 0.3533 | d_Y_loss: 0.6179 | d_X_loss:
0.8310 | d_fake_loss: 1.4489 | g_loss: 1.4353
Iteration [ 2830/10000] | d_real_loss: 0.6095 | d_Y_loss: 0.4366 | d_X_loss:
1.0620 | d_fake_loss: 1.4986 | g_loss: 1.3150
Iteration [ 2840/10000] | d_real_loss: 0.3428 | d_Y_loss: 0.7126 | d_X_loss:
0.4790 | d_fake_loss: 1.1916 | g_loss: 1.2229
Iteration [ 2850/10000] | d_real_loss: 0.4271 | d_Y_loss: 0.6390 | d_X_loss:
0.5715 | d_fake_loss: 1.2106 | g_loss: 1.3370
Iteration [ 2860/10000] | d_real_loss: 0.3157 | d_Y_loss: 0.4229 | d_X_loss:
0.2579 | d_fake_loss: 0.6808 | g_loss: 1.3927
Iteration [ 2870/10000] | d_real_loss: 0.3419 | d_Y_loss: 0.3249 | d_X_loss:
0.4740 | d_fake_loss: 0.7989 | g_loss: 1.4663
Iteration [ 2880/10000] | d_real_loss: 0.2490 | d_Y_loss: 0.3482 | d_X_loss:
0.4477 | d_fake_loss: 0.7959 | g_loss: 1.4105
Iteration [ 2890/10000] | d_real_loss: 0.2412 | d_Y_loss: 0.6016 | d_X_loss:
0.1737 | d_fake_loss: 0.7753 | g_loss: 1.4416
Iteration [ 2900/10000] | d_real_loss: 0.2494 | d_Y_loss: 0.3106 | d_X_loss:
0.1380 | d_fake_loss: 0.4485 | g_loss: 1.5053
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002900-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-002900-
Y-X.png
Iteration [ 2910/10000] | d_real_loss: 0.1685 | d_Y_loss: 0.2867 | d_X_loss:
0.1367 | d_fake_loss: 0.4234 | g_loss: 1.6227
Iteration [ 2920/10000] | d_real_loss: 0.2504 | d_Y_loss: 0.6465 | d_X_loss:
0.2816 | d_fake_loss: 0.9280 | g_loss: 1.4061
Iteration [ 2930/10000] | d_real_loss: 0.2850 | d_Y_loss: 0.6348 | d_X_loss:
0.3291 | d_fake_loss: 0.9639 | g_loss: 1.3975
Iteration [ 2940/10000] | d_real_loss: 0.3282 | d_Y_loss: 0.3573 | d_X_loss:
0.2394 | d_fake_loss: 0.5967 | g_loss: 1.4834
Iteration [ 2950/10000] | d_real_loss: 0.3348 | d_Y_loss: 0.3662 | d_X_loss:
0.5103 | d_fake_loss: 0.8764 | g_loss: 1.5394
Iteration [ 2960/10000] | d_real_loss: 0.2368 | d_Y_loss: 0.5257 | d_X_loss:
0.6076 | d_fake_loss: 1.1333 | g_loss: 1.5187

```

Iteration [2970/10000] | d_real_loss: 0.3054 | d_Y_loss: 0.3620 | d_X_loss: 0.3820 | d_fake_loss: 0.7440 | g_loss: 1.6290
 Iteration [2980/10000] | d_real_loss: 0.2872 | d_Y_loss: 0.4406 | d_X_loss: 0.3162 | d_fake_loss: 0.7568 | g_loss: 1.6015
 Iteration [2990/10000] | d_real_loss: 0.3504 | d_Y_loss: 0.6411 | d_X_loss: 0.5003 | d_fake_loss: 1.1414 | g_loss: 1.3375
 Iteration [3000/10000] | d_real_loss: 0.5024 | d_Y_loss: 0.5132 | d_X_loss: 0.4313 | d_fake_loss: 0.9445 | g_loss: 1.4441
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003000-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003000-Y-X.png
 Iteration [3010/10000] | d_real_loss: 0.3585 | d_Y_loss: 0.3895 | d_X_loss: 0.2508 | d_fake_loss: 0.6402 | g_loss: 1.4813
 Iteration [3020/10000] | d_real_loss: 0.3356 | d_Y_loss: 0.5963 | d_X_loss: 1.0877 | d_fake_loss: 1.6839 | g_loss: 1.4569
 Iteration [3030/10000] | d_real_loss: 0.3927 | d_Y_loss: 0.3587 | d_X_loss: 0.4488 | d_fake_loss: 0.8075 | g_loss: 1.4580
 Iteration [3040/10000] | d_real_loss: 0.4869 | d_Y_loss: 0.6722 | d_X_loss: 0.5224 | d_fake_loss: 1.1946 | g_loss: 1.3625
 Iteration [3050/10000] | d_real_loss: 0.3889 | d_Y_loss: 0.5261 | d_X_loss: 0.5014 | d_fake_loss: 1.0275 | g_loss: 1.4578
 Iteration [3060/10000] | d_real_loss: 0.4106 | d_Y_loss: 0.5313 | d_X_loss: 0.3456 | d_fake_loss: 0.8769 | g_loss: 1.4455
 Iteration [3070/10000] | d_real_loss: 0.3063 | d_Y_loss: 0.3552 | d_X_loss: 0.3730 | d_fake_loss: 0.7282 | g_loss: 1.4861
 Iteration [3080/10000] | d_real_loss: 0.2928 | d_Y_loss: 0.4627 | d_X_loss: 0.2940 | d_fake_loss: 0.7567 | g_loss: 1.5321
 Iteration [3090/10000] | d_real_loss: 0.3462 | d_Y_loss: 0.3567 | d_X_loss: 0.2395 | d_fake_loss: 0.5962 | g_loss: 1.5166
 Iteration [3100/10000] | d_real_loss: 0.3309 | d_Y_loss: 0.8022 | d_X_loss: 0.2265 | d_fake_loss: 1.0287 | g_loss: 1.2553
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003100-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003100-Y-X.png
 Iteration [3110/10000] | d_real_loss: 0.2754 | d_Y_loss: 0.4734 | d_X_loss: 0.3771 | d_fake_loss: 0.8505 | g_loss: 1.5041
 Iteration [3120/10000] | d_real_loss: 0.4981 | d_Y_loss: 0.5492 | d_X_loss: 0.4259 | d_fake_loss: 0.9751 | g_loss: 1.5217
 Iteration [3130/10000] | d_real_loss: 0.2782 | d_Y_loss: 0.5048 | d_X_loss: 0.3823 | d_fake_loss: 0.8871 | g_loss: 1.5208
 Iteration [3140/10000] | d_real_loss: 0.3105 | d_Y_loss: 0.4649 | d_X_loss: 0.2458 | d_fake_loss: 0.7107 | g_loss: 1.4526
 Iteration [3150/10000] | d_real_loss: 0.2010 | d_Y_loss: 0.3935 | d_X_loss: 0.1495 | d_fake_loss: 0.5430 | g_loss: 1.5109
 Iteration [3160/10000] | d_real_loss: 0.3344 | d_Y_loss: 0.3655 | d_X_loss: 0.1955 | d_fake_loss: 0.5609 | g_loss: 1.5209

Iteration [3170/10000] | d_real_loss: 0.3374 | d_Y_loss: 0.4324 | d_X_loss: 0.1523 | d_fake_loss: 0.5847 | g_loss: 1.5521
 Iteration [3180/10000] | d_real_loss: 0.2801 | d_Y_loss: 0.4818 | d_X_loss: 0.1768 | d_fake_loss: 0.6586 | g_loss: 1.4754
 Iteration [3190/10000] | d_real_loss: 0.3350 | d_Y_loss: 0.5781 | d_X_loss: 0.3044 | d_fake_loss: 0.8825 | g_loss: 1.4921
 Iteration [3200/10000] | d_real_loss: 0.3499 | d_Y_loss: 0.4997 | d_X_loss: 0.2078 | d_fake_loss: 0.7074 | g_loss: 1.5114
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003200-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003200-Y-X.png
 Iteration [3210/10000] | d_real_loss: 0.3129 | d_Y_loss: 0.2691 | d_X_loss: 0.2215 | d_fake_loss: 0.4906 | g_loss: 1.5702
 Iteration [3220/10000] | d_real_loss: 0.3913 | d_Y_loss: 0.5920 | d_X_loss: 0.3059 | d_fake_loss: 0.8979 | g_loss: 1.5193
 Iteration [3230/10000] | d_real_loss: 0.1713 | d_Y_loss: 0.4104 | d_X_loss: 0.2418 | d_fake_loss: 0.6523 | g_loss: 1.4764
 Iteration [3240/10000] | d_real_loss: 0.4537 | d_Y_loss: 0.5889 | d_X_loss: 0.3761 | d_fake_loss: 0.9650 | g_loss: 1.5353
 Iteration [3250/10000] | d_real_loss: 0.3356 | d_Y_loss: 0.2718 | d_X_loss: 0.2558 | d_fake_loss: 0.5276 | g_loss: 1.6674
 Iteration [3260/10000] | d_real_loss: 0.3568 | d_Y_loss: 0.3669 | d_X_loss: 0.5331 | d_fake_loss: 0.9000 | g_loss: 1.6257
 Iteration [3270/10000] | d_real_loss: 0.3340 | d_Y_loss: 0.5222 | d_X_loss: 0.5410 | d_fake_loss: 1.0632 | g_loss: 1.4439
 Iteration [3280/10000] | d_real_loss: 0.3866 | d_Y_loss: 0.5265 | d_X_loss: 0.3585 | d_fake_loss: 0.8850 | g_loss: 1.5737
 Iteration [3290/10000] | d_real_loss: 0.3387 | d_Y_loss: 0.4358 | d_X_loss: 0.3236 | d_fake_loss: 0.7594 | g_loss: 1.5665
 Iteration [3300/10000] | d_real_loss: 0.3336 | d_Y_loss: 0.6576 | d_X_loss: 0.2367 | d_fake_loss: 0.8943 | g_loss: 1.5608
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003300-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003300-Y-X.png
 Iteration [3310/10000] | d_real_loss: 0.2917 | d_Y_loss: 0.3435 | d_X_loss: 0.1925 | d_fake_loss: 0.5359 | g_loss: 1.6102
 Iteration [3320/10000] | d_real_loss: 0.1885 | d_Y_loss: 0.5090 | d_X_loss: 0.1308 | d_fake_loss: 0.6398 | g_loss: 1.6940
 Iteration [3330/10000] | d_real_loss: 0.2400 | d_Y_loss: 0.6367 | d_X_loss: 0.1360 | d_fake_loss: 0.7727 | g_loss: 1.5701
 Iteration [3340/10000] | d_real_loss: 0.2938 | d_Y_loss: 0.3381 | d_X_loss: 0.1507 | d_fake_loss: 0.4888 | g_loss: 1.6431
 Iteration [3350/10000] | d_real_loss: 0.3048 | d_Y_loss: 0.4369 | d_X_loss: 0.1699 | d_fake_loss: 0.6068 | g_loss: 1.6474
 Iteration [3360/10000] | d_real_loss: 0.2320 | d_Y_loss: 0.5035 | d_X_loss: 0.2030 | d_fake_loss: 0.7065 | g_loss: 1.6290

```

Iteration [ 3370/10000] | d_real_loss: 0.2831 | d_Y_loss: 0.6306 | d_X_loss:
0.2754 | d_fake_loss: 0.9061 | g_loss: 1.5804
Iteration [ 3380/10000] | d_real_loss: 0.2924 | d_Y_loss: 0.3864 | d_X_loss:
0.2318 | d_fake_loss: 0.6182 | g_loss: 1.4738
Iteration [ 3390/10000] | d_real_loss: 0.2655 | d_Y_loss: 0.2561 | d_X_loss:
0.1658 | d_fake_loss: 0.4218 | g_loss: 1.6465
Iteration [ 3400/10000] | d_real_loss: 0.2176 | d_Y_loss: 0.4969 | d_X_loss:
0.1591 | d_fake_loss: 0.6560 | g_loss: 1.6900
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003400-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003400-
Y-X.png
Iteration [ 3410/10000] | d_real_loss: 0.1937 | d_Y_loss: 0.4276 | d_X_loss:
0.1704 | d_fake_loss: 0.5980 | g_loss: 1.6791
Iteration [ 3420/10000] | d_real_loss: 0.2012 | d_Y_loss: 0.4012 | d_X_loss:
0.1615 | d_fake_loss: 0.5627 | g_loss: 1.6135
Iteration [ 3430/10000] | d_real_loss: 0.2315 | d_Y_loss: 0.3376 | d_X_loss:
0.1567 | d_fake_loss: 0.4943 | g_loss: 1.5836
Iteration [ 3440/10000] | d_real_loss: 0.2464 | d_Y_loss: 0.2694 | d_X_loss:
0.1361 | d_fake_loss: 0.4056 | g_loss: 1.6379
Iteration [ 3450/10000] | d_real_loss: 0.3247 | d_Y_loss: 0.3225 | d_X_loss:
0.3194 | d_fake_loss: 0.6420 | g_loss: 1.6374
Iteration [ 3460/10000] | d_real_loss: 0.1940 | d_Y_loss: 0.5115 | d_X_loss:
0.1868 | d_fake_loss: 0.6983 | g_loss: 1.7491
Iteration [ 3470/10000] | d_real_loss: 0.2756 | d_Y_loss: 0.4412 | d_X_loss:
0.2242 | d_fake_loss: 0.6654 | g_loss: 1.6660
Iteration [ 3480/10000] | d_real_loss: 0.1892 | d_Y_loss: 0.4690 | d_X_loss:
0.1271 | d_fake_loss: 0.5962 | g_loss: 1.4931
Iteration [ 3490/10000] | d_real_loss: 0.2189 | d_Y_loss: 0.5040 | d_X_loss:
0.2538 | d_fake_loss: 0.7578 | g_loss: 1.7195
Iteration [ 3500/10000] | d_real_loss: 0.2076 | d_Y_loss: 0.2216 | d_X_loss:
0.5554 | d_fake_loss: 0.7770 | g_loss: 1.7505
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003500-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003500-
Y-X.png
Iteration [ 3510/10000] | d_real_loss: 0.3340 | d_Y_loss: 0.4200 | d_X_loss:
0.4418 | d_fake_loss: 0.8618 | g_loss: 1.6588
Iteration [ 3520/10000] | d_real_loss: 0.1624 | d_Y_loss: 0.2832 | d_X_loss:
0.1165 | d_fake_loss: 0.3996 | g_loss: 1.8343
Iteration [ 3530/10000] | d_real_loss: 0.9391 | d_Y_loss: 0.4569 | d_X_loss:
0.3891 | d_fake_loss: 0.8460 | g_loss: 1.3407
Iteration [ 3540/10000] | d_real_loss: 0.4503 | d_Y_loss: 0.7002 | d_X_loss:
0.1838 | d_fake_loss: 0.8840 | g_loss: 1.3918
Iteration [ 3550/10000] | d_real_loss: 0.2870 | d_Y_loss: 0.4301 | d_X_loss:
0.3169 | d_fake_loss: 0.7470 | g_loss: 1.6165
Iteration [ 3560/10000] | d_real_loss: 0.2948 | d_Y_loss: 0.3947 | d_X_loss:
0.1042 | d_fake_loss: 0.4989 | g_loss: 1.6085

```

Iteration [3570/10000] | d_real_loss: 0.1546 | d_Y_loss: 0.2918 | d_X_loss: 0.1455 | d_fake_loss: 0.4374 | g_loss: 1.6905
 Iteration [3580/10000] | d_real_loss: 0.2626 | d_Y_loss: 0.3743 | d_X_loss: 0.1737 | d_fake_loss: 0.5480 | g_loss: 1.6801
 Iteration [3590/10000] | d_real_loss: 0.2985 | d_Y_loss: 0.2806 | d_X_loss: 0.2152 | d_fake_loss: 0.4958 | g_loss: 1.7691
 Iteration [3600/10000] | d_real_loss: 0.2538 | d_Y_loss: 0.2437 | d_X_loss: 0.1491 | d_fake_loss: 0.3928 | g_loss: 1.7786
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003600-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003600-Y-X.png
 Iteration [3610/10000] | d_real_loss: 0.1612 | d_Y_loss: 0.3917 | d_X_loss: 0.1720 | d_fake_loss: 0.5636 | g_loss: 1.7944
 Iteration [3620/10000] | d_real_loss: 0.1909 | d_Y_loss: 0.3340 | d_X_loss: 0.0977 | d_fake_loss: 0.4317 | g_loss: 1.9238
 Iteration [3630/10000] | d_real_loss: 0.3000 | d_Y_loss: 0.5936 | d_X_loss: 0.0824 | d_fake_loss: 0.6760 | g_loss: 1.5317
 Iteration [3640/10000] | d_real_loss: 0.1504 | d_Y_loss: 0.3278 | d_X_loss: 0.0704 | d_fake_loss: 0.3982 | g_loss: 1.7605
 Iteration [3650/10000] | d_real_loss: 0.2140 | d_Y_loss: 0.4489 | d_X_loss: 0.1124 | d_fake_loss: 0.5613 | g_loss: 1.6887
 Iteration [3660/10000] | d_real_loss: 0.2106 | d_Y_loss: 0.2697 | d_X_loss: 0.1666 | d_fake_loss: 0.4363 | g_loss: 1.8488
 Iteration [3670/10000] | d_real_loss: 0.1961 | d_Y_loss: 0.4498 | d_X_loss: 0.1560 | d_fake_loss: 0.6058 | g_loss: 1.8089
 Iteration [3680/10000] | d_real_loss: 0.1848 | d_Y_loss: 0.3832 | d_X_loss: 0.1975 | d_fake_loss: 0.5807 | g_loss: 1.7693
 Iteration [3690/10000] | d_real_loss: 0.2744 | d_Y_loss: 0.6015 | d_X_loss: 0.1540 | d_fake_loss: 0.7555 | g_loss: 1.5555
 Iteration [3700/10000] | d_real_loss: 0.3397 | d_Y_loss: 0.4567 | d_X_loss: 0.1596 | d_fake_loss: 0.6163 | g_loss: 1.5626
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003700-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003700-Y-X.png
 Iteration [3710/10000] | d_real_loss: 0.2814 | d_Y_loss: 0.2932 | d_X_loss: 0.1456 | d_fake_loss: 0.4389 | g_loss: 1.7529
 Iteration [3720/10000] | d_real_loss: 0.3692 | d_Y_loss: 0.2264 | d_X_loss: 0.5849 | d_fake_loss: 0.8113 | g_loss: 1.9370
 Iteration [3730/10000] | d_real_loss: 0.6509 | d_Y_loss: 0.7381 | d_X_loss: 0.8998 | d_fake_loss: 1.6379 | g_loss: 1.4454
 Iteration [3740/10000] | d_real_loss: 0.7044 | d_Y_loss: 0.4585 | d_X_loss: 0.9460 | d_fake_loss: 1.4046 | g_loss: 1.4993
 Iteration [3750/10000] | d_real_loss: 0.5747 | d_Y_loss: 0.4109 | d_X_loss: 0.9297 | d_fake_loss: 1.3406 | g_loss: 1.6986
 Iteration [3760/10000] | d_real_loss: 0.5867 | d_Y_loss: 0.3512 | d_X_loss: 0.9047 | d_fake_loss: 1.2559 | g_loss: 1.6495

Iteration [3770/10000] | d_real_loss: 0.4235 | d_Y_loss: 0.4118 | d_X_loss: 0.7479 | d_fake_loss: 1.1597 | g_loss: 1.8110
 Iteration [3780/10000] | d_real_loss: 0.4681 | d_Y_loss: 0.5194 | d_X_loss: 0.7289 | d_fake_loss: 1.2483 | g_loss: 1.8239
 Iteration [3790/10000] | d_real_loss: 0.5227 | d_Y_loss: 0.3289 | d_X_loss: 0.8706 | d_fake_loss: 1.1995 | g_loss: 1.7556
 Iteration [3800/10000] | d_real_loss: 0.3507 | d_Y_loss: 0.2742 | d_X_loss: 0.3104 | d_fake_loss: 0.5846 | g_loss: 1.8688
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003800-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003800-Y-X.png
 Iteration [3810/10000] | d_real_loss: 0.2447 | d_Y_loss: 0.3402 | d_X_loss: 0.3077 | d_fake_loss: 0.6480 | g_loss: 1.7589
 Iteration [3820/10000] | d_real_loss: 0.2659 | d_Y_loss: 0.3074 | d_X_loss: 0.2476 | d_fake_loss: 0.5550 | g_loss: 1.8837
 Iteration [3830/10000] | d_real_loss: 0.2775 | d_Y_loss: 0.3767 | d_X_loss: 0.3714 | d_fake_loss: 0.7480 | g_loss: 1.7855
 Iteration [3840/10000] | d_real_loss: 0.4039 | d_Y_loss: 0.2761 | d_X_loss: 0.2730 | d_fake_loss: 0.5491 | g_loss: 1.9583
 Iteration [3850/10000] | d_real_loss: 0.2294 | d_Y_loss: 0.2694 | d_X_loss: 0.2236 | d_fake_loss: 0.4929 | g_loss: 1.8930
 Iteration [3860/10000] | d_real_loss: 0.1951 | d_Y_loss: 0.3856 | d_X_loss: 0.2092 | d_fake_loss: 0.5948 | g_loss: 1.8584
 Iteration [3870/10000] | d_real_loss: 0.2485 | d_Y_loss: 0.2494 | d_X_loss: 0.2678 | d_fake_loss: 0.5171 | g_loss: 1.9335
 Iteration [3880/10000] | d_real_loss: 0.3160 | d_Y_loss: 0.3508 | d_X_loss: 0.3298 | d_fake_loss: 0.6806 | g_loss: 1.8585
 Iteration [3890/10000] | d_real_loss: 0.2277 | d_Y_loss: 0.5305 | d_X_loss: 0.4077 | d_fake_loss: 0.9383 | g_loss: 1.9810
 Iteration [3900/10000] | d_real_loss: 0.6850 | d_Y_loss: 0.8294 | d_X_loss: 0.5891 | d_fake_loss: 1.4185 | g_loss: 1.0205
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003900-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-003900-Y-X.png
 Iteration [3910/10000] | d_real_loss: 0.3997 | d_Y_loss: 0.7452 | d_X_loss: 0.4077 | d_fake_loss: 1.1528 | g_loss: 1.2706
 Iteration [3920/10000] | d_real_loss: 0.2109 | d_Y_loss: 0.6242 | d_X_loss: 0.1090 | d_fake_loss: 0.7332 | g_loss: 1.4926
 Iteration [3930/10000] | d_real_loss: 0.3315 | d_Y_loss: 0.5252 | d_X_loss: 0.1467 | d_fake_loss: 0.6719 | g_loss: 1.4948
 Iteration [3940/10000] | d_real_loss: 0.3191 | d_Y_loss: 0.4626 | d_X_loss: 0.1319 | d_fake_loss: 0.5945 | g_loss: 1.7520
 Iteration [3950/10000] | d_real_loss: 0.2598 | d_Y_loss: 0.4336 | d_X_loss: 0.1635 | d_fake_loss: 0.5971 | g_loss: 1.7012
 Iteration [3960/10000] | d_real_loss: 0.1892 | d_Y_loss: 0.5501 | d_X_loss: 0.1475 | d_fake_loss: 0.6976 | g_loss: 1.8880


```

Iteration [ 3970/10000] | d_real_loss: 0.3069 | d_Y_loss: 0.4341 | d_X_loss:
0.1523 | d_fake_loss: 0.5865 | g_loss: 1.7827
Iteration [ 3980/10000] | d_real_loss: 0.2047 | d_Y_loss: 0.3651 | d_X_loss:
0.1846 | d_fake_loss: 0.5498 | g_loss: 1.7085
Iteration [ 3990/10000] | d_real_loss: 0.2430 | d_Y_loss: 0.7122 | d_X_loss:
0.1833 | d_fake_loss: 0.8955 | g_loss: 1.4584
Iteration [ 4000/10000] | d_real_loss: 0.2495 | d_Y_loss: 0.3352 | d_X_loss:
0.1758 | d_fake_loss: 0.5110 | g_loss: 1.8640
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004000-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004000-
Y-X.png
Iteration [ 4010/10000] | d_real_loss: 0.1619 | d_Y_loss: 0.3464 | d_X_loss:
0.1340 | d_fake_loss: 0.4804 | g_loss: 1.7054
Iteration [ 4020/10000] | d_real_loss: 0.1724 | d_Y_loss: 0.5170 | d_X_loss:
0.1364 | d_fake_loss: 0.6534 | g_loss: 1.7305
Iteration [ 4030/10000] | d_real_loss: 0.3746 | d_Y_loss: 0.3980 | d_X_loss:
0.1699 | d_fake_loss: 0.5679 | g_loss: 1.7342
Iteration [ 4040/10000] | d_real_loss: 0.2604 | d_Y_loss: 0.3606 | d_X_loss:
0.1628 | d_fake_loss: 0.5234 | g_loss: 1.7806
Iteration [ 4050/10000] | d_real_loss: 0.1928 | d_Y_loss: 0.5126 | d_X_loss:
0.1963 | d_fake_loss: 0.7088 | g_loss: 1.7933
Iteration [ 4060/10000] | d_real_loss: 0.1845 | d_Y_loss: 0.4013 | d_X_loss:
0.3857 | d_fake_loss: 0.7870 | g_loss: 1.6751
Iteration [ 4070/10000] | d_real_loss: 0.1392 | d_Y_loss: 0.1806 | d_X_loss:
0.1044 | d_fake_loss: 0.2850 | g_loss: 1.9290
Iteration [ 4080/10000] | d_real_loss: 0.1785 | d_Y_loss: 0.3152 | d_X_loss:
0.1570 | d_fake_loss: 0.4722 | g_loss: 1.7738
Iteration [ 4090/10000] | d_real_loss: 0.2797 | d_Y_loss: 0.4240 | d_X_loss:
0.2811 | d_fake_loss: 0.7050 | g_loss: 1.9056
Iteration [ 4100/10000] | d_real_loss: 0.1786 | d_Y_loss: 0.3808 | d_X_loss:
0.3914 | d_fake_loss: 0.7721 | g_loss: 1.8367
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004100-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004100-
Y-X.png
Iteration [ 4110/10000] | d_real_loss: 0.2569 | d_Y_loss: 0.3096 | d_X_loss:
0.2808 | d_fake_loss: 0.5904 | g_loss: 1.9763
Iteration [ 4120/10000] | d_real_loss: 0.2985 | d_Y_loss: 0.2688 | d_X_loss:
0.3018 | d_fake_loss: 0.5706 | g_loss: 1.8652
Iteration [ 4130/10000] | d_real_loss: 0.1881 | d_Y_loss: 0.3435 | d_X_loss:
0.0993 | d_fake_loss: 0.4428 | g_loss: 1.8955
Iteration [ 4140/10000] | d_real_loss: 0.1796 | d_Y_loss: 0.1939 | d_X_loss:
0.1789 | d_fake_loss: 0.3728 | g_loss: 2.0226
Iteration [ 4150/10000] | d_real_loss: 0.2567 | d_Y_loss: 0.5576 | d_X_loss:
0.1063 | d_fake_loss: 0.6639 | g_loss: 1.9182
Iteration [ 4160/10000] | d_real_loss: 0.1782 | d_Y_loss: 0.5256 | d_X_loss:
0.2833 | d_fake_loss: 0.8089 | g_loss: 1.9462

```

```

Iteration [ 4170/10000] | d_real_loss: 0.2612 | d_Y_loss: 0.3282 | d_X_loss:
0.2426 | d_fake_loss: 0.5709 | g_loss: 1.7164
Iteration [ 4180/10000] | d_real_loss: 0.2526 | d_Y_loss: 0.4640 | d_X_loss:
0.1238 | d_fake_loss: 0.5878 | g_loss: 1.9167
Iteration [ 4190/10000] | d_real_loss: 0.2601 | d_Y_loss: 0.2696 | d_X_loss:
0.1061 | d_fake_loss: 0.3757 | g_loss: 2.0172
Iteration [ 4200/10000] | d_real_loss: 0.1985 | d_Y_loss: 0.1746 | d_X_loss:
0.1432 | d_fake_loss: 0.3178 | g_loss: 2.0443
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004200-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004200-
Y-X.png
Iteration [ 4210/10000] | d_real_loss: 0.1966 | d_Y_loss: 0.2229 | d_X_loss:
0.1971 | d_fake_loss: 0.4200 | g_loss: 1.8506
Iteration [ 4220/10000] | d_real_loss: 0.1506 | d_Y_loss: 0.3370 | d_X_loss:
0.0818 | d_fake_loss: 0.4188 | g_loss: 2.0015
Iteration [ 4230/10000] | d_real_loss: 0.1386 | d_Y_loss: 0.2118 | d_X_loss:
0.0668 | d_fake_loss: 0.2786 | g_loss: 1.9967
Iteration [ 4240/10000] | d_real_loss: 0.1733 | d_Y_loss: 0.3237 | d_X_loss:
0.2457 | d_fake_loss: 0.5694 | g_loss: 2.0465
Iteration [ 4250/10000] | d_real_loss: 0.3618 | d_Y_loss: 0.3625 | d_X_loss:
0.4459 | d_fake_loss: 0.8084 | g_loss: 1.8314
Iteration [ 4260/10000] | d_real_loss: 0.5193 | d_Y_loss: 0.3873 | d_X_loss:
0.2913 | d_fake_loss: 0.6785 | g_loss: 1.8436
Iteration [ 4270/10000] | d_real_loss: 0.4725 | d_Y_loss: 0.1951 | d_X_loss:
0.2486 | d_fake_loss: 0.4437 | g_loss: 1.9814
Iteration [ 4280/10000] | d_real_loss: 0.2269 | d_Y_loss: 0.2811 | d_X_loss:
0.5483 | d_fake_loss: 0.8294 | g_loss: 1.9092
Iteration [ 4290/10000] | d_real_loss: 0.1790 | d_Y_loss: 0.2963 | d_X_loss:
0.3190 | d_fake_loss: 0.6154 | g_loss: 1.8670
Iteration [ 4300/10000] | d_real_loss: 0.2131 | d_Y_loss: 0.5475 | d_X_loss:
0.3151 | d_fake_loss: 0.8626 | g_loss: 1.7361
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004300-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004300-
Y-X.png
Iteration [ 4310/10000] | d_real_loss: 0.3048 | d_Y_loss: 0.2301 | d_X_loss:
0.3187 | d_fake_loss: 0.5489 | g_loss: 2.0481
Iteration [ 4320/10000] | d_real_loss: 0.2167 | d_Y_loss: 0.4717 | d_X_loss:
0.2801 | d_fake_loss: 0.7517 | g_loss: 1.8451
Iteration [ 4330/10000] | d_real_loss: 0.1663 | d_Y_loss: 0.3609 | d_X_loss:
0.6162 | d_fake_loss: 0.9771 | g_loss: 2.0936
Iteration [ 4340/10000] | d_real_loss: 0.3518 | d_Y_loss: 0.1471 | d_X_loss:
0.2853 | d_fake_loss: 0.4323 | g_loss: 2.1258
Iteration [ 4350/10000] | d_real_loss: 0.2109 | d_Y_loss: 0.3160 | d_X_loss:
0.1901 | d_fake_loss: 0.5062 | g_loss: 2.1000
Iteration [ 4360/10000] | d_real_loss: 0.3720 | d_Y_loss: 0.2340 | d_X_loss:
0.2335 | d_fake_loss: 0.4676 | g_loss: 2.0673

```

Iteration [4370/10000] | d_real_loss: 0.2325 | d_Y_loss: 0.2813 | d_X_loss: 0.2266 | d_fake_loss: 0.5079 | g_loss: 1.9168
 Iteration [4380/10000] | d_real_loss: 0.2474 | d_Y_loss: 0.5309 | d_X_loss: 0.1314 | d_fake_loss: 0.6623 | g_loss: 1.9962
 Iteration [4390/10000] | d_real_loss: 0.2203 | d_Y_loss: 0.3701 | d_X_loss: 0.2092 | d_fake_loss: 0.5793 | g_loss: 1.9042
 Iteration [4400/10000] | d_real_loss: 0.2034 | d_Y_loss: 0.3282 | d_X_loss: 0.2145 | d_fake_loss: 0.5427 | g_loss: 2.0661
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004400-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004400-Y-X.png
 Iteration [4410/10000] | d_real_loss: 0.3676 | d_Y_loss: 0.4896 | d_X_loss: 0.1309 | d_fake_loss: 0.6205 | g_loss: 1.7340
 Iteration [4420/10000] | d_real_loss: 0.3197 | d_Y_loss: 0.4567 | d_X_loss: 0.3632 | d_fake_loss: 0.8199 | g_loss: 1.8608
 Iteration [4430/10000] | d_real_loss: 0.2443 | d_Y_loss: 0.3892 | d_X_loss: 0.3481 | d_fake_loss: 0.7373 | g_loss: 1.8859
 Iteration [4440/10000] | d_real_loss: 0.2744 | d_Y_loss: 0.4410 | d_X_loss: 0.4597 | d_fake_loss: 0.9007 | g_loss: 1.9299
 Iteration [4450/10000] | d_real_loss: 0.2486 | d_Y_loss: 0.4670 | d_X_loss: 0.3003 | d_fake_loss: 0.7672 | g_loss: 1.9823
 Iteration [4460/10000] | d_real_loss: 0.2411 | d_Y_loss: 0.4411 | d_X_loss: 0.4305 | d_fake_loss: 0.8716 | g_loss: 1.8521
 Iteration [4470/10000] | d_real_loss: 0.2560 | d_Y_loss: 0.2169 | d_X_loss: 0.2499 | d_fake_loss: 0.4667 | g_loss: 1.9749
 Iteration [4480/10000] | d_real_loss: 0.1861 | d_Y_loss: 0.3575 | d_X_loss: 0.2970 | d_fake_loss: 0.6545 | g_loss: 1.9993
 Iteration [4490/10000] | d_real_loss: 0.1547 | d_Y_loss: 0.2840 | d_X_loss: 0.2400 | d_fake_loss: 0.5240 | g_loss: 2.0996
 Iteration [4500/10000] | d_real_loss: 0.1375 | d_Y_loss: 0.2551 | d_X_loss: 0.0933 | d_fake_loss: 0.3484 | g_loss: 2.0380
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004500-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004500-Y-X.png
 Iteration [4510/10000] | d_real_loss: 0.1568 | d_Y_loss: 0.6001 | d_X_loss: 0.1023 | d_fake_loss: 0.7023 | g_loss: 1.9398
 Iteration [4520/10000] | d_real_loss: 0.2470 | d_Y_loss: 0.3135 | d_X_loss: 0.1896 | d_fake_loss: 0.5032 | g_loss: 1.9285
 Iteration [4530/10000] | d_real_loss: 0.1632 | d_Y_loss: 0.4715 | d_X_loss: 0.0921 | d_fake_loss: 0.5636 | g_loss: 2.0659
 Iteration [4540/10000] | d_real_loss: 0.2641 | d_Y_loss: 0.2215 | d_X_loss: 0.1409 | d_fake_loss: 0.3624 | g_loss: 2.0397
 Iteration [4550/10000] | d_real_loss: 0.1316 | d_Y_loss: 0.1956 | d_X_loss: 0.1562 | d_fake_loss: 0.3519 | g_loss: 2.0464
 Iteration [4560/10000] | d_real_loss: 0.2108 | d_Y_loss: 0.2590 | d_X_loss: 0.0947 | d_fake_loss: 0.3538 | g_loss: 2.0315

Iteration [4570/10000] | d_real_loss: 0.1458 | d_Y_loss: 0.3822 | d_X_loss: 0.3547 | d_fake_loss: 0.7369 | g_loss: 2.0805
 Iteration [4580/10000] | d_real_loss: 0.4459 | d_Y_loss: 0.1911 | d_X_loss: 0.5087 | d_fake_loss: 0.6997 | g_loss: 2.0355
 Iteration [4590/10000] | d_real_loss: 0.4074 | d_Y_loss: 0.2127 | d_X_loss: 0.2497 | d_fake_loss: 0.4623 | g_loss: 2.2574
 Iteration [4600/10000] | d_real_loss: 0.2241 | d_Y_loss: 0.1969 | d_X_loss: 0.5256 | d_fake_loss: 0.7225 | g_loss: 2.1365
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004600-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004600-Y-X.png
 Iteration [4610/10000] | d_real_loss: 0.3002 | d_Y_loss: 0.3637 | d_X_loss: 0.2445 | d_fake_loss: 0.6082 | g_loss: 2.0207
 Iteration [4620/10000] | d_real_loss: 0.3255 | d_Y_loss: 0.2421 | d_X_loss: 0.2342 | d_fake_loss: 0.4763 | g_loss: 2.2575
 Iteration [4630/10000] | d_real_loss: 0.1177 | d_Y_loss: 0.1625 | d_X_loss: 0.4209 | d_fake_loss: 0.5834 | g_loss: 2.0252
 Iteration [4640/10000] | d_real_loss: 0.1862 | d_Y_loss: 0.1482 | d_X_loss: 0.2163 | d_fake_loss: 0.3645 | g_loss: 2.1030
 Iteration [4650/10000] | d_real_loss: 0.1353 | d_Y_loss: 0.1331 | d_X_loss: 0.2151 | d_fake_loss: 0.3483 | g_loss: 2.1704
 Iteration [4660/10000] | d_real_loss: 0.1654 | d_Y_loss: 0.1388 | d_X_loss: 0.3192 | d_fake_loss: 0.4581 | g_loss: 2.1406
 Iteration [4670/10000] | d_real_loss: 0.1286 | d_Y_loss: 0.1272 | d_X_loss: 0.2420 | d_fake_loss: 0.3692 | g_loss: 2.2227
 Iteration [4680/10000] | d_real_loss: 0.1189 | d_Y_loss: 0.1095 | d_X_loss: 0.2369 | d_fake_loss: 0.3464 | g_loss: 2.3462
 Iteration [4690/10000] | d_real_loss: 0.0951 | d_Y_loss: 0.1039 | d_X_loss: 0.0922 | d_fake_loss: 0.1960 | g_loss: 2.4143
 Iteration [4700/10000] | d_real_loss: 0.0792 | d_Y_loss: 0.1511 | d_X_loss: 0.1239 | d_fake_loss: 0.2749 | g_loss: 2.2363
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004700-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004700-Y-X.png
 Iteration [4710/10000] | d_real_loss: 0.1064 | d_Y_loss: 0.1161 | d_X_loss: 0.0975 | d_fake_loss: 0.2136 | g_loss: 2.3229
 Iteration [4720/10000] | d_real_loss: 0.1119 | d_Y_loss: 0.0979 | d_X_loss: 0.1632 | d_fake_loss: 0.2611 | g_loss: 2.4491
 Iteration [4730/10000] | d_real_loss: 0.1012 | d_Y_loss: 0.1003 | d_X_loss: 0.0837 | d_fake_loss: 0.1840 | g_loss: 2.4464
 Iteration [4740/10000] | d_real_loss: 0.1022 | d_Y_loss: 0.0939 | d_X_loss: 0.1487 | d_fake_loss: 0.2426 | g_loss: 2.4933
 Iteration [4750/10000] | d_real_loss: 0.2085 | d_Y_loss: 0.0869 | d_X_loss: 0.1654 | d_fake_loss: 0.2523 | g_loss: 2.5548
 Iteration [4760/10000] | d_real_loss: 0.1381 | d_Y_loss: 0.0821 | d_X_loss: 0.1423 | d_fake_loss: 0.2244 | g_loss: 2.6025

Iteration [4770/10000] | d_real_loss: 0.1117 | d_Y_loss: 0.0863 | d_X_loss: 0.0830 | d_fake_loss: 0.1692 | g_loss: 2.5480
 Iteration [4780/10000] | d_real_loss: 0.1277 | d_Y_loss: 0.0929 | d_X_loss: 0.2001 | d_fake_loss: 0.2931 | g_loss: 2.5133
 Iteration [4790/10000] | d_real_loss: 0.2633 | d_Y_loss: 0.0897 | d_X_loss: 0.4926 | d_fake_loss: 0.5823 | g_loss: 2.5301
 Iteration [4800/10000] | d_real_loss: 0.1003 | d_Y_loss: 0.0874 | d_X_loss: 0.1992 | d_fake_loss: 0.2866 | g_loss: 2.5590
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004800-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004800-Y-X.png
 Iteration [4810/10000] | d_real_loss: 0.1329 | d_Y_loss: 0.0859 | d_X_loss: 0.1052 | d_fake_loss: 0.1911 | g_loss: 2.5770
 Iteration [4820/10000] | d_real_loss: 0.1627 | d_Y_loss: 0.0701 | d_X_loss: 0.1916 | d_fake_loss: 0.2617 | g_loss: 2.7483
 Iteration [4830/10000] | d_real_loss: 0.0956 | d_Y_loss: 0.0729 | d_X_loss: 0.2561 | d_fake_loss: 0.3289 | g_loss: 2.7196
 Iteration [4840/10000] | d_real_loss: 0.1218 | d_Y_loss: 0.0866 | d_X_loss: 0.2156 | d_fake_loss: 0.3021 | g_loss: 2.5930
 Iteration [4850/10000] | d_real_loss: 0.1268 | d_Y_loss: 0.0866 | d_X_loss: 0.1786 | d_fake_loss: 0.2652 | g_loss: 2.6092
 Iteration [4860/10000] | d_real_loss: 0.2495 | d_Y_loss: 0.0666 | d_X_loss: 0.5752 | d_fake_loss: 0.6418 | g_loss: 2.8265
 Iteration [4870/10000] | d_real_loss: 0.2067 | d_Y_loss: 0.0718 | d_X_loss: 0.0877 | d_fake_loss: 0.1595 | g_loss: 2.7744
 Iteration [4880/10000] | d_real_loss: 0.1455 | d_Y_loss: 0.0681 | d_X_loss: 0.1634 | d_fake_loss: 0.2314 | g_loss: 2.8052
 Iteration [4890/10000] | d_real_loss: 0.1767 | d_Y_loss: 0.0886 | d_X_loss: 0.1610 | d_fake_loss: 0.2495 | g_loss: 2.5833
 Iteration [4900/10000] | d_real_loss: 0.1179 | d_Y_loss: 0.1126 | d_X_loss: 0.1647 | d_fake_loss: 0.2773 | g_loss: 2.4360
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004900-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-004900-Y-X.png
 Iteration [4910/10000] | d_real_loss: 0.1263 | d_Y_loss: 0.0884 | d_X_loss: 0.1835 | d_fake_loss: 0.2719 | g_loss: 2.6239
 Iteration [4920/10000] | d_real_loss: 0.1343 | d_Y_loss: 0.0802 | d_X_loss: 0.1236 | d_fake_loss: 0.2038 | g_loss: 2.7037
 Iteration [4930/10000] | d_real_loss: 0.0873 | d_Y_loss: 0.0840 | d_X_loss: 0.2229 | d_fake_loss: 0.3069 | g_loss: 2.6672
 Iteration [4940/10000] | d_real_loss: 0.0569 | d_Y_loss: 0.0975 | d_X_loss: 0.0847 | d_fake_loss: 0.1822 | g_loss: 2.5922
 Iteration [4950/10000] | d_real_loss: 0.1066 | d_Y_loss: 0.0770 | d_X_loss: 0.1193 | d_fake_loss: 0.1963 | g_loss: 2.7422
 Iteration [4960/10000] | d_real_loss: 0.1250 | d_Y_loss: 0.0790 | d_X_loss: 0.1092 | d_fake_loss: 0.1882 | g_loss: 2.7115

```

Iteration [ 4970/10000] | d_real_loss: 0.0720 | d_Y_loss: 0.0841 | d_X_loss:
0.0635 | d_fake_loss: 0.1477 | g_loss: 2.6693
Iteration [ 4980/10000] | d_real_loss: 0.0808 | d_Y_loss: 0.0865 | d_X_loss:
0.0980 | d_fake_loss: 0.1845 | g_loss: 2.6913
Iteration [ 4990/10000] | d_real_loss: 0.0603 | d_Y_loss: 0.0623 | d_X_loss:
0.0822 | d_fake_loss: 0.1445 | g_loss: 2.8788
Iteration [ 5000/10000] | d_real_loss: 0.1088 | d_Y_loss: 0.0901 | d_X_loss:
0.0862 | d_fake_loss: 0.1763 | g_loss: 2.6159
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005000-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005000-
Y-X.png
Iteration [ 5010/10000] | d_real_loss: 0.0801 | d_Y_loss: 0.0800 | d_X_loss:
0.1789 | d_fake_loss: 0.2589 | g_loss: 2.6809
Iteration [ 5020/10000] | d_real_loss: 0.0560 | d_Y_loss: 0.0645 | d_X_loss:
0.0705 | d_fake_loss: 0.1350 | g_loss: 2.8382
Iteration [ 5030/10000] | d_real_loss: 0.0608 | d_Y_loss: 0.0696 | d_X_loss:
0.0535 | d_fake_loss: 0.1230 | g_loss: 2.7761
Iteration [ 5040/10000] | d_real_loss: 0.0510 | d_Y_loss: 0.0868 | d_X_loss:
0.0576 | d_fake_loss: 0.1444 | g_loss: 2.6556
Iteration [ 5050/10000] | d_real_loss: 0.0749 | d_Y_loss: 0.0908 | d_X_loss:
0.1032 | d_fake_loss: 0.1940 | g_loss: 2.6307
Iteration [ 5060/10000] | d_real_loss: 0.0668 | d_Y_loss: 0.1346 | d_X_loss:
0.2722 | d_fake_loss: 0.4068 | g_loss: 2.7176
Iteration [ 5070/10000] | d_real_loss: 0.1165 | d_Y_loss: 0.0786 | d_X_loss:
0.1633 | d_fake_loss: 0.2419 | g_loss: 2.8203
Iteration [ 5080/10000] | d_real_loss: 0.2120 | d_Y_loss: 0.0882 | d_X_loss:
0.1018 | d_fake_loss: 0.1901 | g_loss: 2.8075
Iteration [ 5090/10000] | d_real_loss: 0.0905 | d_Y_loss: 0.0749 | d_X_loss:
0.1270 | d_fake_loss: 0.2019 | g_loss: 2.7796
Iteration [ 5100/10000] | d_real_loss: 0.0667 | d_Y_loss: 0.1541 | d_X_loss:
0.0493 | d_fake_loss: 0.2033 | g_loss: 2.9544
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005100-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005100-
Y-X.png
Iteration [ 5110/10000] | d_real_loss: 0.0733 | d_Y_loss: 0.1072 | d_X_loss:
0.0515 | d_fake_loss: 0.1587 | g_loss: 2.7437
Iteration [ 5120/10000] | d_real_loss: 0.0717 | d_Y_loss: 0.1109 | d_X_loss:
0.0432 | d_fake_loss: 0.1541 | g_loss: 2.7665
Iteration [ 5130/10000] | d_real_loss: 0.0896 | d_Y_loss: 0.1331 | d_X_loss:
0.0451 | d_fake_loss: 0.1782 | g_loss: 2.8677
Iteration [ 5140/10000] | d_real_loss: 0.1267 | d_Y_loss: 0.0663 | d_X_loss:
0.0454 | d_fake_loss: 0.1117 | g_loss: 2.8576
Iteration [ 5150/10000] | d_real_loss: 0.0621 | d_Y_loss: 0.1315 | d_X_loss:
0.0364 | d_fake_loss: 0.1679 | g_loss: 2.7164
Iteration [ 5160/10000] | d_real_loss: 0.0745 | d_Y_loss: 0.1363 | d_X_loss:
0.0352 | d_fake_loss: 0.1715 | g_loss: 2.7765

```

```

Iteration [ 5170/10000] | d_real_loss: 0.1181 | d_Y_loss: 0.0877 | d_X_loss:
0.0349 | d_fake_loss: 0.1226 | g_loss: 2.8674
Iteration [ 5180/10000] | d_real_loss: 0.0678 | d_Y_loss: 0.1438 | d_X_loss:
0.0384 | d_fake_loss: 0.1823 | g_loss: 2.8057
Iteration [ 5190/10000] | d_real_loss: 0.1417 | d_Y_loss: 0.1369 | d_X_loss:
0.0421 | d_fake_loss: 0.1790 | g_loss: 2.6608
Iteration [ 5200/10000] | d_real_loss: 0.1381 | d_Y_loss: 0.3090 | d_X_loss:
0.0425 | d_fake_loss: 0.3515 | g_loss: 2.5090
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005200-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005200-
Y-X.png
Iteration [ 5210/10000] | d_real_loss: 0.1336 | d_Y_loss: 0.6233 | d_X_loss:
0.0406 | d_fake_loss: 0.6639 | g_loss: 2.5839
Iteration [ 5220/10000] | d_real_loss: 0.1692 | d_Y_loss: 0.1962 | d_X_loss:
0.0370 | d_fake_loss: 0.2332 | g_loss: 2.6392
Iteration [ 5230/10000] | d_real_loss: 0.1280 | d_Y_loss: 0.3755 | d_X_loss:
0.0363 | d_fake_loss: 0.4118 | g_loss: 2.6145
Iteration [ 5240/10000] | d_real_loss: 0.1044 | d_Y_loss: 0.3244 | d_X_loss:
0.0373 | d_fake_loss: 0.3617 | g_loss: 2.6303
Iteration [ 5250/10000] | d_real_loss: 0.1210 | d_Y_loss: 0.3125 | d_X_loss:
0.0438 | d_fake_loss: 0.3563 | g_loss: 2.5443
Iteration [ 5260/10000] | d_real_loss: 0.1348 | d_Y_loss: 0.2221 | d_X_loss:
0.0377 | d_fake_loss: 0.2598 | g_loss: 2.6151
Iteration [ 5270/10000] | d_real_loss: 0.2913 | d_Y_loss: 0.8873 | d_X_loss:
0.0357 | d_fake_loss: 0.9230 | g_loss: 1.7008
Iteration [ 5280/10000] | d_real_loss: 0.1829 | d_Y_loss: 0.4542 | d_X_loss:
0.0443 | d_fake_loss: 0.4985 | g_loss: 1.8402
Iteration [ 5290/10000] | d_real_loss: 0.2963 | d_Y_loss: 0.6891 | d_X_loss:
0.0388 | d_fake_loss: 0.7279 | g_loss: 1.9402
Iteration [ 5300/10000] | d_real_loss: 0.3667 | d_Y_loss: 0.4132 | d_X_loss:
0.0363 | d_fake_loss: 0.4495 | g_loss: 2.0329
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005300-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005300-
Y-X.png
Iteration [ 5310/10000] | d_real_loss: 0.1847 | d_Y_loss: 0.4094 | d_X_loss:
0.0313 | d_fake_loss: 0.4407 | g_loss: 2.3148
Iteration [ 5320/10000] | d_real_loss: 0.2018 | d_Y_loss: 0.3844 | d_X_loss:
0.0349 | d_fake_loss: 0.4193 | g_loss: 2.0464
Iteration [ 5330/10000] | d_real_loss: 0.2404 | d_Y_loss: 0.2204 | d_X_loss:
0.0449 | d_fake_loss: 0.2653 | g_loss: 2.1383
Iteration [ 5340/10000] | d_real_loss: 0.2066 | d_Y_loss: 0.2188 | d_X_loss:
0.0290 | d_fake_loss: 0.2478 | g_loss: 2.4162
Iteration [ 5350/10000] | d_real_loss: 0.2575 | d_Y_loss: 0.4547 | d_X_loss:
0.0293 | d_fake_loss: 0.4840 | g_loss: 2.3471
Iteration [ 5360/10000] | d_real_loss: 0.0885 | d_Y_loss: 0.2736 | d_X_loss:
0.0315 | d_fake_loss: 0.3050 | g_loss: 2.4292

```

```

Iteration [ 5370/10000] | d_real_loss: 0.1548 | d_Y_loss: 0.2711 | d_X_loss:
0.0318 | d_fake_loss: 0.3028 | g_loss: 2.1993
Iteration [ 5380/10000] | d_real_loss: 0.1433 | d_Y_loss: 0.2065 | d_X_loss:
0.0337 | d_fake_loss: 0.2402 | g_loss: 2.2483
Iteration [ 5390/10000] | d_real_loss: 0.2536 | d_Y_loss: 0.1901 | d_X_loss:
0.0301 | d_fake_loss: 0.2202 | g_loss: 2.4577
Iteration [ 5400/10000] | d_real_loss: 0.1272 | d_Y_loss: 0.1750 | d_X_loss:
0.0304 | d_fake_loss: 0.2054 | g_loss: 2.4745
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005400-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005400-
Y-X.png
Iteration [ 5410/10000] | d_real_loss: 0.0783 | d_Y_loss: 0.3300 | d_X_loss:
0.0273 | d_fake_loss: 0.3573 | g_loss: 2.6130
Iteration [ 5420/10000] | d_real_loss: 0.2053 | d_Y_loss: 0.3262 | d_X_loss:
0.0329 | d_fake_loss: 0.3591 | g_loss: 2.3608
Iteration [ 5430/10000] | d_real_loss: 0.0879 | d_Y_loss: 0.1795 | d_X_loss:
0.0364 | d_fake_loss: 0.2159 | g_loss: 2.5002
Iteration [ 5440/10000] | d_real_loss: 0.1243 | d_Y_loss: 0.1797 | d_X_loss:
0.0281 | d_fake_loss: 0.2079 | g_loss: 2.2194
Iteration [ 5450/10000] | d_real_loss: 0.2082 | d_Y_loss: 0.3255 | d_X_loss:
0.0341 | d_fake_loss: 0.3595 | g_loss: 1.9602
Iteration [ 5460/10000] | d_real_loss: 0.1221 | d_Y_loss: 0.4329 | d_X_loss:
0.0247 | d_fake_loss: 0.4576 | g_loss: 2.3780
Iteration [ 5470/10000] | d_real_loss: 0.0778 | d_Y_loss: 0.2365 | d_X_loss:
0.0271 | d_fake_loss: 0.2636 | g_loss: 2.3414
Iteration [ 5480/10000] | d_real_loss: 0.1519 | d_Y_loss: 0.2959 | d_X_loss:
0.0297 | d_fake_loss: 0.3255 | g_loss: 2.0870
Iteration [ 5490/10000] | d_real_loss: 0.0994 | d_Y_loss: 0.3548 | d_X_loss:
0.0287 | d_fake_loss: 0.3836 | g_loss: 2.2744
Iteration [ 5500/10000] | d_real_loss: 0.1241 | d_Y_loss: 0.1074 | d_X_loss:
0.0469 | d_fake_loss: 0.1543 | g_loss: 2.5243
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005500-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005500-
Y-X.png
Iteration [ 5510/10000] | d_real_loss: 0.0794 | d_Y_loss: 0.2286 | d_X_loss:
0.0332 | d_fake_loss: 0.2618 | g_loss: 2.2492
Iteration [ 5520/10000] | d_real_loss: 0.2290 | d_Y_loss: 0.4346 | d_X_loss:
0.0365 | d_fake_loss: 0.4710 | g_loss: 2.3987
Iteration [ 5530/10000] | d_real_loss: 0.1144 | d_Y_loss: 0.1138 | d_X_loss:
0.0315 | d_fake_loss: 0.1453 | g_loss: 2.4638
Iteration [ 5540/10000] | d_real_loss: 0.2307 | d_Y_loss: 0.2058 | d_X_loss:
0.0251 | d_fake_loss: 0.2309 | g_loss: 2.4855
Iteration [ 5550/10000] | d_real_loss: 0.1162 | d_Y_loss: 0.2110 | d_X_loss:
0.0207 | d_fake_loss: 0.2317 | g_loss: 2.3690
Iteration [ 5560/10000] | d_real_loss: 0.2009 | d_Y_loss: 0.2291 | d_X_loss:
0.0241 | d_fake_loss: 0.2532 | g_loss: 2.2496

```



```

Iteration [ 5570/10000] | d_real_loss: 0.0822 | d_Y_loss: 0.0939 | d_X_loss:
0.0206 | d_fake_loss: 0.1145 | g_loss: 2.5519
Iteration [ 5580/10000] | d_real_loss: 0.0629 | d_Y_loss: 0.0988 | d_X_loss:
0.0244 | d_fake_loss: 0.1232 | g_loss: 2.4667
Iteration [ 5590/10000] | d_real_loss: 0.0533 | d_Y_loss: 0.1151 | d_X_loss:
0.0224 | d_fake_loss: 0.1375 | g_loss: 2.3853
Iteration [ 5600/10000] | d_real_loss: 0.0372 | d_Y_loss: 0.0899 | d_X_loss:
0.0347 | d_fake_loss: 0.1246 | g_loss: 2.5548
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005600-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005600-
Y-X.png
Iteration [ 5610/10000] | d_real_loss: 0.0622 | d_Y_loss: 0.0865 | d_X_loss:
0.0306 | d_fake_loss: 0.1171 | g_loss: 2.5917
Iteration [ 5620/10000] | d_real_loss: 0.0434 | d_Y_loss: 0.0915 | d_X_loss:
0.0487 | d_fake_loss: 0.1402 | g_loss: 2.5601
Iteration [ 5630/10000] | d_real_loss: 0.0349 | d_Y_loss: 0.0880 | d_X_loss:
0.0318 | d_fake_loss: 0.1198 | g_loss: 2.5938
Iteration [ 5640/10000] | d_real_loss: 0.0382 | d_Y_loss: 0.0828 | d_X_loss:
0.0345 | d_fake_loss: 0.1173 | g_loss: 2.6375
Iteration [ 5650/10000] | d_real_loss: 0.0428 | d_Y_loss: 0.0852 | d_X_loss:
0.0418 | d_fake_loss: 0.1270 | g_loss: 2.6397
Iteration [ 5660/10000] | d_real_loss: 0.0334 | d_Y_loss: 0.0936 | d_X_loss:
0.0348 | d_fake_loss: 0.1284 | g_loss: 2.5761
Iteration [ 5670/10000] | d_real_loss: 0.0417 | d_Y_loss: 0.0754 | d_X_loss:
0.0254 | d_fake_loss: 0.1008 | g_loss: 2.7876
Iteration [ 5680/10000] | d_real_loss: 0.0555 | d_Y_loss: 0.0919 | d_X_loss:
0.0567 | d_fake_loss: 0.1486 | g_loss: 2.6891
Iteration [ 5690/10000] | d_real_loss: 0.0642 | d_Y_loss: 0.0648 | d_X_loss:
0.0391 | d_fake_loss: 0.1039 | g_loss: 2.9216
Iteration [ 5700/10000] | d_real_loss: 0.0836 | d_Y_loss: 0.1572 | d_X_loss:
0.0519 | d_fake_loss: 0.2091 | g_loss: 2.8004
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005700-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005700-
Y-X.png
Iteration [ 5710/10000] | d_real_loss: 0.1374 | d_Y_loss: 0.2741 | d_X_loss:
0.0271 | d_fake_loss: 0.3012 | g_loss: 2.8705
Iteration [ 5720/10000] | d_real_loss: 0.1938 | d_Y_loss: 0.1833 | d_X_loss:
0.0399 | d_fake_loss: 0.2232 | g_loss: 2.4984
Iteration [ 5730/10000] | d_real_loss: 0.1419 | d_Y_loss: 0.6653 | d_X_loss:
0.0307 | d_fake_loss: 0.6960 | g_loss: 2.5270
Iteration [ 5740/10000] | d_real_loss: 0.2002 | d_Y_loss: 0.3463 | d_X_loss:
0.0368 | d_fake_loss: 0.3831 | g_loss: 2.6394
Iteration [ 5750/10000] | d_real_loss: 0.1527 | d_Y_loss: 0.4945 | d_X_loss:
0.0749 | d_fake_loss: 0.5694 | g_loss: 2.3878
Iteration [ 5760/10000] | d_real_loss: 0.0926 | d_Y_loss: 0.2106 | d_X_loss:
0.0540 | d_fake_loss: 0.2646 | g_loss: 2.6083

```

Iteration [5770/10000] | d_real_loss: 0.2084 | d_Y_loss: 0.2759 | d_X_loss: 0.0431 | d_fake_loss: 0.3190 | g_loss: 2.5686
 Iteration [5780/10000] | d_real_loss: 0.0914 | d_Y_loss: 0.2436 | d_X_loss: 0.0586 | d_fake_loss: 0.3021 | g_loss: 2.6392
 Iteration [5790/10000] | d_real_loss: 0.1572 | d_Y_loss: 0.2631 | d_X_loss: 0.0470 | d_fake_loss: 0.3101 | g_loss: 2.7518
 Iteration [5800/10000] | d_real_loss: 0.3517 | d_Y_loss: 0.3687 | d_X_loss: 0.5382 | d_fake_loss: 0.9069 | g_loss: 2.5395
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005800-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005800-Y-X.png
 Iteration [5810/10000] | d_real_loss: 0.1484 | d_Y_loss: 0.2540 | d_X_loss: 0.2889 | d_fake_loss: 0.5429 | g_loss: 2.6232
 Iteration [5820/10000] | d_real_loss: 0.1118 | d_Y_loss: 0.2107 | d_X_loss: 0.0837 | d_fake_loss: 0.2943 | g_loss: 2.4633
 Iteration [5830/10000] | d_real_loss: 0.1355 | d_Y_loss: 0.1256 | d_X_loss: 0.0847 | d_fake_loss: 0.2103 | g_loss: 2.6088
 Iteration [5840/10000] | d_real_loss: 0.1243 | d_Y_loss: 0.2064 | d_X_loss: 0.0657 | d_fake_loss: 0.2721 | g_loss: 2.4446
 Iteration [5850/10000] | d_real_loss: 0.7071 | d_Y_loss: 1.0948 | d_X_loss: 0.1314 | d_fake_loss: 1.2262 | g_loss: 0.6661
 Iteration [5860/10000] | d_real_loss: 0.3277 | d_Y_loss: 0.9691 | d_X_loss: 0.0673 | d_fake_loss: 1.0364 | g_loss: 0.8727
 Iteration [5870/10000] | d_real_loss: 0.3655 | d_Y_loss: 0.8652 | d_X_loss: 0.1198 | d_fake_loss: 0.9851 | g_loss: 1.0913
 Iteration [5880/10000] | d_real_loss: 0.2882 | d_Y_loss: 0.8627 | d_X_loss: 0.0746 | d_fake_loss: 0.9373 | g_loss: 1.2277
 Iteration [5890/10000] | d_real_loss: 0.2979 | d_Y_loss: 0.8213 | d_X_loss: 0.1487 | d_fake_loss: 0.9700 | g_loss: 1.3161
 Iteration [5900/10000] | d_real_loss: 0.2430 | d_Y_loss: 0.5427 | d_X_loss: 0.1846 | d_fake_loss: 0.7273 | g_loss: 1.5598
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005900-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-005900-Y-X.png
 Iteration [5910/10000] | d_real_loss: 0.2293 | d_Y_loss: 0.6992 | d_X_loss: 0.0586 | d_fake_loss: 0.7578 | g_loss: 1.5049
 Iteration [5920/10000] | d_real_loss: 0.1524 | d_Y_loss: 0.6793 | d_X_loss: 0.0721 | d_fake_loss: 0.7514 | g_loss: 1.8739
 Iteration [5930/10000] | d_real_loss: 0.2002 | d_Y_loss: 0.4413 | d_X_loss: 0.0735 | d_fake_loss: 0.5148 | g_loss: 2.0118
 Iteration [5940/10000] | d_real_loss: 0.2113 | d_Y_loss: 0.2702 | d_X_loss: 0.0333 | d_fake_loss: 0.3035 | g_loss: 2.1771
 Iteration [5950/10000] | d_real_loss: 0.1537 | d_Y_loss: 0.4695 | d_X_loss: 0.0301 | d_fake_loss: 0.4996 | g_loss: 2.3341
 Iteration [5960/10000] | d_real_loss: 0.1568 | d_Y_loss: 0.8044 | d_X_loss: 0.0419 | d_fake_loss: 0.8463 | g_loss: 2.2564

```

Iteration [ 5970/10000] | d_real_loss: 0.1613 | d_Y_loss: 0.3401 | d_X_loss:
0.1028 | d_fake_loss: 0.4429 | g_loss: 2.3323
Iteration [ 5980/10000] | d_real_loss: 0.1711 | d_Y_loss: 0.4755 | d_X_loss:
0.0689 | d_fake_loss: 0.5445 | g_loss: 2.1369
Iteration [ 5990/10000] | d_real_loss: 0.2488 | d_Y_loss: 0.2748 | d_X_loss:
0.0798 | d_fake_loss: 0.3546 | g_loss: 2.2969
Iteration [ 6000/10000] | d_real_loss: 0.2018 | d_Y_loss: 0.4227 | d_X_loss:
0.0746 | d_fake_loss: 0.4973 | g_loss: 2.3098
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006000-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006000-
Y-X.png
Iteration [ 6010/10000] | d_real_loss: 0.1234 | d_Y_loss: 0.1255 | d_X_loss:
0.0523 | d_fake_loss: 0.1778 | g_loss: 2.5870
Iteration [ 6020/10000] | d_real_loss: 0.1250 | d_Y_loss: 0.4389 | d_X_loss:
0.0732 | d_fake_loss: 0.5120 | g_loss: 2.3011
Iteration [ 6030/10000] | d_real_loss: 0.1479 | d_Y_loss: 0.2652 | d_X_loss:
0.0512 | d_fake_loss: 0.3164 | g_loss: 2.3510
Iteration [ 6040/10000] | d_real_loss: 0.0841 | d_Y_loss: 0.4053 | d_X_loss:
0.0389 | d_fake_loss: 0.4442 | g_loss: 2.3842
Iteration [ 6050/10000] | d_real_loss: 0.1807 | d_Y_loss: 0.3392 | d_X_loss:
0.2383 | d_fake_loss: 0.5775 | g_loss: 2.5634
Iteration [ 6060/10000] | d_real_loss: 0.2351 | d_Y_loss: 0.4781 | d_X_loss:
0.1079 | d_fake_loss: 0.5860 | g_loss: 2.6465
Iteration [ 6070/10000] | d_real_loss: 0.2213 | d_Y_loss: 0.4814 | d_X_loss:
0.2197 | d_fake_loss: 0.7011 | g_loss: 2.3415
Iteration [ 6080/10000] | d_real_loss: 0.1401 | d_Y_loss: 0.2791 | d_X_loss:
0.0942 | d_fake_loss: 0.3733 | g_loss: 2.4750
Iteration [ 6090/10000] | d_real_loss: 0.1768 | d_Y_loss: 0.2283 | d_X_loss:
0.1043 | d_fake_loss: 0.3326 | g_loss: 2.4537
Iteration [ 6100/10000] | d_real_loss: 0.1336 | d_Y_loss: 0.4290 | d_X_loss:
0.0665 | d_fake_loss: 0.4955 | g_loss: 2.2991
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006100-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006100-
Y-X.png
Iteration [ 6110/10000] | d_real_loss: 0.1052 | d_Y_loss: 0.2772 | d_X_loss:
0.0318 | d_fake_loss: 0.3091 | g_loss: 2.4982
Iteration [ 6120/10000] | d_real_loss: 0.1483 | d_Y_loss: 0.2700 | d_X_loss:
0.0248 | d_fake_loss: 0.2948 | g_loss: 2.3609
Iteration [ 6130/10000] | d_real_loss: 0.0790 | d_Y_loss: 0.6637 | d_X_loss:
0.0410 | d_fake_loss: 0.7047 | g_loss: 2.6413
Iteration [ 6140/10000] | d_real_loss: 0.1238 | d_Y_loss: 0.1970 | d_X_loss:
0.0635 | d_fake_loss: 0.2605 | g_loss: 2.3407
Iteration [ 6150/10000] | d_real_loss: 0.2532 | d_Y_loss: 0.1439 | d_X_loss:
0.0456 | d_fake_loss: 0.1895 | g_loss: 2.3372
Iteration [ 6160/10000] | d_real_loss: 0.1179 | d_Y_loss: 0.2107 | d_X_loss:
0.8794 | d_fake_loss: 1.0901 | g_loss: 2.3812

```

```

Iteration [ 6170/10000] | d_real_loss: 0.1417 | d_Y_loss: 0.2175 | d_X_loss:
0.0855 | d_fake_loss: 0.3030 | g_loss: 2.4845
Iteration [ 6180/10000] | d_real_loss: 0.1405 | d_Y_loss: 0.2114 | d_X_loss:
0.1037 | d_fake_loss: 0.3151 | g_loss: 2.5732
Iteration [ 6190/10000] | d_real_loss: 0.1476 | d_Y_loss: 0.1764 | d_X_loss:
0.1425 | d_fake_loss: 0.3189 | g_loss: 2.5597
Iteration [ 6200/10000] | d_real_loss: 0.1293 | d_Y_loss: 0.6036 | d_X_loss:
0.0962 | d_fake_loss: 0.6998 | g_loss: 2.6184
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006200-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006200-
Y-X.png
Iteration [ 6210/10000] | d_real_loss: 0.6128 | d_Y_loss: 0.7975 | d_X_loss:
0.2132 | d_fake_loss: 1.0107 | g_loss: 1.1754
Iteration [ 6220/10000] | d_real_loss: 0.2692 | d_Y_loss: 0.6616 | d_X_loss:
0.1652 | d_fake_loss: 0.8267 | g_loss: 1.8656
Iteration [ 6230/10000] | d_real_loss: 0.1564 | d_Y_loss: 0.4523 | d_X_loss:
0.0939 | d_fake_loss: 0.5462 | g_loss: 2.1117
Iteration [ 6240/10000] | d_real_loss: 0.4236 | d_Y_loss: 0.4736 | d_X_loss:
0.1630 | d_fake_loss: 0.6366 | g_loss: 2.0785
Iteration [ 6250/10000] | d_real_loss: 0.2016 | d_Y_loss: 0.4455 | d_X_loss:
0.1787 | d_fake_loss: 0.6243 | g_loss: 2.0971
Iteration [ 6260/10000] | d_real_loss: 0.2486 | d_Y_loss: 0.1920 | d_X_loss:
0.0726 | d_fake_loss: 0.2646 | g_loss: 2.4442
Iteration [ 6270/10000] | d_real_loss: 0.2674 | d_Y_loss: 0.2000 | d_X_loss:
0.0599 | d_fake_loss: 0.2599 | g_loss: 2.2066
Iteration [ 6280/10000] | d_real_loss: 0.1333 | d_Y_loss: 0.6405 | d_X_loss:
0.0528 | d_fake_loss: 0.6933 | g_loss: 2.6681
Iteration [ 6290/10000] | d_real_loss: 0.1526 | d_Y_loss: 0.3046 | d_X_loss:
0.1145 | d_fake_loss: 0.4191 | g_loss: 2.2690
Iteration [ 6300/10000] | d_real_loss: 0.1433 | d_Y_loss: 0.3404 | d_X_loss:
0.0882 | d_fake_loss: 0.4285 | g_loss: 2.3481
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006300-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006300-
Y-X.png
Iteration [ 6310/10000] | d_real_loss: 0.2164 | d_Y_loss: 0.3146 | d_X_loss:
0.3010 | d_fake_loss: 0.6156 | g_loss: 2.5052
Iteration [ 6320/10000] | d_real_loss: 0.1688 | d_Y_loss: 0.1960 | d_X_loss:
0.0708 | d_fake_loss: 0.2667 | g_loss: 2.4046
Iteration [ 6330/10000] | d_real_loss: 0.3595 | d_Y_loss: 0.3039 | d_X_loss:
0.1068 | d_fake_loss: 0.4106 | g_loss: 2.1467
Iteration [ 6340/10000] | d_real_loss: 0.1851 | d_Y_loss: 0.3168 | d_X_loss:
0.3188 | d_fake_loss: 0.6356 | g_loss: 2.3001
Iteration [ 6350/10000] | d_real_loss: 0.0946 | d_Y_loss: 0.4516 | d_X_loss:
0.2494 | d_fake_loss: 0.7011 | g_loss: 2.3058
Iteration [ 6360/10000] | d_real_loss: 0.2036 | d_Y_loss: 0.2138 | d_X_loss:
0.0949 | d_fake_loss: 0.3087 | g_loss: 2.3894

```

Iteration [6370/10000] | d_real_loss: 0.1152 | d_Y_loss: 0.2402 | d_X_loss: 0.0399 | d_fake_loss: 0.2801 | g_loss: 2.2993
 Iteration [6380/10000] | d_real_loss: 0.2510 | d_Y_loss: 0.3543 | d_X_loss: 0.1129 | d_fake_loss: 0.4672 | g_loss: 2.2297
 Iteration [6390/10000] | d_real_loss: 0.1309 | d_Y_loss: 0.3148 | d_X_loss: 0.1821 | d_fake_loss: 0.4969 | g_loss: 2.5567
 Iteration [6400/10000] | d_real_loss: 0.9262 | d_Y_loss: 0.1296 | d_X_loss: 1.3526 | d_fake_loss: 1.4823 | g_loss: 2.4461
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006400-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006400-Y-X.png
 Iteration [6410/10000] | d_real_loss: 0.2255 | d_Y_loss: 0.1194 | d_X_loss: 0.5865 | d_fake_loss: 0.7059 | g_loss: 2.4166
 Iteration [6420/10000] | d_real_loss: 0.3095 | d_Y_loss: 0.1606 | d_X_loss: 0.1919 | d_fake_loss: 0.3524 | g_loss: 2.3463
 Iteration [6430/10000] | d_real_loss: 0.1615 | d_Y_loss: 0.2435 | d_X_loss: 0.3777 | d_fake_loss: 0.6212 | g_loss: 2.3557
 Iteration [6440/10000] | d_real_loss: 0.1228 | d_Y_loss: 0.2713 | d_X_loss: 0.1524 | d_fake_loss: 0.4237 | g_loss: 2.4975
 Iteration [6450/10000] | d_real_loss: 0.1828 | d_Y_loss: 0.4078 | d_X_loss: 0.1248 | d_fake_loss: 0.5325 | g_loss: 2.4265
 Iteration [6460/10000] | d_real_loss: 0.2093 | d_Y_loss: 0.2721 | d_X_loss: 0.1460 | d_fake_loss: 0.4181 | g_loss: 2.4354
 Iteration [6470/10000] | d_real_loss: 0.5099 | d_Y_loss: 0.3396 | d_X_loss: 0.2260 | d_fake_loss: 0.5657 | g_loss: 2.3396
 Iteration [6480/10000] | d_real_loss: 0.2498 | d_Y_loss: 0.1962 | d_X_loss: 0.2670 | d_fake_loss: 0.4632 | g_loss: 2.1612
 Iteration [6490/10000] | d_real_loss: 0.1532 | d_Y_loss: 0.3891 | d_X_loss: 0.0809 | d_fake_loss: 0.4700 | g_loss: 2.4139
 Iteration [6500/10000] | d_real_loss: 0.1733 | d_Y_loss: 0.6910 | d_X_loss: 0.1497 | d_fake_loss: 0.8407 | g_loss: 2.6454
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006500-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006500-Y-X.png
 Iteration [6510/10000] | d_real_loss: 0.2577 | d_Y_loss: 0.4651 | d_X_loss: 0.2427 | d_fake_loss: 0.7079 | g_loss: 2.2890
 Iteration [6520/10000] | d_real_loss: 0.2054 | d_Y_loss: 0.2843 | d_X_loss: 0.1306 | d_fake_loss: 0.4149 | g_loss: 2.4534
 Iteration [6530/10000] | d_real_loss: 0.1946 | d_Y_loss: 0.3058 | d_X_loss: 0.0380 | d_fake_loss: 0.3438 | g_loss: 2.2087
 Iteration [6540/10000] | d_real_loss: 0.2052 | d_Y_loss: 0.4275 | d_X_loss: 0.0382 | d_fake_loss: 0.4658 | g_loss: 2.3206
 Iteration [6550/10000] | d_real_loss: 0.1761 | d_Y_loss: 0.3105 | d_X_loss: 0.0490 | d_fake_loss: 0.3595 | g_loss: 2.4046
 Iteration [6560/10000] | d_real_loss: 0.0868 | d_Y_loss: 0.1538 | d_X_loss: 0.0611 | d_fake_loss: 0.2149 | g_loss: 2.4613

Iteration [6570/10000] | d_real_loss: 0.1382 | d_Y_loss: 0.1290 | d_X_loss: 0.0740 | d_fake_loss: 0.2030 | g_loss: 2.4782
 Iteration [6580/10000] | d_real_loss: 0.0896 | d_Y_loss: 0.1526 | d_X_loss: 0.0743 | d_fake_loss: 0.2269 | g_loss: 2.6122
 Iteration [6590/10000] | d_real_loss: 0.2391 | d_Y_loss: 0.2237 | d_X_loss: 0.1496 | d_fake_loss: 0.3732 | g_loss: 2.3699
 Iteration [6600/10000] | d_real_loss: 0.3021 | d_Y_loss: 0.6033 | d_X_loss: 0.1245 | d_fake_loss: 0.7279 | g_loss: 2.1565
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006600-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006600-Y-X.png
 Iteration [6610/10000] | d_real_loss: 0.2528 | d_Y_loss: 0.4371 | d_X_loss: 0.0548 | d_fake_loss: 0.4919 | g_loss: 2.2759
 Iteration [6620/10000] | d_real_loss: 0.1785 | d_Y_loss: 0.3121 | d_X_loss: 0.0877 | d_fake_loss: 0.3998 | g_loss: 2.8393
 Iteration [6630/10000] | d_real_loss: 0.1489 | d_Y_loss: 0.2016 | d_X_loss: 0.1194 | d_fake_loss: 0.3210 | g_loss: 2.3390
 Iteration [6640/10000] | d_real_loss: 0.1653 | d_Y_loss: 0.1989 | d_X_loss: 0.0919 | d_fake_loss: 0.2908 | g_loss: 2.6386
 Iteration [6650/10000] | d_real_loss: 0.2178 | d_Y_loss: 0.3210 | d_X_loss: 0.1501 | d_fake_loss: 0.4712 | g_loss: 2.3521
 Iteration [6660/10000] | d_real_loss: 0.1024 | d_Y_loss: 0.2523 | d_X_loss: 0.3400 | d_fake_loss: 0.5923 | g_loss: 2.4615
 Iteration [6670/10000] | d_real_loss: 0.1912 | d_Y_loss: 0.2704 | d_X_loss: 0.5839 | d_fake_loss: 0.8543 | g_loss: 2.4177
 Iteration [6680/10000] | d_real_loss: 0.2442 | d_Y_loss: 0.2129 | d_X_loss: 0.1469 | d_fake_loss: 0.3598 | g_loss: 2.2579
 Iteration [6690/10000] | d_real_loss: 0.1486 | d_Y_loss: 0.2035 | d_X_loss: 0.2822 | d_fake_loss: 0.4858 | g_loss: 2.6663
 Iteration [6700/10000] | d_real_loss: 0.2514 | d_Y_loss: 0.3045 | d_X_loss: 0.0375 | d_fake_loss: 0.3420 | g_loss: 2.4323
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006700-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006700-Y-X.png
 Iteration [6710/10000] | d_real_loss: 0.3229 | d_Y_loss: 0.9762 | d_X_loss: 0.1708 | d_fake_loss: 1.1470 | g_loss: 1.4843
 Iteration [6720/10000] | d_real_loss: 0.2703 | d_Y_loss: 0.7646 | d_X_loss: 0.0756 | d_fake_loss: 0.8402 | g_loss: 2.0384
 Iteration [6730/10000] | d_real_loss: 0.3363 | d_Y_loss: 0.3951 | d_X_loss: 0.0600 | d_fake_loss: 0.4552 | g_loss: 1.9110
 Iteration [6740/10000] | d_real_loss: 0.3530 | d_Y_loss: 0.2213 | d_X_loss: 0.1171 | d_fake_loss: 0.3384 | g_loss: 2.0590
 Iteration [6750/10000] | d_real_loss: 0.1894 | d_Y_loss: 0.3548 | d_X_loss: 0.0846 | d_fake_loss: 0.4394 | g_loss: 2.2487
 Iteration [6760/10000] | d_real_loss: 0.1574 | d_Y_loss: 0.4898 | d_X_loss: 0.0965 | d_fake_loss: 0.5863 | g_loss: 2.2067

Iteration [6770/10000] | d_real_loss: 0.1795 | d_Y_loss: 0.4776 | d_X_loss: 0.0607 | d_fake_loss: 0.5384 | g_loss: 2.6140
 Iteration [6780/10000] | d_real_loss: 0.1556 | d_Y_loss: 0.3150 | d_X_loss: 0.1509 | d_fake_loss: 0.4659 | g_loss: 2.3625
 Iteration [6790/10000] | d_real_loss: 0.2281 | d_Y_loss: 0.3144 | d_X_loss: 0.0392 | d_fake_loss: 0.3537 | g_loss: 2.3449
 Iteration [6800/10000] | d_real_loss: 0.1588 | d_Y_loss: 0.4139 | d_X_loss: 0.0979 | d_fake_loss: 0.5118 | g_loss: 2.6821
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006800-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006800-Y-X.png
 Iteration [6810/10000] | d_real_loss: 0.0893 | d_Y_loss: 0.2095 | d_X_loss: 0.0480 | d_fake_loss: 0.2575 | g_loss: 2.5619
 Iteration [6820/10000] | d_real_loss: 0.1542 | d_Y_loss: 0.2682 | d_X_loss: 0.1149 | d_fake_loss: 0.3830 | g_loss: 2.4657
 Iteration [6830/10000] | d_real_loss: 0.2255 | d_Y_loss: 0.2091 | d_X_loss: 0.1505 | d_fake_loss: 0.3596 | g_loss: 2.4103
 Iteration [6840/10000] | d_real_loss: 0.1516 | d_Y_loss: 0.4276 | d_X_loss: 0.1255 | d_fake_loss: 0.5531 | g_loss: 2.5516
 Iteration [6850/10000] | d_real_loss: 0.1706 | d_Y_loss: 0.1847 | d_X_loss: 0.0704 | d_fake_loss: 0.2551 | g_loss: 2.5285
 Iteration [6860/10000] | d_real_loss: 0.2873 | d_Y_loss: 0.1247 | d_X_loss: 0.0971 | d_fake_loss: 0.2218 | g_loss: 2.3962
 Iteration [6870/10000] | d_real_loss: 0.2204 | d_Y_loss: 0.2786 | d_X_loss: 0.0384 | d_fake_loss: 0.3170 | g_loss: 2.4753
 Iteration [6880/10000] | d_real_loss: 0.2874 | d_Y_loss: 0.2300 | d_X_loss: 0.0386 | d_fake_loss: 0.2687 | g_loss: 2.4169
 Iteration [6890/10000] | d_real_loss: 0.1082 | d_Y_loss: 0.3071 | d_X_loss: 0.0451 | d_fake_loss: 0.3522 | g_loss: 2.4054
 Iteration [6900/10000] | d_real_loss: 0.2271 | d_Y_loss: 0.1952 | d_X_loss: 0.0874 | d_fake_loss: 0.2826 | g_loss: 2.5189
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006900-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-006900-Y-X.png
 Iteration [6910/10000] | d_real_loss: 0.1715 | d_Y_loss: 0.2450 | d_X_loss: 0.3966 | d_fake_loss: 0.6416 | g_loss: 2.6055
 Iteration [6920/10000] | d_real_loss: 0.2046 | d_Y_loss: 0.3323 | d_X_loss: 0.0757 | d_fake_loss: 0.4080 | g_loss: 2.5980
 Iteration [6930/10000] | d_real_loss: 0.4043 | d_Y_loss: 0.2118 | d_X_loss: 0.0625 | d_fake_loss: 0.2743 | g_loss: 2.4380
 Iteration [6940/10000] | d_real_loss: 0.2028 | d_Y_loss: 0.4082 | d_X_loss: 0.1006 | d_fake_loss: 0.5089 | g_loss: 2.6613
 Iteration [6950/10000] | d_real_loss: 0.1418 | d_Y_loss: 0.4082 | d_X_loss: 0.0493 | d_fake_loss: 0.4574 | g_loss: 2.6887
 Iteration [6960/10000] | d_real_loss: 0.1301 | d_Y_loss: 0.1956 | d_X_loss: 0.2914 | d_fake_loss: 0.4870 | g_loss: 2.4801

```

Iteration [ 6970/10000] | d_real_loss: 0.3152 | d_Y_loss: 0.3815 | d_X_loss:
0.1480 | d_fake_loss: 0.5295 | g_loss: 2.4971
Iteration [ 6980/10000] | d_real_loss: 0.1865 | d_Y_loss: 0.3017 | d_X_loss:
0.1034 | d_fake_loss: 0.4051 | g_loss: 2.3739
Iteration [ 6990/10000] | d_real_loss: 0.2055 | d_Y_loss: 0.3421 | d_X_loss:
0.1098 | d_fake_loss: 0.4519 | g_loss: 2.6256
Iteration [ 7000/10000] | d_real_loss: 0.1890 | d_Y_loss: 0.1724 | d_X_loss:
0.1722 | d_fake_loss: 0.3447 | g_loss: 2.5472
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007000-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007000-
Y-X.png
Iteration [ 7010/10000] | d_real_loss: 0.1291 | d_Y_loss: 0.2407 | d_X_loss:
0.2410 | d_fake_loss: 0.4817 | g_loss: 2.5184
Iteration [ 7020/10000] | d_real_loss: 0.1493 | d_Y_loss: 0.2432 | d_X_loss:
0.1508 | d_fake_loss: 0.3940 | g_loss: 2.3428
Iteration [ 7030/10000] | d_real_loss: 0.1252 | d_Y_loss: 0.2346 | d_X_loss:
0.1471 | d_fake_loss: 0.3818 | g_loss: 2.4257
Iteration [ 7040/10000] | d_real_loss: 0.1290 | d_Y_loss: 0.2374 | d_X_loss:
0.1957 | d_fake_loss: 0.4331 | g_loss: 2.6873
Iteration [ 7050/10000] | d_real_loss: 0.1234 | d_Y_loss: 0.4447 | d_X_loss:
0.0519 | d_fake_loss: 0.4966 | g_loss: 2.3097
Iteration [ 7060/10000] | d_real_loss: 0.1348 | d_Y_loss: 0.4353 | d_X_loss:
0.1354 | d_fake_loss: 0.5707 | g_loss: 2.6779
Iteration [ 7070/10000] | d_real_loss: 0.1546 | d_Y_loss: 0.4057 | d_X_loss:
0.1253 | d_fake_loss: 0.5310 | g_loss: 2.3880
Iteration [ 7080/10000] | d_real_loss: 0.0989 | d_Y_loss: 0.4607 | d_X_loss:
0.0672 | d_fake_loss: 0.5279 | g_loss: 2.6756
Iteration [ 7090/10000] | d_real_loss: 0.1156 | d_Y_loss: 0.2618 | d_X_loss:
0.0344 | d_fake_loss: 0.2962 | g_loss: 2.4400
Iteration [ 7100/10000] | d_real_loss: 0.2436 | d_Y_loss: 0.2030 | d_X_loss:
0.1694 | d_fake_loss: 0.3724 | g_loss: 2.5664
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007100-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007100-
Y-X.png
Iteration [ 7110/10000] | d_real_loss: 0.2202 | d_Y_loss: 0.2483 | d_X_loss:
0.2025 | d_fake_loss: 0.4508 | g_loss: 2.5275
Iteration [ 7120/10000] | d_real_loss: 0.2243 | d_Y_loss: 0.1768 | d_X_loss:
0.1306 | d_fake_loss: 0.3073 | g_loss: 2.4474
Iteration [ 7130/10000] | d_real_loss: 0.1699 | d_Y_loss: 0.2547 | d_X_loss:
0.1327 | d_fake_loss: 0.3874 | g_loss: 2.5805
Iteration [ 7140/10000] | d_real_loss: 0.1331 | d_Y_loss: 0.1738 | d_X_loss:
0.0636 | d_fake_loss: 0.2374 | g_loss: 2.3061
Iteration [ 7150/10000] | d_real_loss: 0.0795 | d_Y_loss: 0.2846 | d_X_loss:
0.1864 | d_fake_loss: 0.4709 | g_loss: 2.7420
Iteration [ 7160/10000] | d_real_loss: 0.1254 | d_Y_loss: 0.3012 | d_X_loss:
0.0846 | d_fake_loss: 0.3858 | g_loss: 2.7348

```


Iteration [7170/10000] | d_real_loss: 0.2101 | d_Y_loss: 0.2233 | d_X_loss: 0.0449 | d_fake_loss: 0.2682 | g_loss: 2.5293
 Iteration [7180/10000] | d_real_loss: 0.1794 | d_Y_loss: 0.4166 | d_X_loss: 0.0504 | d_fake_loss: 0.4670 | g_loss: 2.5532
 Iteration [7190/10000] | d_real_loss: 0.0666 | d_Y_loss: 0.2821 | d_X_loss: 0.0862 | d_fake_loss: 0.3683 | g_loss: 2.6145
 Iteration [7200/10000] | d_real_loss: 0.1485 | d_Y_loss: 0.4060 | d_X_loss: 0.1175 | d_fake_loss: 0.5235 | g_loss: 2.6034
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007200-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007200-Y-X.png
 Iteration [7210/10000] | d_real_loss: 0.1212 | d_Y_loss: 0.1077 | d_X_loss: 0.8884 | d_fake_loss: 0.9961 | g_loss: 2.7281
 Iteration [7220/10000] | d_real_loss: 0.3419 | d_Y_loss: 0.4422 | d_X_loss: 0.1035 | d_fake_loss: 0.5457 | g_loss: 2.7101
 Iteration [7230/10000] | d_real_loss: 0.1522 | d_Y_loss: 0.5770 | d_X_loss: 0.2620 | d_fake_loss: 0.8390 | g_loss: 2.6264
 Iteration [7240/10000] | d_real_loss: 0.1447 | d_Y_loss: 0.5150 | d_X_loss: 0.2307 | d_fake_loss: 0.7457 | g_loss: 2.3303
 Iteration [7250/10000] | d_real_loss: 0.2489 | d_Y_loss: 0.3792 | d_X_loss: 0.1762 | d_fake_loss: 0.5554 | g_loss: 1.9514
 Iteration [7260/10000] | d_real_loss: 0.1353 | d_Y_loss: 0.4994 | d_X_loss: 0.1097 | d_fake_loss: 0.6090 | g_loss: 2.3844
 Iteration [7270/10000] | d_real_loss: 0.2709 | d_Y_loss: 0.2731 | d_X_loss: 0.0466 | d_fake_loss: 0.3197 | g_loss: 2.1949
 Iteration [7280/10000] | d_real_loss: 0.1108 | d_Y_loss: 0.4797 | d_X_loss: 0.0573 | d_fake_loss: 0.5371 | g_loss: 2.6386
 Iteration [7290/10000] | d_real_loss: 0.1196 | d_Y_loss: 0.3921 | d_X_loss: 0.0652 | d_fake_loss: 0.4574 | g_loss: 2.3383
 Iteration [7300/10000] | d_real_loss: 0.1028 | d_Y_loss: 0.2935 | d_X_loss: 0.0852 | d_fake_loss: 0.3788 | g_loss: 2.4593
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007300-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007300-Y-X.png
 Iteration [7310/10000] | d_real_loss: 0.1088 | d_Y_loss: 0.3440 | d_X_loss: 0.0852 | d_fake_loss: 0.4293 | g_loss: 2.4857
 Iteration [7320/10000] | d_real_loss: 0.2099 | d_Y_loss: 0.4148 | d_X_loss: 0.0991 | d_fake_loss: 0.5139 | g_loss: 2.5771
 Iteration [7330/10000] | d_real_loss: 0.2184 | d_Y_loss: 0.2136 | d_X_loss: 0.0244 | d_fake_loss: 0.2380 | g_loss: 2.3910
 Iteration [7340/10000] | d_real_loss: 0.1638 | d_Y_loss: 0.3582 | d_X_loss: 0.0610 | d_fake_loss: 0.4191 | g_loss: 2.7684
 Iteration [7350/10000] | d_real_loss: 0.1342 | d_Y_loss: 0.2634 | d_X_loss: 0.0872 | d_fake_loss: 0.3506 | g_loss: 2.4486
 Iteration [7360/10000] | d_real_loss: 0.1089 | d_Y_loss: 0.1620 | d_X_loss: 0.0267 | d_fake_loss: 0.1887 | g_loss: 2.4269

```

Iteration [ 7370/10000] | d_real_loss: 0.1168 | d_Y_loss: 0.2442 | d_X_loss:
0.0267 | d_fake_loss: 0.2708 | g_loss: 2.4682
Iteration [ 7380/10000] | d_real_loss: 0.0893 | d_Y_loss: 0.1617 | d_X_loss:
0.0246 | d_fake_loss: 0.1863 | g_loss: 2.3975
Iteration [ 7390/10000] | d_real_loss: 0.1030 | d_Y_loss: 0.2221 | d_X_loss:
0.0187 | d_fake_loss: 0.2407 | g_loss: 2.6054
Iteration [ 7400/10000] | d_real_loss: 0.0815 | d_Y_loss: 0.4336 | d_X_loss:
0.0199 | d_fake_loss: 0.4535 | g_loss: 2.6916
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007400-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007400-
Y-X.png
Iteration [ 7410/10000] | d_real_loss: 0.1664 | d_Y_loss: 0.4725 | d_X_loss:
0.0177 | d_fake_loss: 0.4902 | g_loss: 2.6322
Iteration [ 7420/10000] | d_real_loss: 0.0940 | d_Y_loss: 0.3270 | d_X_loss:
0.0195 | d_fake_loss: 0.3465 | g_loss: 2.5366
Iteration [ 7430/10000] | d_real_loss: 0.0549 | d_Y_loss: 0.6769 | d_X_loss:
0.0197 | d_fake_loss: 0.6966 | g_loss: 2.8972
Iteration [ 7440/10000] | d_real_loss: 0.1091 | d_Y_loss: 0.4213 | d_X_loss:
0.0210 | d_fake_loss: 0.4422 | g_loss: 2.5567
Iteration [ 7450/10000] | d_real_loss: 0.0724 | d_Y_loss: 0.2721 | d_X_loss:
0.0275 | d_fake_loss: 0.2996 | g_loss: 2.5644
Iteration [ 7460/10000] | d_real_loss: 0.1392 | d_Y_loss: 0.2894 | d_X_loss:
0.0251 | d_fake_loss: 0.3145 | g_loss: 2.5502
Iteration [ 7470/10000] | d_real_loss: 0.0891 | d_Y_loss: 0.3021 | d_X_loss:
0.0241 | d_fake_loss: 0.3262 | g_loss: 2.6619
Iteration [ 7480/10000] | d_real_loss: 0.0938 | d_Y_loss: 0.1992 | d_X_loss:
0.0170 | d_fake_loss: 0.2163 | g_loss: 2.4572
Iteration [ 7490/10000] | d_real_loss: 0.1086 | d_Y_loss: 0.2108 | d_X_loss:
0.0386 | d_fake_loss: 0.2494 | g_loss: 2.4908
Iteration [ 7500/10000] | d_real_loss: 0.0803 | d_Y_loss: 0.2130 | d_X_loss:
0.0261 | d_fake_loss: 0.2391 | g_loss: 2.5555
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007500-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007500-
Y-X.png
Iteration [ 7510/10000] | d_real_loss: 0.1253 | d_Y_loss: 0.1164 | d_X_loss:
0.0232 | d_fake_loss: 0.1396 | g_loss: 2.6560
Iteration [ 7520/10000] | d_real_loss: 0.0950 | d_Y_loss: 0.5635 | d_X_loss:
0.0162 | d_fake_loss: 0.5797 | g_loss: 2.9015
Iteration [ 7530/10000] | d_real_loss: 0.0828 | d_Y_loss: 0.2015 | d_X_loss:
0.0213 | d_fake_loss: 0.2228 | g_loss: 2.6859
Iteration [ 7540/10000] | d_real_loss: 0.1959 | d_Y_loss: 0.1953 | d_X_loss:
0.0143 | d_fake_loss: 0.2097 | g_loss: 2.6983
Iteration [ 7550/10000] | d_real_loss: 0.0500 | d_Y_loss: 0.4663 | d_X_loss:
0.0232 | d_fake_loss: 0.4895 | g_loss: 2.9918
Iteration [ 7560/10000] | d_real_loss: 0.0506 | d_Y_loss: 0.1842 | d_X_loss:
0.0468 | d_fake_loss: 0.2310 | g_loss: 2.4342

```

```

Iteration [ 7570/10000] | d_real_loss: 0.0774 | d_Y_loss: 0.3661 | d_X_loss:
0.0242 | d_fake_loss: 0.3903 | g_loss: 2.8272
Iteration [ 7580/10000] | d_real_loss: 0.0613 | d_Y_loss: 0.2266 | d_X_loss:
0.0216 | d_fake_loss: 0.2483 | g_loss: 2.7207
Iteration [ 7590/10000] | d_real_loss: 0.0998 | d_Y_loss: 0.3081 | d_X_loss:
0.0514 | d_fake_loss: 0.3595 | g_loss: 2.6126
Iteration [ 7600/10000] | d_real_loss: 0.0909 | d_Y_loss: 0.1411 | d_X_loss:
0.0395 | d_fake_loss: 0.1805 | g_loss: 2.6199
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007600-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007600-
Y-X.png
Iteration [ 7610/10000] | d_real_loss: 0.1633 | d_Y_loss: 0.1719 | d_X_loss:
0.0236 | d_fake_loss: 0.1955 | g_loss: 2.5067
Iteration [ 7620/10000] | d_real_loss: 0.0899 | d_Y_loss: 0.0853 | d_X_loss:
0.0606 | d_fake_loss: 0.1459 | g_loss: 2.7910
Iteration [ 7630/10000] | d_real_loss: 0.0791 | d_Y_loss: 0.3555 | d_X_loss:
0.0165 | d_fake_loss: 0.3720 | g_loss: 2.9440
Iteration [ 7640/10000] | d_real_loss: 0.1008 | d_Y_loss: 0.3311 | d_X_loss:
0.0172 | d_fake_loss: 0.3482 | g_loss: 2.8150
Iteration [ 7650/10000] | d_real_loss: 0.0737 | d_Y_loss: 0.2983 | d_X_loss:
0.0138 | d_fake_loss: 0.3121 | g_loss: 2.5793
Iteration [ 7660/10000] | d_real_loss: 0.0669 | d_Y_loss: 0.2159 | d_X_loss:
0.0138 | d_fake_loss: 0.2297 | g_loss: 2.7231
Iteration [ 7670/10000] | d_real_loss: 0.0630 | d_Y_loss: 0.2805 | d_X_loss:
0.0113 | d_fake_loss: 0.2918 | g_loss: 2.6442
Iteration [ 7680/10000] | d_real_loss: 0.2286 | d_Y_loss: 0.3931 | d_X_loss:
0.0172 | d_fake_loss: 0.4103 | g_loss: 2.4070
Iteration [ 7690/10000] | d_real_loss: 0.1415 | d_Y_loss: 0.3494 | d_X_loss:
0.0192 | d_fake_loss: 0.3686 | g_loss: 2.9204
Iteration [ 7700/10000] | d_real_loss: 0.0872 | d_Y_loss: 0.6690 | d_X_loss:
0.0317 | d_fake_loss: 0.7007 | g_loss: 2.6306
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007700-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007700-
Y-X.png
Iteration [ 7710/10000] | d_real_loss: 0.1473 | d_Y_loss: 0.2909 | d_X_loss:
0.0446 | d_fake_loss: 0.3356 | g_loss: 2.5003
Iteration [ 7720/10000] | d_real_loss: 0.1791 | d_Y_loss: 0.1185 | d_X_loss:
0.0299 | d_fake_loss: 0.1484 | g_loss: 2.6352
Iteration [ 7730/10000] | d_real_loss: 0.0528 | d_Y_loss: 0.2631 | d_X_loss:
0.0682 | d_fake_loss: 0.3313 | g_loss: 2.4146
Iteration [ 7740/10000] | d_real_loss: 0.1632 | d_Y_loss: 0.2035 | d_X_loss:
0.2586 | d_fake_loss: 0.4622 | g_loss: 2.5278
Iteration [ 7750/10000] | d_real_loss: 0.1103 | d_Y_loss: 0.2828 | d_X_loss:
0.0223 | d_fake_loss: 0.3050 | g_loss: 2.6544
Iteration [ 7760/10000] | d_real_loss: 0.4896 | d_Y_loss: 0.2065 | d_X_loss:
0.0196 | d_fake_loss: 0.2261 | g_loss: 2.4960

```

Iteration [7770/10000] | d_real_loss: 0.1411 | d_Y_loss: 0.2994 | d_X_loss: 0.0758 | d_fake_loss: 0.3752 | g_loss: 2.5501
 Iteration [7780/10000] | d_real_loss: 0.3154 | d_Y_loss: 0.2403 | d_X_loss: 0.6162 | d_fake_loss: 0.8565 | g_loss: 2.5819
 Iteration [7790/10000] | d_real_loss: 0.1467 | d_Y_loss: 0.3347 | d_X_loss: 0.5187 | d_fake_loss: 0.8534 | g_loss: 2.6388
 Iteration [7800/10000] | d_real_loss: 0.1665 | d_Y_loss: 0.2270 | d_X_loss: 0.4365 | d_fake_loss: 0.6636 | g_loss: 2.6482
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007800-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007800-Y-X.png
 Iteration [7810/10000] | d_real_loss: 0.3005 | d_Y_loss: 0.4516 | d_X_loss: 0.4464 | d_fake_loss: 0.8979 | g_loss: 2.4496
 Iteration [7820/10000] | d_real_loss: 0.1647 | d_Y_loss: 0.1267 | d_X_loss: 0.1758 | d_fake_loss: 0.3025 | g_loss: 2.5918
 Iteration [7830/10000] | d_real_loss: 0.1574 | d_Y_loss: 0.4457 | d_X_loss: 0.2542 | d_fake_loss: 0.6999 | g_loss: 2.3196
 Iteration [7840/10000] | d_real_loss: 0.2274 | d_Y_loss: 0.6147 | d_X_loss: 0.0938 | d_fake_loss: 0.7085 | g_loss: 2.8427
 Iteration [7850/10000] | d_real_loss: 0.1666 | d_Y_loss: 0.3457 | d_X_loss: 0.0667 | d_fake_loss: 0.4124 | g_loss: 2.3791
 Iteration [7860/10000] | d_real_loss: 0.2922 | d_Y_loss: 0.2148 | d_X_loss: 0.0881 | d_fake_loss: 0.3029 | g_loss: 2.4278
 Iteration [7870/10000] | d_real_loss: 0.1793 | d_Y_loss: 0.3732 | d_X_loss: 0.2796 | d_fake_loss: 0.6528 | g_loss: 2.4017
 Iteration [7880/10000] | d_real_loss: 0.1086 | d_Y_loss: 0.1607 | d_X_loss: 0.2604 | d_fake_loss: 0.4210 | g_loss: 2.4673
 Iteration [7890/10000] | d_real_loss: 0.2341 | d_Y_loss: 0.3302 | d_X_loss: 0.1399 | d_fake_loss: 0.4701 | g_loss: 2.5079
 Iteration [7900/10000] | d_real_loss: 0.1096 | d_Y_loss: 0.3969 | d_X_loss: 0.2000 | d_fake_loss: 0.5969 | g_loss: 2.5715
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007900-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-007900-Y-X.png
 Iteration [7910/10000] | d_real_loss: 0.1462 | d_Y_loss: 0.2260 | d_X_loss: 0.0802 | d_fake_loss: 0.3062 | g_loss: 2.7271
 Iteration [7920/10000] | d_real_loss: 0.1705 | d_Y_loss: 0.2426 | d_X_loss: 0.2233 | d_fake_loss: 0.4659 | g_loss: 2.7165
 Iteration [7930/10000] | d_real_loss: 0.1049 | d_Y_loss: 0.2648 | d_X_loss: 0.2644 | d_fake_loss: 0.5292 | g_loss: 2.8638
 Iteration [7940/10000] | d_real_loss: 0.1685 | d_Y_loss: 0.2474 | d_X_loss: 0.0671 | d_fake_loss: 0.3145 | g_loss: 2.6534
 Iteration [7950/10000] | d_real_loss: 0.2176 | d_Y_loss: 0.1724 | d_X_loss: 0.1925 | d_fake_loss: 0.3649 | g_loss: 2.5322
 Iteration [7960/10000] | d_real_loss: 0.1178 | d_Y_loss: 0.1857 | d_X_loss: 0.1413 | d_fake_loss: 0.3270 | g_loss: 2.6406

Iteration [7970/10000] | d_real_loss: 0.2674 | d_Y_loss: 0.1662 | d_X_loss: 0.2149 | d_fake_loss: 0.3810 | g_loss: 2.5216
 Iteration [7980/10000] | d_real_loss: 0.1617 | d_Y_loss: 0.1632 | d_X_loss: 0.2840 | d_fake_loss: 0.4472 | g_loss: 2.7089
 Iteration [7990/10000] | d_real_loss: 0.2480 | d_Y_loss: 0.4534 | d_X_loss: 0.0665 | d_fake_loss: 0.5199 | g_loss: 3.1022
 Iteration [8000/10000] | d_real_loss: 0.2938 | d_Y_loss: 0.4077 | d_X_loss: 0.0939 | d_fake_loss: 0.5016 | g_loss: 2.6757
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008000-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008000-Y-X.png
 Iteration [8010/10000] | d_real_loss: 0.1192 | d_Y_loss: 0.2500 | d_X_loss: 0.2004 | d_fake_loss: 0.4504 | g_loss: 2.6621
 Iteration [8020/10000] | d_real_loss: 0.1239 | d_Y_loss: 0.4548 | d_X_loss: 0.1689 | d_fake_loss: 0.6236 | g_loss: 2.6314
 Iteration [8030/10000] | d_real_loss: 0.1103 | d_Y_loss: 0.1199 | d_X_loss: 0.0926 | d_fake_loss: 0.2125 | g_loss: 2.6320
 Iteration [8040/10000] | d_real_loss: 0.2085 | d_Y_loss: 0.2864 | d_X_loss: 0.2935 | d_fake_loss: 0.5799 | g_loss: 2.7123
 Iteration [8050/10000] | d_real_loss: 0.2697 | d_Y_loss: 0.3084 | d_X_loss: 0.0951 | d_fake_loss: 0.4036 | g_loss: 3.0941
 Iteration [8060/10000] | d_real_loss: 0.1173 | d_Y_loss: 0.2191 | d_X_loss: 0.1053 | d_fake_loss: 0.3244 | g_loss: 2.5889
 Iteration [8070/10000] | d_real_loss: 0.2969 | d_Y_loss: 0.4482 | d_X_loss: 0.1347 | d_fake_loss: 0.5830 | g_loss: 2.8745
 Iteration [8080/10000] | d_real_loss: 0.1849 | d_Y_loss: 0.2684 | d_X_loss: 0.0947 | d_fake_loss: 0.3631 | g_loss: 2.7931
 Iteration [8090/10000] | d_real_loss: 0.1348 | d_Y_loss: 0.2494 | d_X_loss: 0.1217 | d_fake_loss: 0.3711 | g_loss: 2.9783
 Iteration [8100/10000] | d_real_loss: 0.1306 | d_Y_loss: 0.2295 | d_X_loss: 0.0598 | d_fake_loss: 0.2893 | g_loss: 2.8833
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008100-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008100-Y-X.png
 Iteration [8110/10000] | d_real_loss: 0.1844 | d_Y_loss: 0.2133 | d_X_loss: 0.0515 | d_fake_loss: 0.2648 | g_loss: 2.4792
 Iteration [8120/10000] | d_real_loss: 0.2137 | d_Y_loss: 0.3734 | d_X_loss: 0.0698 | d_fake_loss: 0.4432 | g_loss: 2.7238
 Iteration [8130/10000] | d_real_loss: 0.1991 | d_Y_loss: 0.2059 | d_X_loss: 0.1675 | d_fake_loss: 0.3734 | g_loss: 2.5171
 Iteration [8140/10000] | d_real_loss: 0.0895 | d_Y_loss: 0.3104 | d_X_loss: 0.1707 | d_fake_loss: 0.4812 | g_loss: 2.8931
 Iteration [8150/10000] | d_real_loss: 0.1526 | d_Y_loss: 0.1754 | d_X_loss: 0.3179 | d_fake_loss: 0.4933 | g_loss: 2.6454
 Iteration [8160/10000] | d_real_loss: 0.1720 | d_Y_loss: 0.3545 | d_X_loss: 0.3352 | d_fake_loss: 0.6897 | g_loss: 2.6991

Iteration [8170/10000] | d_real_loss: 0.2000 | d_Y_loss: 0.1352 | d_X_loss: 0.1481 | d_fake_loss: 0.2833 | g_loss: 2.5268
 Iteration [8180/10000] | d_real_loss: 0.1024 | d_Y_loss: 0.1452 | d_X_loss: 0.0669 | d_fake_loss: 0.2120 | g_loss: 2.6148
 Iteration [8190/10000] | d_real_loss: 0.0600 | d_Y_loss: 0.1389 | d_X_loss: 0.0612 | d_fake_loss: 0.2001 | g_loss: 2.8098
 Iteration [8200/10000] | d_real_loss: 0.0471 | d_Y_loss: 0.2319 | d_X_loss: 0.0491 | d_fake_loss: 0.2810 | g_loss: 2.6540
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008200-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008200-Y-X.png
 Iteration [8210/10000] | d_real_loss: 0.0899 | d_Y_loss: 0.0939 | d_X_loss: 0.0320 | d_fake_loss: 0.1258 | g_loss: 2.6716
 Iteration [8220/10000] | d_real_loss: 0.0763 | d_Y_loss: 0.0815 | d_X_loss: 0.0376 | d_fake_loss: 0.1191 | g_loss: 2.7947
 Iteration [8230/10000] | d_real_loss: 0.0943 | d_Y_loss: 0.1104 | d_X_loss: 0.0303 | d_fake_loss: 0.1407 | g_loss: 2.7204
 Iteration [8240/10000] | d_real_loss: 0.0879 | d_Y_loss: 0.0953 | d_X_loss: 0.1562 | d_fake_loss: 0.2515 | g_loss: 2.7279
 Iteration [8250/10000] | d_real_loss: 0.1104 | d_Y_loss: 0.0806 | d_X_loss: 0.1041 | d_fake_loss: 0.1847 | g_loss: 2.8673
 Iteration [8260/10000] | d_real_loss: 0.0921 | d_Y_loss: 0.1116 | d_X_loss: 0.0259 | d_fake_loss: 0.1374 | g_loss: 2.7061
 Iteration [8270/10000] | d_real_loss: 0.0651 | d_Y_loss: 0.0924 | d_X_loss: 0.0852 | d_fake_loss: 0.1776 | g_loss: 2.7153
 Iteration [8280/10000] | d_real_loss: 0.0786 | d_Y_loss: 0.1114 | d_X_loss: 0.1665 | d_fake_loss: 0.2779 | g_loss: 2.7583
 Iteration [8290/10000] | d_real_loss: 0.0850 | d_Y_loss: 0.1223 | d_X_loss: 0.2224 | d_fake_loss: 0.3447 | g_loss: 2.9392
 Iteration [8300/10000] | d_real_loss: 0.0565 | d_Y_loss: 0.0708 | d_X_loss: 0.0762 | d_fake_loss: 0.1470 | g_loss: 3.1234
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008300-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008300-Y-X.png
 Iteration [8310/10000] | d_real_loss: 0.0796 | d_Y_loss: 0.0691 | d_X_loss: 0.1734 | d_fake_loss: 0.2425 | g_loss: 3.1874
 Iteration [8320/10000] | d_real_loss: 0.0851 | d_Y_loss: 0.0714 | d_X_loss: 0.0305 | d_fake_loss: 0.1019 | g_loss: 2.9181
 Iteration [8330/10000] | d_real_loss: 0.2386 | d_Y_loss: 0.0985 | d_X_loss: 0.1244 | d_fake_loss: 0.2230 | g_loss: 2.7922
 Iteration [8340/10000] | d_real_loss: 0.1376 | d_Y_loss: 0.0725 | d_X_loss: 0.0853 | d_fake_loss: 0.1577 | g_loss: 3.0378
 Iteration [8350/10000] | d_real_loss: 0.1807 | d_Y_loss: 0.2814 | d_X_loss: 0.0780 | d_fake_loss: 0.3594 | g_loss: 3.0572
 Iteration [8360/10000] | d_real_loss: 0.1642 | d_Y_loss: 0.0817 | d_X_loss: 0.0725 | d_fake_loss: 0.1542 | g_loss: 2.9852

```

Iteration [ 8370/10000] | d_real_loss: 0.0963 | d_Y_loss: 0.1528 | d_X_loss:
0.0362 | d_fake_loss: 0.1890 | g_loss: 3.0678
Iteration [ 8380/10000] | d_real_loss: 0.0837 | d_Y_loss: 0.3273 | d_X_loss:
0.1105 | d_fake_loss: 0.4378 | g_loss: 2.6216
Iteration [ 8390/10000] | d_real_loss: 0.2021 | d_Y_loss: 0.3808 | d_X_loss:
0.3347 | d_fake_loss: 0.7155 | g_loss: 3.0849
Iteration [ 8400/10000] | d_real_loss: 0.2387 | d_Y_loss: 0.0484 | d_X_loss:
0.0777 | d_fake_loss: 0.1261 | g_loss: 3.3041
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008400-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008400-
Y-X.png
Iteration [ 8410/10000] | d_real_loss: 0.1994 | d_Y_loss: 0.2760 | d_X_loss:
0.1355 | d_fake_loss: 0.4115 | g_loss: 2.8399
Iteration [ 8420/10000] | d_real_loss: 0.3216 | d_Y_loss: 0.1876 | d_X_loss:
0.0441 | d_fake_loss: 0.2317 | g_loss: 2.6227
Iteration [ 8430/10000] | d_real_loss: 0.1742 | d_Y_loss: 0.2816 | d_X_loss:
0.0901 | d_fake_loss: 0.3717 | g_loss: 2.6684
Iteration [ 8440/10000] | d_real_loss: 0.1510 | d_Y_loss: 0.4273 | d_X_loss:
0.2948 | d_fake_loss: 0.7221 | g_loss: 3.3350
Iteration [ 8450/10000] | d_real_loss: 0.1364 | d_Y_loss: 0.3173 | d_X_loss:
0.2257 | d_fake_loss: 0.5430 | g_loss: 3.0643
Iteration [ 8460/10000] | d_real_loss: 0.1536 | d_Y_loss: 0.1554 | d_X_loss:
0.1925 | d_fake_loss: 0.3479 | g_loss: 3.0100
Iteration [ 8470/10000] | d_real_loss: 0.3360 | d_Y_loss: 0.5143 | d_X_loss:
0.3685 | d_fake_loss: 0.8829 | g_loss: 2.3784
Iteration [ 8480/10000] | d_real_loss: 0.3306 | d_Y_loss: 0.5149 | d_X_loss:
0.0834 | d_fake_loss: 0.5982 | g_loss: 2.4902
Iteration [ 8490/10000] | d_real_loss: 0.1341 | d_Y_loss: 0.3055 | d_X_loss:
0.1474 | d_fake_loss: 0.4529 | g_loss: 2.7776
Iteration [ 8500/10000] | d_real_loss: 0.2421 | d_Y_loss: 0.1695 | d_X_loss:
0.0565 | d_fake_loss: 0.2260 | g_loss: 2.5476
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008500-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008500-
Y-X.png
Iteration [ 8510/10000] | d_real_loss: 0.1815 | d_Y_loss: 0.2574 | d_X_loss:
0.0561 | d_fake_loss: 0.3135 | g_loss: 2.7740
Iteration [ 8520/10000] | d_real_loss: 0.1175 | d_Y_loss: 0.3111 | d_X_loss:
0.0810 | d_fake_loss: 0.3922 | g_loss: 2.7924
Iteration [ 8530/10000] | d_real_loss: 0.2538 | d_Y_loss: 0.4426 | d_X_loss:
0.1731 | d_fake_loss: 0.6157 | g_loss: 2.6851
Iteration [ 8540/10000] | d_real_loss: 0.1911 | d_Y_loss: 0.3335 | d_X_loss:
0.0424 | d_fake_loss: 0.3759 | g_loss: 2.8793
Iteration [ 8550/10000] | d_real_loss: 0.1558 | d_Y_loss: 0.2727 | d_X_loss:
0.0402 | d_fake_loss: 0.3129 | g_loss: 2.8442
Iteration [ 8560/10000] | d_real_loss: 0.1675 | d_Y_loss: 0.3056 | d_X_loss:
0.1499 | d_fake_loss: 0.4556 | g_loss: 2.9137

```

```

Iteration [ 8570/10000] | d_real_loss: 0.1071 | d_Y_loss: 0.3170 | d_X_loss:
0.0666 | d_fake_loss: 0.3837 | g_loss: 2.7821
Iteration [ 8580/10000] | d_real_loss: 0.0921 | d_Y_loss: 0.4304 | d_X_loss:
0.0522 | d_fake_loss: 0.4826 | g_loss: 3.0786
Iteration [ 8590/10000] | d_real_loss: 0.0797 | d_Y_loss: 0.2963 | d_X_loss:
0.0234 | d_fake_loss: 0.3197 | g_loss: 3.0003
Iteration [ 8600/10000] | d_real_loss: 0.0883 | d_Y_loss: 0.1593 | d_X_loss:
0.0260 | d_fake_loss: 0.1853 | g_loss: 2.7684
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008600-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008600-
Y-X.png
Iteration [ 8610/10000] | d_real_loss: 0.0719 | d_Y_loss: 0.4600 | d_X_loss:
0.1301 | d_fake_loss: 0.5901 | g_loss: 3.0419
Iteration [ 8620/10000] | d_real_loss: 0.0707 | d_Y_loss: 0.3954 | d_X_loss:
0.0289 | d_fake_loss: 0.4243 | g_loss: 2.8412
Iteration [ 8630/10000] | d_real_loss: 0.1864 | d_Y_loss: 0.1976 | d_X_loss:
0.0291 | d_fake_loss: 0.2267 | g_loss: 2.6866
Iteration [ 8640/10000] | d_real_loss: 0.6388 | d_Y_loss: 0.2762 | d_X_loss:
0.0360 | d_fake_loss: 0.3122 | g_loss: 2.7650
Iteration [ 8650/10000] | d_real_loss: 0.0715 | d_Y_loss: 0.2898 | d_X_loss:
0.0457 | d_fake_loss: 0.3355 | g_loss: 2.5627
Iteration [ 8660/10000] | d_real_loss: 0.0976 | d_Y_loss: 0.2878 | d_X_loss:
0.0598 | d_fake_loss: 0.3477 | g_loss: 2.7218
Iteration [ 8670/10000] | d_real_loss: 0.1856 | d_Y_loss: 0.1804 | d_X_loss:
0.0425 | d_fake_loss: 0.2229 | g_loss: 2.7996
Iteration [ 8680/10000] | d_real_loss: 0.1782 | d_Y_loss: 0.2479 | d_X_loss:
0.1572 | d_fake_loss: 0.4051 | g_loss: 2.8945
Iteration [ 8690/10000] | d_real_loss: 0.0729 | d_Y_loss: 0.3390 | d_X_loss:
0.0322 | d_fake_loss: 0.3712 | g_loss: 3.0488
Iteration [ 8700/10000] | d_real_loss: 0.1302 | d_Y_loss: 0.3743 | d_X_loss:
0.0388 | d_fake_loss: 0.4131 | g_loss: 2.7539
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008700-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008700-
Y-X.png
Iteration [ 8710/10000] | d_real_loss: 0.1216 | d_Y_loss: 0.2483 | d_X_loss:
0.0278 | d_fake_loss: 0.2761 | g_loss: 2.6254
Iteration [ 8720/10000] | d_real_loss: 0.0786 | d_Y_loss: 0.1295 | d_X_loss:
0.0422 | d_fake_loss: 0.1717 | g_loss: 2.7229
Iteration [ 8730/10000] | d_real_loss: 0.1354 | d_Y_loss: 0.2892 | d_X_loss:
0.0350 | d_fake_loss: 0.3242 | g_loss: 2.5877
Iteration [ 8740/10000] | d_real_loss: 0.1200 | d_Y_loss: 0.3881 | d_X_loss:
0.0860 | d_fake_loss: 0.4741 | g_loss: 2.6712
Iteration [ 8750/10000] | d_real_loss: 0.1233 | d_Y_loss: 0.1074 | d_X_loss:
0.0525 | d_fake_loss: 0.1599 | g_loss: 2.8036
Iteration [ 8760/10000] | d_real_loss: 0.2962 | d_Y_loss: 0.2281 | d_X_loss:
0.0955 | d_fake_loss: 0.3236 | g_loss: 2.6696

```


Iteration [8770/10000] | d_real_loss: 0.1115 | d_Y_loss: 0.4714 | d_X_loss: 0.0671 | d_fake_loss: 0.5385 | g_loss: 2.3805
 Iteration [8780/10000] | d_real_loss: 0.1960 | d_Y_loss: 0.2834 | d_X_loss: 0.1450 | d_fake_loss: 0.4284 | g_loss: 2.3970
 Iteration [8790/10000] | d_real_loss: 0.1369 | d_Y_loss: 0.6020 | d_X_loss: 0.0508 | d_fake_loss: 0.6527 | g_loss: 2.8204
 Iteration [8800/10000] | d_real_loss: 0.1474 | d_Y_loss: 0.3039 | d_X_loss: 0.1305 | d_fake_loss: 0.4344 | g_loss: 2.6894
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008800-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008800-Y-X.png
 Iteration [8810/10000] | d_real_loss: 0.1023 | d_Y_loss: 0.2450 | d_X_loss: 0.2753 | d_fake_loss: 0.5202 | g_loss: 2.8768
 Iteration [8820/10000] | d_real_loss: 0.3996 | d_Y_loss: 0.1633 | d_X_loss: 0.0783 | d_fake_loss: 0.2416 | g_loss: 2.5660
 Iteration [8830/10000] | d_real_loss: 0.1558 | d_Y_loss: 0.1193 | d_X_loss: 0.0337 | d_fake_loss: 0.1530 | g_loss: 2.7876
 Iteration [8840/10000] | d_real_loss: 0.0704 | d_Y_loss: 0.5260 | d_X_loss: 0.1432 | d_fake_loss: 0.6693 | g_loss: 2.7506
 Iteration [8850/10000] | d_real_loss: 0.1608 | d_Y_loss: 0.3221 | d_X_loss: 0.0615 | d_fake_loss: 0.3836 | g_loss: 2.6588
 Iteration [8860/10000] | d_real_loss: 0.1185 | d_Y_loss: 0.3032 | d_X_loss: 0.2083 | d_fake_loss: 0.5115 | g_loss: 2.9880
 Iteration [8870/10000] | d_real_loss: 0.1013 | d_Y_loss: 0.1091 | d_X_loss: 0.0695 | d_fake_loss: 0.1786 | g_loss: 2.6869
 Iteration [8880/10000] | d_real_loss: 0.1162 | d_Y_loss: 0.2510 | d_X_loss: 0.1976 | d_fake_loss: 0.4485 | g_loss: 2.8496
 Iteration [8890/10000] | d_real_loss: 0.2459 | d_Y_loss: 0.1954 | d_X_loss: 0.1698 | d_fake_loss: 0.3651 | g_loss: 2.6959
 Iteration [8900/10000] | d_real_loss: 0.1850 | d_Y_loss: 0.2563 | d_X_loss: 0.0754 | d_fake_loss: 0.3316 | g_loss: 2.4985
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008900-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-008900-Y-X.png
 Iteration [8910/10000] | d_real_loss: 0.0850 | d_Y_loss: 0.2134 | d_X_loss: 0.5901 | d_fake_loss: 0.8035 | g_loss: 2.8659
 Iteration [8920/10000] | d_real_loss: 0.2217 | d_Y_loss: 0.2582 | d_X_loss: 0.1681 | d_fake_loss: 0.4262 | g_loss: 2.8674
 Iteration [8930/10000] | d_real_loss: 0.0995 | d_Y_loss: 0.2974 | d_X_loss: 0.1458 | d_fake_loss: 0.4432 | g_loss: 2.8182
 Iteration [8940/10000] | d_real_loss: 0.1995 | d_Y_loss: 0.2521 | d_X_loss: 0.2212 | d_fake_loss: 0.4733 | g_loss: 2.7513
 Iteration [8950/10000] | d_real_loss: 0.1525 | d_Y_loss: 0.3896 | d_X_loss: 0.0766 | d_fake_loss: 0.4662 | g_loss: 3.0286
 Iteration [8960/10000] | d_real_loss: 0.1655 | d_Y_loss: 0.2107 | d_X_loss: 0.1119 | d_fake_loss: 0.3226 | g_loss: 2.5897

```

Iteration [ 8970/10000] | d_real_loss: 0.0989 | d_Y_loss: 0.3028 | d_X_loss:
0.0941 | d_fake_loss: 0.3969 | g_loss: 2.7572
Iteration [ 8980/10000] | d_real_loss: 0.1277 | d_Y_loss: 0.1508 | d_X_loss:
0.0489 | d_fake_loss: 0.1997 | g_loss: 2.8049
Iteration [ 8990/10000] | d_real_loss: 0.0923 | d_Y_loss: 0.2044 | d_X_loss:
0.0482 | d_fake_loss: 0.2526 | g_loss: 2.8173
Iteration [ 9000/10000] | d_real_loss: 0.0868 | d_Y_loss: 0.4621 | d_X_loss:
0.0493 | d_fake_loss: 0.5114 | g_loss: 2.9417
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009000-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009000-
Y-X.png
Iteration [ 9010/10000] | d_real_loss: 0.1203 | d_Y_loss: 0.2341 | d_X_loss:
0.0335 | d_fake_loss: 0.2676 | g_loss: 2.5979
Iteration [ 9020/10000] | d_real_loss: 0.1077 | d_Y_loss: 0.1988 | d_X_loss:
0.0571 | d_fake_loss: 0.2559 | g_loss: 2.8476
Iteration [ 9030/10000] | d_real_loss: 0.1686 | d_Y_loss: 0.2065 | d_X_loss:
0.0639 | d_fake_loss: 0.2705 | g_loss: 2.8153
Iteration [ 9040/10000] | d_real_loss: 0.0505 | d_Y_loss: 0.2133 | d_X_loss:
0.0380 | d_fake_loss: 0.2513 | g_loss: 2.9080
Iteration [ 9050/10000] | d_real_loss: 0.1698 | d_Y_loss: 0.2333 | d_X_loss:
0.0498 | d_fake_loss: 0.2831 | g_loss: 2.8244
Iteration [ 9060/10000] | d_real_loss: 0.0798 | d_Y_loss: 0.2474 | d_X_loss:
0.0346 | d_fake_loss: 0.2821 | g_loss: 2.8881
Iteration [ 9070/10000] | d_real_loss: 0.0907 | d_Y_loss: 0.2337 | d_X_loss:
0.0245 | d_fake_loss: 0.2582 | g_loss: 2.7746
Iteration [ 9080/10000] | d_real_loss: 0.0901 | d_Y_loss: 0.0857 | d_X_loss:
0.0447 | d_fake_loss: 0.1304 | g_loss: 2.8350
Iteration [ 9090/10000] | d_real_loss: 0.1042 | d_Y_loss: 0.2848 | d_X_loss:
0.0164 | d_fake_loss: 0.3012 | g_loss: 2.9658
Iteration [ 9100/10000] | d_real_loss: 0.2212 | d_Y_loss: 0.1849 | d_X_loss:
0.0141 | d_fake_loss: 0.1991 | g_loss: 2.7025
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009100-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009100-
Y-X.png
Iteration [ 9110/10000] | d_real_loss: 0.0958 | d_Y_loss: 0.2377 | d_X_loss:
0.0294 | d_fake_loss: 0.2671 | g_loss: 2.5294
Iteration [ 9120/10000] | d_real_loss: 0.1527 | d_Y_loss: 0.3561 | d_X_loss:
0.0359 | d_fake_loss: 0.3920 | g_loss: 3.0000
Iteration [ 9130/10000] | d_real_loss: 0.0977 | d_Y_loss: 0.2310 | d_X_loss:
0.0207 | d_fake_loss: 0.2518 | g_loss: 2.7277
Iteration [ 9140/10000] | d_real_loss: 0.0616 | d_Y_loss: 0.1592 | d_X_loss:
0.0232 | d_fake_loss: 0.1824 | g_loss: 2.8490
Iteration [ 9150/10000] | d_real_loss: 0.1414 | d_Y_loss: 0.1615 | d_X_loss:
0.0188 | d_fake_loss: 0.1803 | g_loss: 2.7555
Iteration [ 9160/10000] | d_real_loss: 0.0847 | d_Y_loss: 0.1376 | d_X_loss:
0.0229 | d_fake_loss: 0.1605 | g_loss: 2.9101

```

Iteration [9170/10000] | d_real_loss: 0.1396 | d_Y_loss: 0.2302 | d_X_loss: 0.0215 | d_fake_loss: 0.2516 | g_loss: 2.6896
 Iteration [9180/10000] | d_real_loss: 0.0431 | d_Y_loss: 0.3289 | d_X_loss: 0.0367 | d_fake_loss: 0.3656 | g_loss: 2.7609
 Iteration [9190/10000] | d_real_loss: 0.1446 | d_Y_loss: 0.2782 | d_X_loss: 0.0744 | d_fake_loss: 0.3526 | g_loss: 3.0188
 Iteration [9200/10000] | d_real_loss: 0.0920 | d_Y_loss: 0.1436 | d_X_loss: 0.0231 | d_fake_loss: 0.1667 | g_loss: 2.7862
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009200-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009200-Y-X.png
 Iteration [9210/10000] | d_real_loss: 0.1723 | d_Y_loss: 0.2787 | d_X_loss: 0.0170 | d_fake_loss: 0.2957 | g_loss: 2.7530
 Iteration [9220/10000] | d_real_loss: 0.1518 | d_Y_loss: 0.1955 | d_X_loss: 0.0424 | d_fake_loss: 0.2379 | g_loss: 2.7371
 Iteration [9230/10000] | d_real_loss: 0.2315 | d_Y_loss: 0.0708 | d_X_loss: 0.0142 | d_fake_loss: 0.0850 | g_loss: 2.8974
 Iteration [9240/10000] | d_real_loss: 0.1057 | d_Y_loss: 0.1772 | d_X_loss: 0.4829 | d_fake_loss: 0.6600 | g_loss: 2.8628
 Iteration [9250/10000] | d_real_loss: 0.0975 | d_Y_loss: 0.3386 | d_X_loss: 0.6083 | d_fake_loss: 0.9468 | g_loss: 3.1923
 Iteration [9260/10000] | d_real_loss: 0.1123 | d_Y_loss: 0.1312 | d_X_loss: 0.2395 | d_fake_loss: 0.3707 | g_loss: 2.7763
 Iteration [9270/10000] | d_real_loss: 0.1290 | d_Y_loss: 0.1532 | d_X_loss: 0.0852 | d_fake_loss: 0.2383 | g_loss: 2.8304
 Iteration [9280/10000] | d_real_loss: 0.0803 | d_Y_loss: 0.2470 | d_X_loss: 0.0984 | d_fake_loss: 0.3454 | g_loss: 3.0413
 Iteration [9290/10000] | d_real_loss: 0.1903 | d_Y_loss: 0.2967 | d_X_loss: 0.0651 | d_fake_loss: 0.3617 | g_loss: 3.0970
 Iteration [9300/10000] | d_real_loss: 0.0554 | d_Y_loss: 0.1148 | d_X_loss: 0.0976 | d_fake_loss: 0.2123 | g_loss: 3.1608
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009300-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009300-Y-X.png
 Iteration [9310/10000] | d_real_loss: 0.1543 | d_Y_loss: 0.3738 | d_X_loss: 0.2741 | d_fake_loss: 0.6479 | g_loss: 3.1382
 Iteration [9320/10000] | d_real_loss: 0.1293 | d_Y_loss: 0.2629 | d_X_loss: 0.0978 | d_fake_loss: 0.3607 | g_loss: 2.7703
 Iteration [9330/10000] | d_real_loss: 0.0452 | d_Y_loss: 0.6172 | d_X_loss: 0.0944 | d_fake_loss: 0.7116 | g_loss: 3.2356
 Iteration [9340/10000] | d_real_loss: 0.1303 | d_Y_loss: 0.4238 | d_X_loss: 0.0329 | d_fake_loss: 0.4567 | g_loss: 2.9180
 Iteration [9350/10000] | d_real_loss: 0.1412 | d_Y_loss: 0.2352 | d_X_loss: 0.2156 | d_fake_loss: 0.4508 | g_loss: 3.1554
 Iteration [9360/10000] | d_real_loss: 0.1080 | d_Y_loss: 0.6617 | d_X_loss: 0.3044 | d_fake_loss: 0.9661 | g_loss: 3.1303

```

Iteration [ 9370/10000] | d_real_loss: 0.1455 | d_Y_loss: 0.3997 | d_X_loss:
0.0647 | d_fake_loss: 0.4644 | g_loss: 2.6059
Iteration [ 9380/10000] | d_real_loss: 0.1428 | d_Y_loss: 0.2163 | d_X_loss:
0.1142 | d_fake_loss: 0.3306 | g_loss: 2.5707
Iteration [ 9390/10000] | d_real_loss: 0.1232 | d_Y_loss: 0.1072 | d_X_loss:
0.0524 | d_fake_loss: 0.1596 | g_loss: 2.7578
Iteration [ 9400/10000] | d_real_loss: 0.2450 | d_Y_loss: 0.2333 | d_X_loss:
0.0758 | d_fake_loss: 0.3091 | g_loss: 3.2145
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009400-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009400-
Y-X.png
Iteration [ 9410/10000] | d_real_loss: 0.2849 | d_Y_loss: 0.2632 | d_X_loss:
0.1780 | d_fake_loss: 0.4412 | g_loss: 2.5381
Iteration [ 9420/10000] | d_real_loss: 0.1547 | d_Y_loss: 0.3481 | d_X_loss:
0.1198 | d_fake_loss: 0.4679 | g_loss: 2.8045
Iteration [ 9430/10000] | d_real_loss: 0.1833 | d_Y_loss: 0.2018 | d_X_loss:
0.3929 | d_fake_loss: 0.5947 | g_loss: 2.6501
Iteration [ 9440/10000] | d_real_loss: 0.1025 | d_Y_loss: 0.2629 | d_X_loss:
0.2180 | d_fake_loss: 0.4810 | g_loss: 2.8964
Iteration [ 9450/10000] | d_real_loss: 0.1410 | d_Y_loss: 0.1350 | d_X_loss:
0.0538 | d_fake_loss: 0.1888 | g_loss: 2.8903
Iteration [ 9460/10000] | d_real_loss: 0.1560 | d_Y_loss: 0.0991 | d_X_loss:
0.1892 | d_fake_loss: 0.2883 | g_loss: 2.9230
Iteration [ 9470/10000] | d_real_loss: 0.0833 | d_Y_loss: 0.0878 | d_X_loss:
0.0874 | d_fake_loss: 0.1752 | g_loss: 3.1387
Iteration [ 9480/10000] | d_real_loss: 0.2064 | d_Y_loss: 0.2371 | d_X_loss:
0.0817 | d_fake_loss: 0.3187 | g_loss: 2.9574
Iteration [ 9490/10000] | d_real_loss: 0.0880 | d_Y_loss: 0.2536 | d_X_loss:
0.0517 | d_fake_loss: 0.3054 | g_loss: 3.1093
Iteration [ 9500/10000] | d_real_loss: 0.1117 | d_Y_loss: 0.7176 | d_X_loss:
0.0628 | d_fake_loss: 0.7804 | g_loss: 2.8237
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009500-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009500-
Y-X.png
Iteration [ 9510/10000] | d_real_loss: 0.2041 | d_Y_loss: 0.5662 | d_X_loss:
0.0540 | d_fake_loss: 0.6202 | g_loss: 3.0105
Iteration [ 9520/10000] | d_real_loss: 0.2163 | d_Y_loss: 0.4919 | d_X_loss:
0.0246 | d_fake_loss: 0.5165 | g_loss: 2.6646
Iteration [ 9530/10000] | d_real_loss: 0.1755 | d_Y_loss: 0.5354 | d_X_loss:
0.0441 | d_fake_loss: 0.5795 | g_loss: 2.7797
Iteration [ 9540/10000] | d_real_loss: 0.1791 | d_Y_loss: 0.1569 | d_X_loss:
0.0197 | d_fake_loss: 0.1766 | g_loss: 2.6293
Iteration [ 9550/10000] | d_real_loss: 0.2703 | d_Y_loss: 0.3878 | d_X_loss:
0.0399 | d_fake_loss: 0.4277 | g_loss: 2.6893
Iteration [ 9560/10000] | d_real_loss: 0.1043 | d_Y_loss: 0.2181 | d_X_loss:
0.0619 | d_fake_loss: 0.2800 | g_loss: 2.7162

```

Iteration [9570/10000] | d_real_loss: 0.1250 | d_Y_loss: 0.1656 | d_X_loss: 0.0734 | d_fake_loss: 0.2390 | g_loss: 2.7382
 Iteration [9580/10000] | d_real_loss: 0.1985 | d_Y_loss: 0.2991 | d_X_loss: 0.2954 | d_fake_loss: 0.5945 | g_loss: 2.5276
 Iteration [9590/10000] | d_real_loss: 0.0927 | d_Y_loss: 0.2685 | d_X_loss: 0.1220 | d_fake_loss: 0.3906 | g_loss: 3.0028
 Iteration [9600/10000] | d_real_loss: 0.1051 | d_Y_loss: 0.2775 | d_X_loss: 0.0650 | d_fake_loss: 0.3426 | g_loss: 2.9472
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009600-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009600-Y-X.png
 Iteration [9610/10000] | d_real_loss: 0.1160 | d_Y_loss: 0.1837 | d_X_loss: 0.0433 | d_fake_loss: 0.2270 | g_loss: 2.8060
 Iteration [9620/10000] | d_real_loss: 0.1343 | d_Y_loss: 0.1528 | d_X_loss: 0.0388 | d_fake_loss: 0.1916 | g_loss: 2.9612
 Iteration [9630/10000] | d_real_loss: 0.0813 | d_Y_loss: 0.3330 | d_X_loss: 0.0376 | d_fake_loss: 0.3706 | g_loss: 3.1968
 Iteration [9640/10000] | d_real_loss: 0.0935 | d_Y_loss: 0.1317 | d_X_loss: 0.0258 | d_fake_loss: 0.1575 | g_loss: 2.7767
 Iteration [9650/10000] | d_real_loss: 0.0972 | d_Y_loss: 0.1599 | d_X_loss: 0.0514 | d_fake_loss: 0.2113 | g_loss: 2.9092
 Iteration [9660/10000] | d_real_loss: 0.1474 | d_Y_loss: 0.1684 | d_X_loss: 0.0647 | d_fake_loss: 0.2331 | g_loss: 2.7272
 Iteration [9670/10000] | d_real_loss: 0.1461 | d_Y_loss: 0.2053 | d_X_loss: 0.0279 | d_fake_loss: 0.2332 | g_loss: 2.8166
 Iteration [9680/10000] | d_real_loss: 0.1667 | d_Y_loss: 0.3220 | d_X_loss: 0.0251 | d_fake_loss: 0.3472 | g_loss: 2.9750
 Iteration [9690/10000] | d_real_loss: 0.1104 | d_Y_loss: 0.1413 | d_X_loss: 0.0745 | d_fake_loss: 0.2158 | g_loss: 2.7981
 Iteration [9700/10000] | d_real_loss: 0.0682 | d_Y_loss: 0.1079 | d_X_loss: 0.0238 | d_fake_loss: 0.1317 | g_loss: 3.0575
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009700-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009700-Y-X.png
 Iteration [9710/10000] | d_real_loss: 0.0895 | d_Y_loss: 0.2998 | d_X_loss: 0.0678 | d_fake_loss: 0.3676 | g_loss: 3.3522
 Iteration [9720/10000] | d_real_loss: 0.0945 | d_Y_loss: 0.3304 | d_X_loss: 0.1999 | d_fake_loss: 0.5303 | g_loss: 3.3124
 Iteration [9730/10000] | d_real_loss: 0.0536 | d_Y_loss: 0.3136 | d_X_loss: 0.0669 | d_fake_loss: 0.3805 | g_loss: 3.1888
 Iteration [9740/10000] | d_real_loss: 0.0957 | d_Y_loss: 0.3139 | d_X_loss: 0.0286 | d_fake_loss: 0.3425 | g_loss: 2.9651
 Iteration [9750/10000] | d_real_loss: 0.0670 | d_Y_loss: 0.2284 | d_X_loss: 0.0386 | d_fake_loss: 0.2670 | g_loss: 3.1435
 Iteration [9760/10000] | d_real_loss: 0.0697 | d_Y_loss: 0.3337 | d_X_loss: 0.0206 | d_fake_loss: 0.3543 | g_loss: 3.4579

```

Iteration [ 9770/10000] | d_real_loss: 0.1174 | d_Y_loss: 0.1588 | d_X_loss:
0.0360 | d_fake_loss: 0.1948 | g_loss: 3.0801
Iteration [ 9780/10000] | d_real_loss: 0.0746 | d_Y_loss: 0.2334 | d_X_loss:
0.0309 | d_fake_loss: 0.2642 | g_loss: 3.1246
Iteration [ 9790/10000] | d_real_loss: 0.0768 | d_Y_loss: 0.1884 | d_X_loss:
0.0254 | d_fake_loss: 0.2138 | g_loss: 2.9007
Iteration [ 9800/10000] | d_real_loss: 0.0655 | d_Y_loss: 0.1015 | d_X_loss:
0.0209 | d_fake_loss: 0.1224 | g_loss: 2.8786
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009800-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009800-
Y-X.png
Iteration [ 9810/10000] | d_real_loss: 0.0761 | d_Y_loss: 0.3095 | d_X_loss:
0.0152 | d_fake_loss: 0.3247 | g_loss: 3.1237
Iteration [ 9820/10000] | d_real_loss: 0.1128 | d_Y_loss: 0.0858 | d_X_loss:
0.0487 | d_fake_loss: 0.1345 | g_loss: 2.9174
Iteration [ 9830/10000] | d_real_loss: 0.2319 | d_Y_loss: 0.1037 | d_X_loss:
0.0200 | d_fake_loss: 0.1237 | g_loss: 2.7387
Iteration [ 9840/10000] | d_real_loss: 0.0646 | d_Y_loss: 0.4102 | d_X_loss:
0.0241 | d_fake_loss: 0.4342 | g_loss: 3.0953
Iteration [ 9850/10000] | d_real_loss: 0.1320 | d_Y_loss: 0.6867 | d_X_loss:
0.0172 | d_fake_loss: 0.7040 | g_loss: 3.1485
Iteration [ 9860/10000] | d_real_loss: 0.1151 | d_Y_loss: 0.3395 | d_X_loss:
0.0175 | d_fake_loss: 0.3570 | g_loss: 2.9246
Iteration [ 9870/10000] | d_real_loss: 0.0797 | d_Y_loss: 0.1977 | d_X_loss:
0.0159 | d_fake_loss: 0.2136 | g_loss: 2.8588
Iteration [ 9880/10000] | d_real_loss: 0.0753 | d_Y_loss: 0.1348 | d_X_loss:
0.0204 | d_fake_loss: 0.1553 | g_loss: 2.8445
Iteration [ 9890/10000] | d_real_loss: 0.1046 | d_Y_loss: 0.1993 | d_X_loss:
0.0152 | d_fake_loss: 0.2145 | g_loss: 2.9634
Iteration [ 9900/10000] | d_real_loss: 0.0375 | d_Y_loss: 0.3634 | d_X_loss:
0.0226 | d_fake_loss: 0.3861 | g_loss: 3.2224
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009900-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-009900-
Y-X.png
Iteration [ 9910/10000] | d_real_loss: 0.0371 | d_Y_loss: 0.4157 | d_X_loss:
0.0180 | d_fake_loss: 0.4336 | g_loss: 3.0316
Iteration [ 9920/10000] | d_real_loss: 0.0867 | d_Y_loss: 0.1681 | d_X_loss:
0.0157 | d_fake_loss: 0.1838 | g_loss: 2.9887
Iteration [ 9930/10000] | d_real_loss: 0.0619 | d_Y_loss: 0.2659 | d_X_loss:
0.0137 | d_fake_loss: 0.2796 | g_loss: 3.0186
Iteration [ 9940/10000] | d_real_loss: 0.1104 | d_Y_loss: 0.1592 | d_X_loss:
0.0164 | d_fake_loss: 0.1756 | g_loss: 2.7927
Iteration [ 9950/10000] | d_real_loss: 0.0479 | d_Y_loss: 0.0610 | d_X_loss:
0.0142 | d_fake_loss: 0.0752 | g_loss: 3.0886
Iteration [ 9960/10000] | d_real_loss: 0.0345 | d_Y_loss: 0.0869 | d_X_loss:
0.0164 | d_fake_loss: 0.1034 | g_loss: 2.9042

```

```

Iteration [ 9970/10000] | d_real_loss: 0.0525 | d_Y_loss: 0.2260 | d_X_loss:
0.0205 | d_fake_loss: 0.2465 | g_loss: 3.0345
Iteration [ 9980/10000] | d_real_loss: 0.1252 | d_Y_loss: 0.3114 | d_X_loss:
0.0119 | d_fake_loss: 0.3234 | g_loss: 3.2375
Iteration [ 9990/10000] | d_real_loss: 0.0479 | d_Y_loss: 0.1523 | d_X_loss:
0.0135 | d_fake_loss: 0.1658 | g_loss: 2.9755
Iteration [10000/10000] | d_real_loss: 0.0545 | d_Y_loss: 0.2115 | d_X_loss:
0.0185 | d_fake_loss: 0.2300 | g_loss: 3.2117
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-010000-
X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive\sample-010000-
Y-X.png

```

2025-04-18 19:12:36.649817: I tensorflow/core/util/port.cc:153] oneDNN custom operations are on. You may see slightly different numerical results due to floating-point round-off errors from different computation orders. To turn them off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.

2025-04-18 19:12:37.605297: I tensorflow/core/util/port.cc:153] oneDNN custom operations are on. You may see slightly different numerical results due to floating-point round-off errors from different computation orders. To turn them off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.

```

[4]: !python cycle_gan.py --train_iters=10000 --sample_dir=cycle_gan_10000_
      ↪--use_cycle_consistency_loss

```

```

=====
                                Opts
-----
                                image_size: 64
                                disc: dc
                                gen: cycle
                                g_conv_dim: 32
                                d_conv_dim: 32
                                norm: instance
                                use_cycle_consistency_loss: 1
                                init_type: naive
                                train_iters: 10000
                                batch_size: 16
                                lr: 0.0003
                                beta1: 0.5
                                beta2: 0.999
                                lambda_cycle: 10
                                X: cat/grumpifyAprocessed
                                Y: cat/grumpifyBprocessed
                                ext: *.png
                                data_aug: deluxe
                                checkpoint_dir: checkpoints_cyclegan
                                sample_dir:
                                output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle

```

```

log_step: 10
sample_every: 100
checkpoint_every: 800
gpu: 0

```

```
=====
```

```

data/cat/grumpifyAprocessed\*.png
75
data/cat/grumpifyBprocessed\*.png
204

```

G_XtoY

```
-----
```

```

CycleGenerator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
    (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv2): Sequential(
    (0): Conv2d(32, 64, kernel_size=(3, 3), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (resnet_block): Sequential(
    (0): ResnetBlock(
      (conv_layer): Sequential(
        (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
      )
    )
    (1): ResnetBlock(
      (conv_layer): Sequential(
        (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
      )
    )
    (2): ResnetBlock(
      (conv_layer): Sequential(
        (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
      )
    )
  )
)

```



```

    )
)
(deconv1): Sequential(
  (0): ConvTranspose2d(64, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1,
1), bias=False)
  (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
)
(deconv2): Sequential(
  (0): Conv2d(32, 3, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
  (1): Tanh()
)
)
-----
                        G_YtoX
-----
CycleGenerator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
    (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv2): Sequential(
    (0): Conv2d(32, 64, kernel_size=(3, 3), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (resnet_block): Sequential(
    (0): ResnetBlock(
      (conv_layer): Sequential(
        (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
      )
    )
    (1): ResnetBlock(
      (conv_layer): Sequential(
        (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
        (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
      )
    )
    (2): ResnetBlock(

```

```

        (conv_layer): Sequential(
          (0): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1),
bias=False)
          (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
        )
      )
    )
    (deconv1): Sequential(
      (0): ConvTranspose2d(64, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1,
1), bias=False)
      (1): InstanceNorm2d(32, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
    )
    (deconv2): Sequential(
      (0): Conv2d(32, 3, kernel_size=(7, 7), stride=(1, 1), padding=(3, 3),
bias=False)
      (1): Tanh()
    )
  )

```

D_X

```

DCDiscriminator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
  )
  (conv2): Sequential(
    (0): Conv2d(32, 64, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv3): Sequential(
    (0): Conv2d(64, 128, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(128, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv4): Sequential(
    (0): Conv2d(128, 256, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(256, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv5): Sequential(
    (0): AdaptiveAvgPool2d(output_size=1)
  )

```

```

        (1): Conv2d(256, 1, kernel_size=(1, 1), stride=(1, 1), bias=False)
    )
)
-----
                        D_Y
-----
DCDiscriminator(
  (conv1): Sequential(
    (0): Conv2d(3, 32, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
  )
  (conv2): Sequential(
    (0): Conv2d(32, 64, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(64, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv3): Sequential(
    (0): Conv2d(64, 128, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(128, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv4): Sequential(
    (0): Conv2d(128, 256, kernel_size=(4, 4), stride=(2, 2), padding=(1, 1),
bias=False)
    (1): InstanceNorm2d(256, eps=1e-05, momentum=0.1, affine=False,
track_running_stats=False)
  )
  (conv5): Sequential(
    (0): AdaptiveAvgPool2d(output_size=1)
    (1): Conv2d(256, 1, kernel_size=(1, 1), stride=(1, 1), bias=False)
  )
)
-----

```

Models moved to GPU.

```

Iteration [ 10/10000] | d_real_loss: 1.0476 | d_Y_loss: 0.9047 | d_X_loss:
0.7510 | d_fake_loss: 1.6557 | g_loss: 2.8061
Iteration [ 20/10000] | d_real_loss: 0.9202 | d_Y_loss: 0.9187 | d_X_loss:
0.7586 | d_fake_loss: 1.6773 | g_loss: 2.5734
Iteration [ 30/10000] | d_real_loss: 0.8364 | d_Y_loss: 0.8978 | d_X_loss:
0.7204 | d_fake_loss: 1.6182 | g_loss: 2.6365
Iteration [ 40/10000] | d_real_loss: 0.7716 | d_Y_loss: 0.8747 | d_X_loss:
0.7104 | d_fake_loss: 1.5851 | g_loss: 2.2327
Iteration [ 50/10000] | d_real_loss: 0.7317 | d_Y_loss: 0.8401 | d_X_loss:
0.6880 | d_fake_loss: 1.5280 | g_loss: 2.4410
Iteration [ 60/10000] | d_real_loss: 0.7378 | d_Y_loss: 0.8155 | d_X_loss:
0.7386 | d_fake_loss: 1.5540 | g_loss: 2.2911

```

```

Iteration [ 70/10000] | d_real_loss: 0.6922 | d_Y_loss: 0.8088 | d_X_loss:
0.7006 | d_fake_loss: 1.5094 | g_loss: 2.8460
Iteration [ 80/10000] | d_real_loss: 0.6804 | d_Y_loss: 0.7766 | d_X_loss:
0.7447 | d_fake_loss: 1.5213 | g_loss: 2.1562
Iteration [ 90/10000] | d_real_loss: 0.6483 | d_Y_loss: 0.7644 | d_X_loss:
0.7116 | d_fake_loss: 1.4760 | g_loss: 2.3964
Iteration [ 100/10000] | d_real_loss: 0.6248 | d_Y_loss: 0.7613 | d_X_loss:
0.7239 | d_fake_loss: 1.4852 | g_loss: 2.6882
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000100-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000100-Y-X.png
Iteration [ 110/10000] | d_real_loss: 0.5874 | d_Y_loss: 0.7215 | d_X_loss:
0.6890 | d_fake_loss: 1.4105 | g_loss: 2.3125
Iteration [ 120/10000] | d_real_loss: 0.5869 | d_Y_loss: 0.7040 | d_X_loss:
0.7063 | d_fake_loss: 1.4103 | g_loss: 2.6459
Iteration [ 130/10000] | d_real_loss: 0.5880 | d_Y_loss: 0.7087 | d_X_loss:
0.6827 | d_fake_loss: 1.3914 | g_loss: 2.0167
Iteration [ 140/10000] | d_real_loss: 0.5415 | d_Y_loss: 0.6900 | d_X_loss:
0.6532 | d_fake_loss: 1.3432 | g_loss: 2.1188
Iteration [ 150/10000] | d_real_loss: 0.5537 | d_Y_loss: 0.6924 | d_X_loss:
0.6659 | d_fake_loss: 1.3583 | g_loss: 2.2419
Iteration [ 160/10000] | d_real_loss: 0.5671 | d_Y_loss: 0.6693 | d_X_loss:
0.7496 | d_fake_loss: 1.4189 | g_loss: 2.0852
Iteration [ 170/10000] | d_real_loss: 0.6155 | d_Y_loss: 0.6303 | d_X_loss:
0.7079 | d_fake_loss: 1.3381 | g_loss: 2.2245
Iteration [ 180/10000] | d_real_loss: 0.5366 | d_Y_loss: 0.6292 | d_X_loss:
0.6089 | d_fake_loss: 1.2381 | g_loss: 2.1663
Iteration [ 190/10000] | d_real_loss: 0.5161 | d_Y_loss: 0.6160 | d_X_loss:
0.6408 | d_fake_loss: 1.2568 | g_loss: 2.3464
Iteration [ 200/10000] | d_real_loss: 0.4971 | d_Y_loss: 0.6132 | d_X_loss:
0.6557 | d_fake_loss: 1.2689 | g_loss: 2.2832
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000200-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000200-Y-X.png
Iteration [ 210/10000] | d_real_loss: 0.4942 | d_Y_loss: 0.5758 | d_X_loss:
0.6353 | d_fake_loss: 1.2111 | g_loss: 2.0972
Iteration [ 220/10000] | d_real_loss: 0.4852 | d_Y_loss: 0.5825 | d_X_loss:
0.6326 | d_fake_loss: 1.2151 | g_loss: 2.2601
Iteration [ 230/10000] | d_real_loss: 0.4671 | d_Y_loss: 0.5664 | d_X_loss:
0.7614 | d_fake_loss: 1.3278 | g_loss: 2.3517
Iteration [ 240/10000] | d_real_loss: 0.4480 | d_Y_loss: 0.5527 | d_X_loss:
0.5852 | d_fake_loss: 1.1380 | g_loss: 2.1029
Iteration [ 250/10000] | d_real_loss: 0.5415 | d_Y_loss: 0.5645 | d_X_loss:
0.6694 | d_fake_loss: 1.2339 | g_loss: 2.4653
Iteration [ 260/10000] | d_real_loss: 0.4531 | d_Y_loss: 0.5435 | d_X_loss:
0.6155 | d_fake_loss: 1.1589 | g_loss: 2.0634

```

Iteration [270/10000] | d_real_loss: 0.4486 | d_Y_loss: 0.5431 | d_X_loss: 0.6838 | d_fake_loss: 1.2269 | g_loss: 2.2055
 Iteration [280/10000] | d_real_loss: 0.4405 | d_Y_loss: 0.5348 | d_X_loss: 0.6727 | d_fake_loss: 1.2075 | g_loss: 2.3983
 Iteration [290/10000] | d_real_loss: 0.4254 | d_Y_loss: 0.5254 | d_X_loss: 0.5891 | d_fake_loss: 1.1145 | g_loss: 2.1062
 Iteration [300/10000] | d_real_loss: 0.4450 | d_Y_loss: 0.4892 | d_X_loss: 0.5846 | d_fake_loss: 1.0737 | g_loss: 2.6511
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000300-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000300-Y-X.png
 Iteration [310/10000] | d_real_loss: 0.4096 | d_Y_loss: 0.4809 | d_X_loss: 0.5632 | d_fake_loss: 1.0441 | g_loss: 2.1439
 Iteration [320/10000] | d_real_loss: 0.3729 | d_Y_loss: 0.5016 | d_X_loss: 0.4985 | d_fake_loss: 1.0001 | g_loss: 2.0525
 Iteration [330/10000] | d_real_loss: 0.4611 | d_Y_loss: 0.4929 | d_X_loss: 0.5372 | d_fake_loss: 1.0301 | g_loss: 2.1569
 Iteration [340/10000] | d_real_loss: 0.4230 | d_Y_loss: 0.5863 | d_X_loss: 0.5740 | d_fake_loss: 1.1604 | g_loss: 2.2267
 Iteration [350/10000] | d_real_loss: 0.3874 | d_Y_loss: 0.5090 | d_X_loss: 0.6215 | d_fake_loss: 1.1305 | g_loss: 2.3121
 Iteration [360/10000] | d_real_loss: 0.5928 | d_Y_loss: 0.4666 | d_X_loss: 0.7111 | d_fake_loss: 1.1777 | g_loss: 2.5499
 Iteration [370/10000] | d_real_loss: 0.4276 | d_Y_loss: 0.5267 | d_X_loss: 0.6584 | d_fake_loss: 1.1851 | g_loss: 2.1724
 Iteration [380/10000] | d_real_loss: 0.4121 | d_Y_loss: 0.4638 | d_X_loss: 0.5607 | d_fake_loss: 1.0246 | g_loss: 2.1212
 Iteration [390/10000] | d_real_loss: 0.3812 | d_Y_loss: 0.4704 | d_X_loss: 0.6468 | d_fake_loss: 1.1172 | g_loss: 2.5872
 Iteration [400/10000] | d_real_loss: 0.3749 | d_Y_loss: 0.4390 | d_X_loss: 0.5474 | d_fake_loss: 0.9865 | g_loss: 2.4143
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000400-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000400-Y-X.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000400-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000400-Y-X.png
 Iteration [410/10000] | d_real_loss: 0.3930 | d_Y_loss: 0.4548 | d_X_loss: 0.5825 | d_fake_loss: 1.0373 | g_loss: 2.4420
 Iteration [420/10000] | d_real_loss: 0.3749 | d_Y_loss: 0.4497 | d_X_loss: 0.5445 | d_fake_loss: 0.9943 | g_loss: 2.6247
 Iteration [430/10000] | d_real_loss: 0.4105 | d_Y_loss: 0.3888 | d_X_loss: 0.8599 | d_fake_loss: 1.2487 | g_loss: 2.3040
 Iteration [440/10000] | d_real_loss: 0.3695 | d_Y_loss: 0.4215 | d_X_loss: 0.6120 | d_fake_loss: 1.0335 | g_loss: 2.1812

```

Iteration [ 450/10000] | d_real_loss: 0.3610 | d_Y_loss: 0.4160 | d_X_loss:
0.6141 | d_fake_loss: 1.0302 | g_loss: 2.4282
Iteration [ 460/10000] | d_real_loss: 0.3705 | d_Y_loss: 0.3883 | d_X_loss:
0.6931 | d_fake_loss: 1.0813 | g_loss: 2.3493
Iteration [ 470/10000] | d_real_loss: 0.3277 | d_Y_loss: 0.3731 | d_X_loss:
0.5330 | d_fake_loss: 0.9061 | g_loss: 2.5403
Iteration [ 480/10000] | d_real_loss: 0.3363 | d_Y_loss: 0.3779 | d_X_loss:
0.5869 | d_fake_loss: 0.9649 | g_loss: 2.2701
Iteration [ 490/10000] | d_real_loss: 0.3496 | d_Y_loss: 0.3661 | d_X_loss:
0.6199 | d_fake_loss: 0.9860 | g_loss: 2.3245
Iteration [ 500/10000] | d_real_loss: 0.3344 | d_Y_loss: 0.3393 | d_X_loss:
0.4641 | d_fake_loss: 0.8034 | g_loss: 2.6150
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000500-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000500-Y-X.png
Iteration [ 510/10000] | d_real_loss: 0.3527 | d_Y_loss: 0.3547 | d_X_loss:
0.5264 | d_fake_loss: 0.8811 | g_loss: 2.4586
Iteration [ 520/10000] | d_real_loss: 0.3160 | d_Y_loss: 0.3763 | d_X_loss:
0.5287 | d_fake_loss: 0.9050 | g_loss: 2.3671
Iteration [ 530/10000] | d_real_loss: 0.3728 | d_Y_loss: 0.3515 | d_X_loss:
0.5755 | d_fake_loss: 0.9270 | g_loss: 2.4734
Iteration [ 540/10000] | d_real_loss: 0.3317 | d_Y_loss: 0.3430 | d_X_loss:
0.4760 | d_fake_loss: 0.8189 | g_loss: 2.5389
Iteration [ 550/10000] | d_real_loss: 0.3340 | d_Y_loss: 0.3215 | d_X_loss:
0.4921 | d_fake_loss: 0.8136 | g_loss: 2.7385
Iteration [ 560/10000] | d_real_loss: 0.3192 | d_Y_loss: 0.3440 | d_X_loss:
0.4830 | d_fake_loss: 0.8271 | g_loss: 2.4746
Iteration [ 570/10000] | d_real_loss: 0.3334 | d_Y_loss: 0.3478 | d_X_loss:
0.4519 | d_fake_loss: 0.7997 | g_loss: 2.5680
Iteration [ 580/10000] | d_real_loss: 0.3409 | d_Y_loss: 0.2906 | d_X_loss:
0.4470 | d_fake_loss: 0.7376 | g_loss: 2.9107
Iteration [ 590/10000] | d_real_loss: 0.3233 | d_Y_loss: 0.3676 | d_X_loss:
0.4307 | d_fake_loss: 0.7983 | g_loss: 2.4163
Iteration [ 600/10000] | d_real_loss: 0.3131 | d_Y_loss: 0.2936 | d_X_loss:
0.6411 | d_fake_loss: 0.9347 | g_loss: 2.7780
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000600-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000600-Y-X.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000600-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000600-Y-X.png
Iteration [ 610/10000] | d_real_loss: 0.3085 | d_Y_loss: 0.2789 | d_X_loss:
0.2939 | d_fake_loss: 0.5728 | g_loss: 2.8328
Iteration [ 620/10000] | d_real_loss: 0.2953 | d_Y_loss: 0.2717 | d_X_loss:
0.2763 | d_fake_loss: 0.5480 | g_loss: 2.7585

```

```

Iteration [ 630/10000] | d_real_loss: 0.2722 | d_Y_loss: 0.2819 | d_X_loss:
0.2890 | d_fake_loss: 0.5708 | g_loss: 2.6305
Iteration [ 640/10000] | d_real_loss: 0.2769 | d_Y_loss: 0.2651 | d_X_loss:
0.3112 | d_fake_loss: 0.5763 | g_loss: 2.6675
Iteration [ 650/10000] | d_real_loss: 0.2890 | d_Y_loss: 0.2858 | d_X_loss:
0.3387 | d_fake_loss: 0.6244 | g_loss: 2.8175
Iteration [ 660/10000] | d_real_loss: 0.2694 | d_Y_loss: 0.2962 | d_X_loss:
0.4529 | d_fake_loss: 0.7491 | g_loss: 2.8159
Iteration [ 670/10000] | d_real_loss: 0.2801 | d_Y_loss: 0.2788 | d_X_loss:
0.5113 | d_fake_loss: 0.7901 | g_loss: 2.8869
Iteration [ 680/10000] | d_real_loss: 0.2683 | d_Y_loss: 0.2655 | d_X_loss:
0.3545 | d_fake_loss: 0.6201 | g_loss: 2.8750
Iteration [ 690/10000] | d_real_loss: 0.2627 | d_Y_loss: 0.2739 | d_X_loss:
0.3864 | d_fake_loss: 0.6603 | g_loss: 2.7158
Iteration [ 700/10000] | d_real_loss: 0.2769 | d_Y_loss: 0.2431 | d_X_loss:
0.3724 | d_fake_loss: 0.6155 | g_loss: 2.7039
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000700-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000700-Y-X.png
Iteration [ 710/10000] | d_real_loss: 0.2648 | d_Y_loss: 0.2404 | d_X_loss:
0.3538 | d_fake_loss: 0.5942 | g_loss: 2.9510
Iteration [ 720/10000] | d_real_loss: 0.2952 | d_Y_loss: 0.2319 | d_X_loss:
0.4020 | d_fake_loss: 0.6339 | g_loss: 2.8549
Iteration [ 730/10000] | d_real_loss: 0.5675 | d_Y_loss: 0.2754 | d_X_loss:
0.4859 | d_fake_loss: 0.7613 | g_loss: 2.8888
Iteration [ 740/10000] | d_real_loss: 0.3098 | d_Y_loss: 0.4056 | d_X_loss:
0.3934 | d_fake_loss: 0.7990 | g_loss: 2.6813
Iteration [ 750/10000] | d_real_loss: 0.3242 | d_Y_loss: 0.3545 | d_X_loss:
0.3891 | d_fake_loss: 0.7436 | g_loss: 2.5542
Iteration [ 760/10000] | d_real_loss: 0.2803 | d_Y_loss: 0.2952 | d_X_loss:
0.4094 | d_fake_loss: 0.7046 | g_loss: 2.8853
Iteration [ 770/10000] | d_real_loss: 0.3093 | d_Y_loss: 0.2819 | d_X_loss:
0.3560 | d_fake_loss: 0.6379 | g_loss: 2.7766
Iteration [ 780/10000] | d_real_loss: 0.2503 | d_Y_loss: 0.3178 | d_X_loss:
0.4579 | d_fake_loss: 0.7757 | g_loss: 2.7568
Iteration [ 790/10000] | d_real_loss: 0.2540 | d_Y_loss: 0.2800 | d_X_loss:
0.4609 | d_fake_loss: 0.7409 | g_loss: 3.0069
Iteration [ 800/10000] | d_real_loss: 0.2727 | d_Y_loss: 0.3122 | d_X_loss:
0.3938 | d_fake_loss: 0.7061 | g_loss: 3.0202
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000800-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000800-Y-X.png
Iteration [ 810/10000] | d_real_loss: 0.2690 | d_Y_loss: 0.2421 | d_X_loss:
0.3969 | d_fake_loss: 0.6390 | g_loss: 2.8718
Iteration [ 820/10000] | d_real_loss: 0.2755 | d_Y_loss: 0.2339 | d_X_loss:
0.2927 | d_fake_loss: 0.5266 | g_loss: 3.4452

```

```

Iteration [ 830/10000] | d_real_loss: 0.2402 | d_Y_loss: 0.2704 | d_X_loss:
0.4304 | d_fake_loss: 0.7008 | g_loss: 3.0868
Iteration [ 840/10000] | d_real_loss: 0.2543 | d_Y_loss: 0.2528 | d_X_loss:
0.4314 | d_fake_loss: 0.6842 | g_loss: 2.8796
Iteration [ 850/10000] | d_real_loss: 0.2325 | d_Y_loss: 0.3261 | d_X_loss:
0.3064 | d_fake_loss: 0.6325 | g_loss: 2.7905
Iteration [ 860/10000] | d_real_loss: 0.2778 | d_Y_loss: 0.2735 | d_X_loss:
0.3963 | d_fake_loss: 0.6699 | g_loss: 2.9783
Iteration [ 870/10000] | d_real_loss: 0.2570 | d_Y_loss: 0.2263 | d_X_loss:
0.3058 | d_fake_loss: 0.5320 | g_loss: 3.1200
Iteration [ 880/10000] | d_real_loss: 0.2198 | d_Y_loss: 0.2442 | d_X_loss:
0.3029 | d_fake_loss: 0.5471 | g_loss: 2.8460
Iteration [ 890/10000] | d_real_loss: 0.2506 | d_Y_loss: 0.3026 | d_X_loss:
0.3106 | d_fake_loss: 0.6132 | g_loss: 2.7816
Iteration [ 900/10000] | d_real_loss: 0.2537 | d_Y_loss: 0.2663 | d_X_loss:
0.3013 | d_fake_loss: 0.5676 | g_loss: 3.0796
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000900-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
000900-Y-X.png
Iteration [ 910/10000] | d_real_loss: 0.2523 | d_Y_loss: 0.2812 | d_X_loss:
0.2919 | d_fake_loss: 0.5731 | g_loss: 3.2345
Iteration [ 920/10000] | d_real_loss: 0.2229 | d_Y_loss: 0.2595 | d_X_loss:
0.4234 | d_fake_loss: 0.6829 | g_loss: 2.8855
Iteration [ 930/10000] | d_real_loss: 0.3082 | d_Y_loss: 0.2030 | d_X_loss:
0.5669 | d_fake_loss: 0.7698 | g_loss: 3.0188
Iteration [ 940/10000] | d_real_loss: 0.2130 | d_Y_loss: 0.1939 | d_X_loss:
0.3531 | d_fake_loss: 0.5470 | g_loss: 2.9627
Iteration [ 950/10000] | d_real_loss: 0.2199 | d_Y_loss: 0.2295 | d_X_loss:
0.4031 | d_fake_loss: 0.6326 | g_loss: 3.0304
Iteration [ 960/10000] | d_real_loss: 0.2151 | d_Y_loss: 0.1993 | d_X_loss:
0.3894 | d_fake_loss: 0.5886 | g_loss: 3.1451
Iteration [ 970/10000] | d_real_loss: 0.2365 | d_Y_loss: 0.2326 | d_X_loss:
0.3363 | d_fake_loss: 0.5689 | g_loss: 3.2429
Iteration [ 980/10000] | d_real_loss: 0.2435 | d_Y_loss: 0.1887 | d_X_loss:
0.2878 | d_fake_loss: 0.4765 | g_loss: 3.0994
Iteration [ 990/10000] | d_real_loss: 0.2138 | d_Y_loss: 0.1955 | d_X_loss:
0.3345 | d_fake_loss: 0.5300 | g_loss: 2.9957
Iteration [ 1000/10000] | d_real_loss: 0.1905 | d_Y_loss: 0.1935 | d_X_loss:
0.3740 | d_fake_loss: 0.5675 | g_loss: 3.3268
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
001000-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
001000-Y-X.png
Iteration [ 1010/10000] | d_real_loss: 0.2148 | d_Y_loss: 0.1814 | d_X_loss:
0.3670 | d_fake_loss: 0.5483 | g_loss: 3.1255
Iteration [ 1020/10000] | d_real_loss: 0.2101 | d_Y_loss: 0.1766 | d_X_loss:
0.2588 | d_fake_loss: 0.4354 | g_loss: 3.0441

```



```

Iteration [ 1030/10000] | d_real_loss: 0.3640 | d_Y_loss: 0.2135 | d_X_loss:
0.2683 | d_fake_loss: 0.4818 | g_loss: 3.0018
Iteration [ 1040/10000] | d_real_loss: 0.2368 | d_Y_loss: 0.1694 | d_X_loss:
0.4313 | d_fake_loss: 0.6007 | g_loss: 3.6616
Iteration [ 1050/10000] | d_real_loss: 0.2007 | d_Y_loss: 0.2714 | d_X_loss:
0.4104 | d_fake_loss: 0.6819 | g_loss: 3.3634
Iteration [ 1060/10000] | d_real_loss: 0.2078 | d_Y_loss: 0.2295 | d_X_loss:
0.6005 | d_fake_loss: 0.8300 | g_loss: 3.3548
Iteration [ 1070/10000] | d_real_loss: 0.3922 | d_Y_loss: 0.8335 | d_X_loss:
0.4000 | d_fake_loss: 1.2335 | g_loss: 2.0362
Iteration [ 1080/10000] | d_real_loss: 0.2461 | d_Y_loss: 0.4327 | d_X_loss:
0.3520 | d_fake_loss: 0.7847 | g_loss: 2.6732
Iteration [ 1090/10000] | d_real_loss: 0.2580 | d_Y_loss: 0.5208 | d_X_loss:
0.3235 | d_fake_loss: 0.8442 | g_loss: 2.7954
Iteration [ 1100/10000] | d_real_loss: 0.2541 | d_Y_loss: 0.4388 | d_X_loss:
0.2487 | d_fake_loss: 0.6875 | g_loss: 2.8229
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
001100-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
001100-Y-X.png
Iteration [ 1110/10000] | d_real_loss: 0.1840 | d_Y_loss: 0.4165 | d_X_loss:
0.2314 | d_fake_loss: 0.6479 | g_loss: 2.9856
Iteration [ 1120/10000] | d_real_loss: 0.3090 | d_Y_loss: 0.6016 | d_X_loss:
0.2834 | d_fake_loss: 0.8851 | g_loss: 2.5337
Iteration [ 1130/10000] | d_real_loss: 0.3065 | d_Y_loss: 0.3320 | d_X_loss:
0.2592 | d_fake_loss: 0.5912 | g_loss: 2.8821
Iteration [ 1140/10000] | d_real_loss: 0.2426 | d_Y_loss: 0.2536 | d_X_loss:
0.2789 | d_fake_loss: 0.5325 | g_loss: 3.0178
Iteration [ 1150/10000] | d_real_loss: 0.2973 | d_Y_loss: 0.3614 | d_X_loss:
0.2193 | d_fake_loss: 0.5807 | g_loss: 2.8902
Iteration [ 1160/10000] | d_real_loss: 0.4206 | d_Y_loss: 0.5833 | d_X_loss:
0.3439 | d_fake_loss: 0.9272 | g_loss: 3.0758
Iteration [ 1170/10000] | d_real_loss: 0.2593 | d_Y_loss: 0.4712 | d_X_loss:
0.4645 | d_fake_loss: 0.9357 | g_loss: 2.8348
Iteration [ 1180/10000] | d_real_loss: 0.2213 | d_Y_loss: 0.4158 | d_X_loss:
0.3295 | d_fake_loss: 0.7453 | g_loss: 3.0642
Iteration [ 1190/10000] | d_real_loss: 0.3233 | d_Y_loss: 0.6005 | d_X_loss:
0.6255 | d_fake_loss: 1.2259 | g_loss: 2.6709
Iteration [ 1200/10000] | d_real_loss: 0.2542 | d_Y_loss: 0.3894 | d_X_loss:
0.2724 | d_fake_loss: 0.6617 | g_loss: 3.2238
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
001200-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
001200-Y-X.png
Iteration [ 1210/10000] | d_real_loss: 0.2499 | d_Y_loss: 0.2851 | d_X_loss:
0.2395 | d_fake_loss: 0.5246 | g_loss: 3.0746
Iteration [ 1220/10000] | d_real_loss: 0.4542 | d_Y_loss: 0.5589 | d_X_loss:
0.4521 | d_fake_loss: 1.0110 | g_loss: 2.9567

```

Iteration [1230/10000] | d_real_loss: 0.2961 | d_Y_loss: 0.3945 | d_X_loss: 0.3331 | d_fake_loss: 0.7276 | g_loss: 3.0679
 Iteration [1240/10000] | d_real_loss: 0.3068 | d_Y_loss: 0.3840 | d_X_loss: 0.2956 | d_fake_loss: 0.6795 | g_loss: 3.1692
 Iteration [1250/10000] | d_real_loss: 0.2299 | d_Y_loss: 0.3651 | d_X_loss: 0.2756 | d_fake_loss: 0.6407 | g_loss: 3.0059
 Iteration [1260/10000] | d_real_loss: 0.3240 | d_Y_loss: 0.4136 | d_X_loss: 0.2503 | d_fake_loss: 0.6639 | g_loss: 3.0469
 Iteration [1270/10000] | d_real_loss: 0.3747 | d_Y_loss: 0.4263 | d_X_loss: 0.3204 | d_fake_loss: 0.7467 | g_loss: 2.8873
 Iteration [1280/10000] | d_real_loss: 0.2807 | d_Y_loss: 0.4871 | d_X_loss: 0.2047 | d_fake_loss: 0.6918 | g_loss: 3.1063
 Iteration [1290/10000] | d_real_loss: 0.1905 | d_Y_loss: 0.5012 | d_X_loss: 0.1725 | d_fake_loss: 0.6737 | g_loss: 2.9874
 Iteration [1300/10000] | d_real_loss: 0.3006 | d_Y_loss: 0.5304 | d_X_loss: 0.2259 | d_fake_loss: 0.7563 | g_loss: 3.2988
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001300-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001300-Y-X.png
 Iteration [1310/10000] | d_real_loss: 0.2988 | d_Y_loss: 0.3655 | d_X_loss: 0.1889 | d_fake_loss: 0.5544 | g_loss: 3.1119
 Iteration [1320/10000] | d_real_loss: 0.2120 | d_Y_loss: 0.4715 | d_X_loss: 0.1787 | d_fake_loss: 0.6502 | g_loss: 3.1786
 Iteration [1330/10000] | d_real_loss: 0.2064 | d_Y_loss: 0.5005 | d_X_loss: 0.2201 | d_fake_loss: 0.7206 | g_loss: 2.9978
 Iteration [1340/10000] | d_real_loss: 0.2253 | d_Y_loss: 0.6262 | d_X_loss: 0.1975 | d_fake_loss: 0.8237 | g_loss: 3.0404
 Iteration [1350/10000] | d_real_loss: 0.3239 | d_Y_loss: 0.6266 | d_X_loss: 0.2002 | d_fake_loss: 0.8269 | g_loss: 2.7129
 Iteration [1360/10000] | d_real_loss: 0.2666 | d_Y_loss: 0.4036 | d_X_loss: 0.1826 | d_fake_loss: 0.5862 | g_loss: 3.0966
 Iteration [1370/10000] | d_real_loss: 0.2172 | d_Y_loss: 0.5397 | d_X_loss: 0.2285 | d_fake_loss: 0.7682 | g_loss: 3.0695
 Iteration [1380/10000] | d_real_loss: 0.4103 | d_Y_loss: 0.5488 | d_X_loss: 0.5767 | d_fake_loss: 1.1254 | g_loss: 3.1136
 Iteration [1390/10000] | d_real_loss: 0.2831 | d_Y_loss: 0.3508 | d_X_loss: 0.4945 | d_fake_loss: 0.8452 | g_loss: 3.3176
 Iteration [1400/10000] | d_real_loss: 0.2591 | d_Y_loss: 0.4744 | d_X_loss: 0.2285 | d_fake_loss: 0.7029 | g_loss: 3.2015
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001400-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001400-Y-X.png
 Iteration [1410/10000] | d_real_loss: 0.3069 | d_Y_loss: 0.3873 | d_X_loss: 0.3525 | d_fake_loss: 0.7398 | g_loss: 2.8924
 Iteration [1420/10000] | d_real_loss: 0.2313 | d_Y_loss: 0.4858 | d_X_loss: 0.2130 | d_fake_loss: 0.6987 | g_loss: 2.9227

Iteration [1430/10000] | d_real_loss: 0.2902 | d_Y_loss: 0.3771 | d_X_loss: 0.2033 | d_fake_loss: 0.5804 | g_loss: 3.0862
 Iteration [1440/10000] | d_real_loss: 0.2578 | d_Y_loss: 0.3881 | d_X_loss: 0.3749 | d_fake_loss: 0.7631 | g_loss: 3.0305
 Iteration [1450/10000] | d_real_loss: 0.2199 | d_Y_loss: 0.2973 | d_X_loss: 0.6348 | d_fake_loss: 0.9322 | g_loss: 3.1654
 Iteration [1460/10000] | d_real_loss: 0.1681 | d_Y_loss: 0.2320 | d_X_loss: 0.1287 | d_fake_loss: 0.3607 | g_loss: 3.0911
 Iteration [1470/10000] | d_real_loss: 0.1801 | d_Y_loss: 0.4881 | d_X_loss: 0.2147 | d_fake_loss: 0.7028 | g_loss: 3.2173
 Iteration [1480/10000] | d_real_loss: 0.2682 | d_Y_loss: 0.3124 | d_X_loss: 0.2020 | d_fake_loss: 0.5144 | g_loss: 3.0824
 Iteration [1490/10000] | d_real_loss: 0.2746 | d_Y_loss: 0.3040 | d_X_loss: 0.2212 | d_fake_loss: 0.5252 | g_loss: 3.3064
 Iteration [1500/10000] | d_real_loss: 0.2329 | d_Y_loss: 0.5329 | d_X_loss: 0.1712 | d_fake_loss: 0.7042 | g_loss: 2.8701
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001500-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001500-Y-X.png
 Iteration [1510/10000] | d_real_loss: 0.1867 | d_Y_loss: 0.5006 | d_X_loss: 0.1605 | d_fake_loss: 0.6611 | g_loss: 3.4083
 Iteration [1520/10000] | d_real_loss: 0.1767 | d_Y_loss: 0.4243 | d_X_loss: 0.1697 | d_fake_loss: 0.5941 | g_loss: 3.1764
 Iteration [1530/10000] | d_real_loss: 0.1887 | d_Y_loss: 0.4574 | d_X_loss: 0.1598 | d_fake_loss: 0.6172 | g_loss: 3.5000
 Iteration [1540/10000] | d_real_loss: 0.2063 | d_Y_loss: 0.3134 | d_X_loss: 0.2050 | d_fake_loss: 0.5183 | g_loss: 3.5632
 Iteration [1550/10000] | d_real_loss: 0.1857 | d_Y_loss: 0.3912 | d_X_loss: 0.1407 | d_fake_loss: 0.5319 | g_loss: 2.8273
 Iteration [1560/10000] | d_real_loss: 0.2154 | d_Y_loss: 0.5024 | d_X_loss: 0.1813 | d_fake_loss: 0.6837 | g_loss: 3.1628
 Iteration [1570/10000] | d_real_loss: 0.3134 | d_Y_loss: 0.3847 | d_X_loss: 0.3384 | d_fake_loss: 0.7231 | g_loss: 2.9875
 Iteration [1580/10000] | d_real_loss: 0.2771 | d_Y_loss: 0.3378 | d_X_loss: 0.3824 | d_fake_loss: 0.7202 | g_loss: 2.8980
 Iteration [1590/10000] | d_real_loss: 0.3540 | d_Y_loss: 0.4744 | d_X_loss: 0.2351 | d_fake_loss: 0.7095 | g_loss: 3.0606
 Iteration [1600/10000] | d_real_loss: 0.2422 | d_Y_loss: 0.3973 | d_X_loss: 0.6333 | d_fake_loss: 1.0306 | g_loss: 2.9504
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001600-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001600-Y-X.png
 Iteration [1610/10000] | d_real_loss: 0.2904 | d_Y_loss: 0.3874 | d_X_loss: 0.3592 | d_fake_loss: 0.7466 | g_loss: 3.1311
 Iteration [1620/10000] | d_real_loss: 0.4057 | d_Y_loss: 0.3883 | d_X_loss: 0.3620 | d_fake_loss: 0.7503 | g_loss: 3.1968

Iteration [1630/10000] | d_real_loss: 0.2529 | d_Y_loss: 0.4103 | d_X_loss: 0.2360 | d_fake_loss: 0.6463 | g_loss: 3.3703
 Iteration [1640/10000] | d_real_loss: 0.1942 | d_Y_loss: 0.3421 | d_X_loss: 0.1810 | d_fake_loss: 0.5231 | g_loss: 3.0652
 Iteration [1650/10000] | d_real_loss: 0.3022 | d_Y_loss: 0.6706 | d_X_loss: 0.4066 | d_fake_loss: 1.0772 | g_loss: 3.2380
 Iteration [1660/10000] | d_real_loss: 0.3843 | d_Y_loss: 0.5085 | d_X_loss: 0.1805 | d_fake_loss: 0.6890 | g_loss: 3.0687
 Iteration [1670/10000] | d_real_loss: 0.2405 | d_Y_loss: 0.4382 | d_X_loss: 0.2028 | d_fake_loss: 0.6410 | g_loss: 3.2401
 Iteration [1680/10000] | d_real_loss: 0.2056 | d_Y_loss: 0.3314 | d_X_loss: 0.1819 | d_fake_loss: 0.5133 | g_loss: 3.1869
 Iteration [1690/10000] | d_real_loss: 0.2617 | d_Y_loss: 0.3906 | d_X_loss: 0.3109 | d_fake_loss: 0.7015 | g_loss: 3.1188
 Iteration [1700/10000] | d_real_loss: 0.1890 | d_Y_loss: 0.3485 | d_X_loss: 0.1644 | d_fake_loss: 0.5129 | g_loss: 3.2784
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001700-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001700-Y-X.png
 Iteration [1710/10000] | d_real_loss: 0.2527 | d_Y_loss: 0.4176 | d_X_loss: 0.1376 | d_fake_loss: 0.5552 | g_loss: 3.1919
 Iteration [1720/10000] | d_real_loss: 0.2130 | d_Y_loss: 0.2706 | d_X_loss: 0.1505 | d_fake_loss: 0.4212 | g_loss: 3.0533
 Iteration [1730/10000] | d_real_loss: 0.1645 | d_Y_loss: 0.3083 | d_X_loss: 0.1414 | d_fake_loss: 0.4496 | g_loss: 3.3537
 Iteration [1740/10000] | d_real_loss: 0.1326 | d_Y_loss: 0.3319 | d_X_loss: 0.1394 | d_fake_loss: 0.4713 | g_loss: 3.1648
 Iteration [1750/10000] | d_real_loss: 0.1279 | d_Y_loss: 0.2283 | d_X_loss: 0.1522 | d_fake_loss: 0.3805 | g_loss: 3.4677
 Iteration [1760/10000] | d_real_loss: 0.1297 | d_Y_loss: 0.2192 | d_X_loss: 0.1212 | d_fake_loss: 0.3403 | g_loss: 3.5737
 Iteration [1770/10000] | d_real_loss: 0.1550 | d_Y_loss: 0.2902 | d_X_loss: 0.1564 | d_fake_loss: 0.4466 | g_loss: 3.4820
 Iteration [1780/10000] | d_real_loss: 0.2736 | d_Y_loss: 0.2382 | d_X_loss: 0.1244 | d_fake_loss: 0.3626 | g_loss: 3.2539
 Iteration [1790/10000] | d_real_loss: 0.1543 | d_Y_loss: 0.2981 | d_X_loss: 0.1277 | d_fake_loss: 0.4258 | g_loss: 3.3269
 Iteration [1800/10000] | d_real_loss: 0.2187 | d_Y_loss: 0.2964 | d_X_loss: 0.1249 | d_fake_loss: 0.4213 | g_loss: 3.3073
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001800-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001800-Y-X.png
 Iteration [1810/10000] | d_real_loss: 0.2913 | d_Y_loss: 0.5267 | d_X_loss: 0.1495 | d_fake_loss: 0.6762 | g_loss: 2.9179
 Iteration [1820/10000] | d_real_loss: 0.1823 | d_Y_loss: 0.5980 | d_X_loss: 0.1008 | d_fake_loss: 0.6989 | g_loss: 3.1721

Iteration [1830/10000] | d_real_loss: 0.2165 | d_Y_loss: 0.3664 | d_X_loss: 0.1556 | d_fake_loss: 0.5219 | g_loss: 3.1832
 Iteration [1840/10000] | d_real_loss: 0.4540 | d_Y_loss: 0.5237 | d_X_loss: 0.4941 | d_fake_loss: 1.0178 | g_loss: 3.5859
 Iteration [1850/10000] | d_real_loss: 0.2447 | d_Y_loss: 0.3080 | d_X_loss: 0.3001 | d_fake_loss: 0.6081 | g_loss: 3.3575
 Iteration [1860/10000] | d_real_loss: 0.1824 | d_Y_loss: 0.4697 | d_X_loss: 0.3154 | d_fake_loss: 0.7852 | g_loss: 3.3861
 Iteration [1870/10000] | d_real_loss: 0.1720 | d_Y_loss: 0.2099 | d_X_loss: 0.2420 | d_fake_loss: 0.4519 | g_loss: 3.4451
 Iteration [1880/10000] | d_real_loss: 0.1911 | d_Y_loss: 0.2917 | d_X_loss: 0.1718 | d_fake_loss: 0.4635 | g_loss: 3.3637
 Iteration [1890/10000] | d_real_loss: 0.1614 | d_Y_loss: 0.1627 | d_X_loss: 0.1414 | d_fake_loss: 0.3041 | g_loss: 3.2702
 Iteration [1900/10000] | d_real_loss: 0.1718 | d_Y_loss: 0.2423 | d_X_loss: 0.1864 | d_fake_loss: 0.4287 | g_loss: 3.6209
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001900-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-001900-Y-X.png
 Iteration [1910/10000] | d_real_loss: 0.1624 | d_Y_loss: 0.2098 | d_X_loss: 0.1836 | d_fake_loss: 0.3934 | g_loss: 3.3143
 Iteration [1920/10000] | d_real_loss: 0.3147 | d_Y_loss: 0.3226 | d_X_loss: 0.5010 | d_fake_loss: 0.8236 | g_loss: 3.3068
 Iteration [1930/10000] | d_real_loss: 0.1912 | d_Y_loss: 0.5975 | d_X_loss: 0.3251 | d_fake_loss: 0.9227 | g_loss: 3.5179
 Iteration [1940/10000] | d_real_loss: 0.2618 | d_Y_loss: 0.4205 | d_X_loss: 0.1149 | d_fake_loss: 0.5353 | g_loss: 3.3494
 Iteration [1950/10000] | d_real_loss: 0.2116 | d_Y_loss: 0.1691 | d_X_loss: 0.0981 | d_fake_loss: 0.2672 | g_loss: 3.2508
 Iteration [1960/10000] | d_real_loss: 0.1692 | d_Y_loss: 0.1864 | d_X_loss: 0.1117 | d_fake_loss: 0.2981 | g_loss: 3.3329
 Iteration [1970/10000] | d_real_loss: 0.2007 | d_Y_loss: 0.3078 | d_X_loss: 0.1077 | d_fake_loss: 0.4155 | g_loss: 3.4264
 Iteration [1980/10000] | d_real_loss: 0.1158 | d_Y_loss: 0.2805 | d_X_loss: 0.1146 | d_fake_loss: 0.3952 | g_loss: 3.5320
 Iteration [1990/10000] | d_real_loss: 0.0904 | d_Y_loss: 0.2855 | d_X_loss: 0.1171 | d_fake_loss: 0.4026 | g_loss: 3.5755
 Iteration [2000/10000] | d_real_loss: 0.1059 | d_Y_loss: 0.3356 | d_X_loss: 0.1088 | d_fake_loss: 0.4444 | g_loss: 3.3075
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-002000-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-002000-Y-X.png
 Iteration [2010/10000] | d_real_loss: 0.1592 | d_Y_loss: 0.2790 | d_X_loss: 0.1154 | d_fake_loss: 0.3944 | g_loss: 3.7748
 Iteration [2020/10000] | d_real_loss: 0.1000 | d_Y_loss: 0.4418 | d_X_loss: 0.1121 | d_fake_loss: 0.5539 | g_loss: 3.9585

Iteration [2030/10000] | d_real_loss: 0.1344 | d_Y_loss: 0.1187 | d_X_loss: 0.1059 | d_fake_loss: 0.2246 | g_loss: 3.5706
 Iteration [2040/10000] | d_real_loss: 0.1211 | d_Y_loss: 0.1470 | d_X_loss: 0.1212 | d_fake_loss: 0.2682 | g_loss: 3.4921
 Iteration [2050/10000] | d_real_loss: 0.0843 | d_Y_loss: 0.1621 | d_X_loss: 0.1013 | d_fake_loss: 0.2634 | g_loss: 3.4776
 Iteration [2060/10000] | d_real_loss: 0.0907 | d_Y_loss: 0.1564 | d_X_loss: 0.1050 | d_fake_loss: 0.2614 | g_loss: 3.3560
 Iteration [2070/10000] | d_real_loss: 0.0786 | d_Y_loss: 0.1274 | d_X_loss: 0.0931 | d_fake_loss: 0.2205 | g_loss: 3.3144
 Iteration [2080/10000] | d_real_loss: 0.0838 | d_Y_loss: 0.1287 | d_X_loss: 0.0966 | d_fake_loss: 0.2253 | g_loss: 3.3261
 Iteration [2090/10000] | d_real_loss: 0.0858 | d_Y_loss: 0.1090 | d_X_loss: 0.0848 | d_fake_loss: 0.1938 | g_loss: 3.5164
 Iteration [2100/10000] | d_real_loss: 0.0830 | d_Y_loss: 0.1096 | d_X_loss: 0.0889 | d_fake_loss: 0.1985 | g_loss: 3.5634
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-002100-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-002100-Y-X.png
 Iteration [2110/10000] | d_real_loss: 0.0813 | d_Y_loss: 0.0960 | d_X_loss: 0.0861 | d_fake_loss: 0.1820 | g_loss: 3.5494
 Iteration [2120/10000] | d_real_loss: 0.0884 | d_Y_loss: 0.1000 | d_X_loss: 0.0994 | d_fake_loss: 0.1994 | g_loss: 3.8239
 Iteration [2130/10000] | d_real_loss: 0.0761 | d_Y_loss: 0.1114 | d_X_loss: 0.0956 | d_fake_loss: 0.2070 | g_loss: 3.7695
 Iteration [2140/10000] | d_real_loss: 0.0853 | d_Y_loss: 0.0861 | d_X_loss: 0.0949 | d_fake_loss: 0.1809 | g_loss: 3.7261
 Iteration [2150/10000] | d_real_loss: 0.0944 | d_Y_loss: 0.0990 | d_X_loss: 0.0894 | d_fake_loss: 0.1884 | g_loss: 3.5580
 Iteration [2160/10000] | d_real_loss: 0.0841 | d_Y_loss: 0.0894 | d_X_loss: 0.0839 | d_fake_loss: 0.1733 | g_loss: 3.7041
 Iteration [2170/10000] | d_real_loss: 0.0943 | d_Y_loss: 0.0905 | d_X_loss: 0.0780 | d_fake_loss: 0.1685 | g_loss: 3.6021
 Iteration [2180/10000] | d_real_loss: 0.0897 | d_Y_loss: 0.0916 | d_X_loss: 0.1050 | d_fake_loss: 0.1966 | g_loss: 3.6504
 Iteration [2190/10000] | d_real_loss: 0.0748 | d_Y_loss: 0.0856 | d_X_loss: 0.0742 | d_fake_loss: 0.1597 | g_loss: 3.7103
 Iteration [2200/10000] | d_real_loss: 0.0874 | d_Y_loss: 0.0896 | d_X_loss: 0.0683 | d_fake_loss: 0.1579 | g_loss: 3.8332
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-002200-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-002200-Y-X.png
 Iteration [2210/10000] | d_real_loss: 0.0666 | d_Y_loss: 0.0904 | d_X_loss: 0.0692 | d_fake_loss: 0.1596 | g_loss: 3.8307
 Iteration [2220/10000] | d_real_loss: 0.0945 | d_Y_loss: 0.1273 | d_X_loss: 0.0712 | d_fake_loss: 0.1985 | g_loss: 3.9138

Iteration [2230/10000] | d_real_loss: 0.0769 | d_Y_loss: 0.1160 | d_X_loss: 0.0693 | d_fake_loss: 0.1853 | g_loss: 3.6705
 Iteration [2240/10000] | d_real_loss: 0.0811 | d_Y_loss: 0.1992 | d_X_loss: 0.0736 | d_fake_loss: 0.2728 | g_loss: 3.7264
 Iteration [2250/10000] | d_real_loss: 0.2336 | d_Y_loss: 0.9984 | d_X_loss: 0.0836 | d_fake_loss: 1.0821 | g_loss: 2.3570
 Iteration [2260/10000] | d_real_loss: 0.2797 | d_Y_loss: 0.9210 | d_X_loss: 0.0640 | d_fake_loss: 0.9850 | g_loss: 2.6541
 Iteration [2270/10000] | d_real_loss: 0.2561 | d_Y_loss: 0.6571 | d_X_loss: 0.0834 | d_fake_loss: 0.7405 | g_loss: 2.8821
 Iteration [2280/10000] | d_real_loss: 0.2272 | d_Y_loss: 0.4863 | d_X_loss: 0.0654 | d_fake_loss: 0.5517 | g_loss: 3.8000
 Iteration [2290/10000] | d_real_loss: 0.1452 | d_Y_loss: 0.5127 | d_X_loss: 0.0650 | d_fake_loss: 0.5777 | g_loss: 4.2557
 Iteration [2300/10000] | d_real_loss: 0.1432 | d_Y_loss: 0.2680 | d_X_loss: 0.0660 | d_fake_loss: 0.3340 | g_loss: 3.6737
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-002300-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-002300-Y-X.png
 Iteration [2310/10000] | d_real_loss: 0.1269 | d_Y_loss: 0.3178 | d_X_loss: 0.0652 | d_fake_loss: 0.3830 | g_loss: 3.7983
 Iteration [2320/10000] | d_real_loss: 0.1685 | d_Y_loss: 0.3731 | d_X_loss: 0.0667 | d_fake_loss: 0.4398 | g_loss: 3.6807
 Iteration [2330/10000] | d_real_loss: 0.1215 | d_Y_loss: 0.4637 | d_X_loss: 0.0536 | d_fake_loss: 0.5173 | g_loss: 4.1556
 Iteration [2340/10000] | d_real_loss: 0.1626 | d_Y_loss: 0.3321 | d_X_loss: 0.0528 | d_fake_loss: 0.3849 | g_loss: 3.7920
 Iteration [2350/10000] | d_real_loss: 0.1655 | d_Y_loss: 0.3029 | d_X_loss: 0.0585 | d_fake_loss: 0.3614 | g_loss: 3.8612
 Iteration [2360/10000] | d_real_loss: 0.2180 | d_Y_loss: 0.2604 | d_X_loss: 0.0647 | d_fake_loss: 0.3251 | g_loss: 3.6794
 Iteration [2370/10000] | d_real_loss: 0.2204 | d_Y_loss: 0.3820 | d_X_loss: 0.0573 | d_fake_loss: 0.4394 | g_loss: 3.5866
 Iteration [2380/10000] | d_real_loss: 0.2158 | d_Y_loss: 0.3186 | d_X_loss: 0.0712 | d_fake_loss: 0.3898 | g_loss: 3.8520
 Iteration [2390/10000] | d_real_loss: 0.4265 | d_Y_loss: 0.3314 | d_X_loss: 1.0038 | d_fake_loss: 1.3352 | g_loss: 3.6337
 Iteration [2400/10000] | d_real_loss: 0.3358 | d_Y_loss: 0.4509 | d_X_loss: 0.7845 | d_fake_loss: 1.2353 | g_loss: 3.8181
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-002400-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-002400-Y-X.png
 Iteration [2410/10000] | d_real_loss: 0.5688 | d_Y_loss: 0.5784 | d_X_loss: 0.4285 | d_fake_loss: 1.0069 | g_loss: 3.1692
 Iteration [2420/10000] | d_real_loss: 0.3684 | d_Y_loss: 0.6011 | d_X_loss: 0.5694 | d_fake_loss: 1.1705 | g_loss: 3.5721

Iteration [2430/10000] | d_real_loss: 0.2260 | d_Y_loss: 0.3549 | d_X_loss: 0.2104 | d_fake_loss: 0.5653 | g_loss: 3.6754
 Iteration [2440/10000] | d_real_loss: 0.3277 | d_Y_loss: 0.5603 | d_X_loss: 0.4284 | d_fake_loss: 0.9887 | g_loss: 3.4106
 Iteration [2450/10000] | d_real_loss: 0.2041 | d_Y_loss: 0.4107 | d_X_loss: 0.2128 | d_fake_loss: 0.6234 | g_loss: 3.6351
 Iteration [2460/10000] | d_real_loss: 0.3061 | d_Y_loss: 0.3504 | d_X_loss: 0.4074 | d_fake_loss: 0.7579 | g_loss: 3.7021
 Iteration [2470/10000] | d_real_loss: 0.2482 | d_Y_loss: 0.2964 | d_X_loss: 0.4144 | d_fake_loss: 0.7108 | g_loss: 3.8820
 Iteration [2480/10000] | d_real_loss: 0.2093 | d_Y_loss: 0.3294 | d_X_loss: 0.1573 | d_fake_loss: 0.4867 | g_loss: 3.5363
 Iteration [2490/10000] | d_real_loss: 0.1884 | d_Y_loss: 0.2166 | d_X_loss: 0.1365 | d_fake_loss: 0.3531 | g_loss: 3.3543
 Iteration [2500/10000] | d_real_loss: 0.2033 | d_Y_loss: 0.3367 | d_X_loss: 0.2440 | d_fake_loss: 0.5807 | g_loss: 4.0323
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-002500-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-002500-Y-X.png
 Iteration [2510/10000] | d_real_loss: 0.2010 | d_Y_loss: 0.2881 | d_X_loss: 0.1215 | d_fake_loss: 0.4095 | g_loss: 3.8613
 Iteration [2520/10000] | d_real_loss: 0.1809 | d_Y_loss: 0.4250 | d_X_loss: 0.1020 | d_fake_loss: 0.5270 | g_loss: 3.7431
 Iteration [2530/10000] | d_real_loss: 0.1554 | d_Y_loss: 0.3935 | d_X_loss: 0.2679 | d_fake_loss: 0.6614 | g_loss: 3.6328
 Iteration [2540/10000] | d_real_loss: 0.3452 | d_Y_loss: 0.3973 | d_X_loss: 0.5731 | d_fake_loss: 0.9704 | g_loss: 3.7608
 Iteration [2550/10000] | d_real_loss: 0.3429 | d_Y_loss: 0.3647 | d_X_loss: 0.3284 | d_fake_loss: 0.6931 | g_loss: 3.5302
 Iteration [2560/10000] | d_real_loss: 0.3716 | d_Y_loss: 0.3010 | d_X_loss: 0.3615 | d_fake_loss: 0.6624 | g_loss: 3.6842
 Iteration [2570/10000] | d_real_loss: 0.2225 | d_Y_loss: 0.4238 | d_X_loss: 0.1241 | d_fake_loss: 0.5478 | g_loss: 3.8347
 Iteration [2580/10000] | d_real_loss: 0.1127 | d_Y_loss: 0.3221 | d_X_loss: 0.3893 | d_fake_loss: 0.7114 | g_loss: 3.3999
 Iteration [2590/10000] | d_real_loss: 0.1498 | d_Y_loss: 0.3212 | d_X_loss: 0.1698 | d_fake_loss: 0.4910 | g_loss: 3.8822
 Iteration [2600/10000] | d_real_loss: 0.1422 | d_Y_loss: 0.3489 | d_X_loss: 0.1067 | d_fake_loss: 0.4557 | g_loss: 3.7279
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-002600-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-002600-Y-X.png
 Iteration [2610/10000] | d_real_loss: 0.2187 | d_Y_loss: 0.1187 | d_X_loss: 0.1040 | d_fake_loss: 0.2227 | g_loss: 3.6490
 Iteration [2620/10000] | d_real_loss: 0.1197 | d_Y_loss: 0.2811 | d_X_loss: 0.0824 | d_fake_loss: 0.3635 | g_loss: 3.5304


```

Iteration [ 2630/10000] | d_real_loss: 0.0978 | d_Y_loss: 0.2467 | d_X_loss:
0.0924 | d_fake_loss: 0.3391 | g_loss: 3.7248
Iteration [ 2640/10000] | d_real_loss: 0.1074 | d_Y_loss: 0.1182 | d_X_loss:
0.0766 | d_fake_loss: 0.1948 | g_loss: 4.6601
Iteration [ 2650/10000] | d_real_loss: 0.1241 | d_Y_loss: 0.1575 | d_X_loss:
0.0781 | d_fake_loss: 0.2356 | g_loss: 3.8437
Iteration [ 2660/10000] | d_real_loss: 0.2244 | d_Y_loss: 0.1324 | d_X_loss:
0.0744 | d_fake_loss: 0.2068 | g_loss: 3.6970
Iteration [ 2670/10000] | d_real_loss: 0.1993 | d_Y_loss: 0.2259 | d_X_loss:
0.0788 | d_fake_loss: 0.3047 | g_loss: 3.5053
Iteration [ 2680/10000] | d_real_loss: 0.1218 | d_Y_loss: 0.3703 | d_X_loss:
0.0841 | d_fake_loss: 0.4543 | g_loss: 3.5595
Iteration [ 2690/10000] | d_real_loss: 0.1710 | d_Y_loss: 0.4197 | d_X_loss:
0.0684 | d_fake_loss: 0.4881 | g_loss: 3.8050
Iteration [ 2700/10000] | d_real_loss: 0.1795 | d_Y_loss: 0.2298 | d_X_loss:
0.0661 | d_fake_loss: 0.2959 | g_loss: 3.5302
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
002700-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
002700-Y-X.png
Iteration [ 2710/10000] | d_real_loss: 0.0706 | d_Y_loss: 0.1611 | d_X_loss:
0.1739 | d_fake_loss: 0.3350 | g_loss: 3.5866
Iteration [ 2720/10000] | d_real_loss: 0.0768 | d_Y_loss: 0.2116 | d_X_loss:
0.1387 | d_fake_loss: 0.3503 | g_loss: 3.4583
Iteration [ 2730/10000] | d_real_loss: 0.1206 | d_Y_loss: 0.2762 | d_X_loss:
0.0850 | d_fake_loss: 0.3612 | g_loss: 4.1422
Iteration [ 2740/10000] | d_real_loss: 0.3412 | d_Y_loss: 0.8820 | d_X_loss:
0.7355 | d_fake_loss: 1.6175 | g_loss: 3.4989
Iteration [ 2750/10000] | d_real_loss: 0.2439 | d_Y_loss: 0.3218 | d_X_loss:
0.1766 | d_fake_loss: 0.4983 | g_loss: 3.6872
Iteration [ 2760/10000] | d_real_loss: 0.1355 | d_Y_loss: 0.3236 | d_X_loss:
0.2018 | d_fake_loss: 0.5254 | g_loss: 4.0435
Iteration [ 2770/10000] | d_real_loss: 0.3860 | d_Y_loss: 0.3029 | d_X_loss:
0.8188 | d_fake_loss: 1.1217 | g_loss: 3.3289
Iteration [ 2780/10000] | d_real_loss: 0.2470 | d_Y_loss: 0.3489 | d_X_loss:
0.3146 | d_fake_loss: 0.6634 | g_loss: 3.6708
Iteration [ 2790/10000] | d_real_loss: 0.2133 | d_Y_loss: 0.2095 | d_X_loss:
0.3162 | d_fake_loss: 0.5257 | g_loss: 3.8671
Iteration [ 2800/10000] | d_real_loss: 0.1955 | d_Y_loss: 0.1844 | d_X_loss:
0.1529 | d_fake_loss: 0.3374 | g_loss: 4.1046
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
002800-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
002800-Y-X.png
Iteration [ 2810/10000] | d_real_loss: 0.2272 | d_Y_loss: 0.4365 | d_X_loss:
0.0740 | d_fake_loss: 0.5106 | g_loss: 3.9721
Iteration [ 2820/10000] | d_real_loss: 0.1353 | d_Y_loss: 0.3942 | d_X_loss:
0.1747 | d_fake_loss: 0.5689 | g_loss: 4.1732

```

```

Iteration [ 2830/10000] | d_real_loss: 0.2724 | d_Y_loss: 0.3337 | d_X_loss:
0.7580 | d_fake_loss: 1.0917 | g_loss: 3.6403
Iteration [ 2840/10000] | d_real_loss: 0.2277 | d_Y_loss: 1.1020 | d_X_loss:
0.4929 | d_fake_loss: 1.5949 | g_loss: 2.7132
Iteration [ 2850/10000] | d_real_loss: 0.2394 | d_Y_loss: 0.5045 | d_X_loss:
0.5513 | d_fake_loss: 1.0557 | g_loss: 3.6140
Iteration [ 2860/10000] | d_real_loss: 0.1880 | d_Y_loss: 0.5712 | d_X_loss:
0.1786 | d_fake_loss: 0.7497 | g_loss: 3.7119
Iteration [ 2870/10000] | d_real_loss: 0.2620 | d_Y_loss: 0.2306 | d_X_loss:
0.1059 | d_fake_loss: 0.3364 | g_loss: 3.4800
Iteration [ 2880/10000] | d_real_loss: 0.1268 | d_Y_loss: 0.2081 | d_X_loss:
0.1116 | d_fake_loss: 0.3197 | g_loss: 4.0429
Iteration [ 2890/10000] | d_real_loss: 0.1627 | d_Y_loss: 0.2162 | d_X_loss:
0.5517 | d_fake_loss: 0.7679 | g_loss: 3.7918
Iteration [ 2900/10000] | d_real_loss: 0.2727 | d_Y_loss: 0.2814 | d_X_loss:
0.3627 | d_fake_loss: 0.6441 | g_loss: 3.9514
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
002900-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
002900-Y-X.png
Iteration [ 2910/10000] | d_real_loss: 0.0921 | d_Y_loss: 0.8319 | d_X_loss:
0.1231 | d_fake_loss: 0.9550 | g_loss: 3.4058
Iteration [ 2920/10000] | d_real_loss: 0.2175 | d_Y_loss: 0.2274 | d_X_loss:
0.2007 | d_fake_loss: 0.4282 | g_loss: 3.6739
Iteration [ 2930/10000] | d_real_loss: 0.2948 | d_Y_loss: 0.5959 | d_X_loss:
0.1557 | d_fake_loss: 0.7516 | g_loss: 3.4277
Iteration [ 2940/10000] | d_real_loss: 0.1651 | d_Y_loss: 0.2948 | d_X_loss:
0.3261 | d_fake_loss: 0.6209 | g_loss: 3.5320
Iteration [ 2950/10000] | d_real_loss: 0.1958 | d_Y_loss: 0.5247 | d_X_loss:
0.1225 | d_fake_loss: 0.6472 | g_loss: 3.8810
Iteration [ 2960/10000] | d_real_loss: 0.1957 | d_Y_loss: 0.3378 | d_X_loss:
0.5523 | d_fake_loss: 0.8901 | g_loss: 4.0198
Iteration [ 2970/10000] | d_real_loss: 0.1898 | d_Y_loss: 0.2554 | d_X_loss:
0.3336 | d_fake_loss: 0.5889 | g_loss: 4.1611
Iteration [ 2980/10000] | d_real_loss: 0.1527 | d_Y_loss: 0.2559 | d_X_loss:
0.1712 | d_fake_loss: 0.4270 | g_loss: 3.9376
Iteration [ 2990/10000] | d_real_loss: 0.1263 | d_Y_loss: 0.5356 | d_X_loss:
0.1713 | d_fake_loss: 0.7069 | g_loss: 3.9221
Iteration [ 3000/10000] | d_real_loss: 0.2282 | d_Y_loss: 0.3102 | d_X_loss:
0.1613 | d_fake_loss: 0.4715 | g_loss: 3.6842
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
003000-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
003000-Y-X.png
Iteration [ 3010/10000] | d_real_loss: 0.1639 | d_Y_loss: 0.2198 | d_X_loss:
0.1579 | d_fake_loss: 0.3778 | g_loss: 4.0249
Iteration [ 3020/10000] | d_real_loss: 0.0924 | d_Y_loss: 0.2539 | d_X_loss:
0.0920 | d_fake_loss: 0.3459 | g_loss: 3.8239

```

Iteration [3030/10000] | d_real_loss: 0.3024 | d_Y_loss: 0.1599 | d_X_loss: 1.0065 | d_fake_loss: 1.1664 | g_loss: 3.9420
 Iteration [3040/10000] | d_real_loss: 0.2350 | d_Y_loss: 0.2147 | d_X_loss: 0.1770 | d_fake_loss: 0.3917 | g_loss: 3.8322
 Iteration [3050/10000] | d_real_loss: 0.2214 | d_Y_loss: 0.2455 | d_X_loss: 0.3309 | d_fake_loss: 0.5764 | g_loss: 4.1381
 Iteration [3060/10000] | d_real_loss: 0.2164 | d_Y_loss: 0.1904 | d_X_loss: 0.1195 | d_fake_loss: 0.3099 | g_loss: 3.9432
 Iteration [3070/10000] | d_real_loss: 0.2012 | d_Y_loss: 0.1525 | d_X_loss: 0.3274 | d_fake_loss: 0.4799 | g_loss: 3.6773
 Iteration [3080/10000] | d_real_loss: 0.1469 | d_Y_loss: 0.2170 | d_X_loss: 0.1754 | d_fake_loss: 0.3924 | g_loss: 3.9063
 Iteration [3090/10000] | d_real_loss: 0.1391 | d_Y_loss: 0.1725 | d_X_loss: 0.1488 | d_fake_loss: 0.3213 | g_loss: 4.1368
 Iteration [3100/10000] | d_real_loss: 0.2188 | d_Y_loss: 0.1733 | d_X_loss: 0.3585 | d_fake_loss: 0.5318 | g_loss: 4.6010
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-003100-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-003100-Y-X.png
 Iteration [3110/10000] | d_real_loss: 0.1911 | d_Y_loss: 0.2948 | d_X_loss: 0.2359 | d_fake_loss: 0.5307 | g_loss: 3.7666
 Iteration [3120/10000] | d_real_loss: 0.2342 | d_Y_loss: 0.9451 | d_X_loss: 0.4191 | d_fake_loss: 1.3642 | g_loss: 3.5485
 Iteration [3130/10000] | d_real_loss: 0.1926 | d_Y_loss: 0.6341 | d_X_loss: 0.1830 | d_fake_loss: 0.8171 | g_loss: 3.7214
 Iteration [3140/10000] | d_real_loss: 0.3329 | d_Y_loss: 0.3062 | d_X_loss: 0.1898 | d_fake_loss: 0.4960 | g_loss: 4.1214
 Iteration [3150/10000] | d_real_loss: 0.4747 | d_Y_loss: 0.1764 | d_X_loss: 0.3373 | d_fake_loss: 0.5137 | g_loss: 3.8044
 Iteration [3160/10000] | d_real_loss: 0.3148 | d_Y_loss: 0.1100 | d_X_loss: 0.6908 | d_fake_loss: 0.8008 | g_loss: 4.0184
 Iteration [3170/10000] | d_real_loss: 0.2582 | d_Y_loss: 0.1948 | d_X_loss: 0.1255 | d_fake_loss: 0.3203 | g_loss: 4.1662
 Iteration [3180/10000] | d_real_loss: 0.1445 | d_Y_loss: 0.3054 | d_X_loss: 0.1139 | d_fake_loss: 0.4192 | g_loss: 4.2839
 Iteration [3190/10000] | d_real_loss: 0.1818 | d_Y_loss: 0.2196 | d_X_loss: 0.7626 | d_fake_loss: 0.9821 | g_loss: 3.8043
 Iteration [3200/10000] | d_real_loss: 0.2138 | d_Y_loss: 0.3574 | d_X_loss: 0.1970 | d_fake_loss: 0.5544 | g_loss: 4.2295
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-003200-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-003200-Y-X.png
 Iteration [3210/10000] | d_real_loss: 0.2122 | d_Y_loss: 0.2298 | d_X_loss: 0.3808 | d_fake_loss: 0.6106 | g_loss: 3.8604
 Iteration [3220/10000] | d_real_loss: 0.2955 | d_Y_loss: 0.2154 | d_X_loss: 0.1680 | d_fake_loss: 0.3835 | g_loss: 3.9233

Iteration [3230/10000] | d_real_loss: 0.1039 | d_Y_loss: 0.0909 | d_X_loss: 0.1341 | d_fake_loss: 0.2249 | g_loss: 3.9347
 Iteration [3240/10000] | d_real_loss: 0.3346 | d_Y_loss: 0.1881 | d_X_loss: 0.5189 | d_fake_loss: 0.7070 | g_loss: 4.2744
 Iteration [3250/10000] | d_real_loss: 0.2463 | d_Y_loss: 0.0839 | d_X_loss: 0.2232 | d_fake_loss: 0.3071 | g_loss: 4.1988
 Iteration [3260/10000] | d_real_loss: 0.1129 | d_Y_loss: 0.0868 | d_X_loss: 0.1986 | d_fake_loss: 0.2854 | g_loss: 3.9378
 Iteration [3270/10000] | d_real_loss: 0.1372 | d_Y_loss: 0.0925 | d_X_loss: 0.3989 | d_fake_loss: 0.4914 | g_loss: 3.7443
 Iteration [3280/10000] | d_real_loss: 0.4236 | d_Y_loss: 0.0926 | d_X_loss: 0.2083 | d_fake_loss: 0.3009 | g_loss: 3.9834
 Iteration [3290/10000] | d_real_loss: 0.0906 | d_Y_loss: 0.0997 | d_X_loss: 0.2891 | d_fake_loss: 0.3888 | g_loss: 3.6773
 Iteration [3300/10000] | d_real_loss: 0.0573 | d_Y_loss: 0.0909 | d_X_loss: 0.1265 | d_fake_loss: 0.2174 | g_loss: 3.9304
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-003300-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-003300-Y-X.png
 Iteration [3310/10000] | d_real_loss: 0.0715 | d_Y_loss: 0.0815 | d_X_loss: 0.0616 | d_fake_loss: 0.1431 | g_loss: 4.0440
 Iteration [3320/10000] | d_real_loss: 0.0712 | d_Y_loss: 0.0712 | d_X_loss: 0.2884 | d_fake_loss: 0.3595 | g_loss: 4.1518
 Iteration [3330/10000] | d_real_loss: 0.0498 | d_Y_loss: 0.0737 | d_X_loss: 0.0850 | d_fake_loss: 0.1587 | g_loss: 4.0895
 Iteration [3340/10000] | d_real_loss: 0.0544 | d_Y_loss: 0.0815 | d_X_loss: 0.0747 | d_fake_loss: 0.1563 | g_loss: 3.8665
 Iteration [3350/10000] | d_real_loss: 0.0468 | d_Y_loss: 0.0758 | d_X_loss: 0.0726 | d_fake_loss: 0.1485 | g_loss: 3.9500
 Iteration [3360/10000] | d_real_loss: 0.0397 | d_Y_loss: 0.0718 | d_X_loss: 0.1108 | d_fake_loss: 0.1826 | g_loss: 3.9300
 Iteration [3370/10000] | d_real_loss: 0.0430 | d_Y_loss: 0.0675 | d_X_loss: 0.0905 | d_fake_loss: 0.1580 | g_loss: 4.0682
 Iteration [3380/10000] | d_real_loss: 0.0544 | d_Y_loss: 0.0697 | d_X_loss: 0.1036 | d_fake_loss: 0.1733 | g_loss: 4.1253
 Iteration [3390/10000] | d_real_loss: 0.0567 | d_Y_loss: 0.0536 | d_X_loss: 0.0734 | d_fake_loss: 0.1270 | g_loss: 4.4429
 Iteration [3400/10000] | d_real_loss: 0.0437 | d_Y_loss: 0.0581 | d_X_loss: 0.0724 | d_fake_loss: 0.1305 | g_loss: 4.2916
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-003400-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-003400-Y-X.png
 Iteration [3410/10000] | d_real_loss: 0.0486 | d_Y_loss: 0.0481 | d_X_loss: 0.0719 | d_fake_loss: 0.1199 | g_loss: 4.1738
 Iteration [3420/10000] | d_real_loss: 0.0516 | d_Y_loss: 0.0546 | d_X_loss: 0.0670 | d_fake_loss: 0.1216 | g_loss: 4.3334

```

Iteration [ 3430/10000] | d_real_loss: 0.0453 | d_Y_loss: 0.0558 | d_X_loss:
0.0818 | d_fake_loss: 0.1376 | g_loss: 4.2473
Iteration [ 3440/10000] | d_real_loss: 0.0522 | d_Y_loss: 0.0517 | d_X_loss:
0.0977 | d_fake_loss: 0.1494 | g_loss: 4.2167
Iteration [ 3450/10000] | d_real_loss: 0.0721 | d_Y_loss: 0.0515 | d_X_loss:
0.0869 | d_fake_loss: 0.1384 | g_loss: 4.4273
Iteration [ 3460/10000] | d_real_loss: 0.0415 | d_Y_loss: 0.0548 | d_X_loss:
0.0540 | d_fake_loss: 0.1088 | g_loss: 4.2676
Iteration [ 3470/10000] | d_real_loss: 0.0558 | d_Y_loss: 0.0527 | d_X_loss:
0.0600 | d_fake_loss: 0.1127 | g_loss: 4.5435
Iteration [ 3480/10000] | d_real_loss: 0.0423 | d_Y_loss: 0.0626 | d_X_loss:
0.0565 | d_fake_loss: 0.1191 | g_loss: 4.1775
Iteration [ 3490/10000] | d_real_loss: 0.0512 | d_Y_loss: 0.0594 | d_X_loss:
0.0530 | d_fake_loss: 0.1124 | g_loss: 4.2137
Iteration [ 3500/10000] | d_real_loss: 0.0441 | d_Y_loss: 0.0503 | d_X_loss:
0.0593 | d_fake_loss: 0.1096 | g_loss: 4.3512
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
003500-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
003500-Y-X.png
Iteration [ 3510/10000] | d_real_loss: 0.0487 | d_Y_loss: 0.0517 | d_X_loss:
0.0488 | d_fake_loss: 0.1005 | g_loss: 4.3296
Iteration [ 3520/10000] | d_real_loss: 0.0404 | d_Y_loss: 0.0532 | d_X_loss:
0.0515 | d_fake_loss: 0.1047 | g_loss: 4.3686
Iteration [ 3530/10000] | d_real_loss: 0.1249 | d_Y_loss: 0.0487 | d_X_loss:
0.0649 | d_fake_loss: 0.1136 | g_loss: 4.4534
Iteration [ 3540/10000] | d_real_loss: 0.0507 | d_Y_loss: 0.0480 | d_X_loss:
0.0672 | d_fake_loss: 0.1151 | g_loss: 4.2999
Iteration [ 3550/10000] | d_real_loss: 0.0423 | d_Y_loss: 0.0464 | d_X_loss:
0.0505 | d_fake_loss: 0.0969 | g_loss: 4.4710
Iteration [ 3560/10000] | d_real_loss: 0.0414 | d_Y_loss: 0.0557 | d_X_loss:
0.0524 | d_fake_loss: 0.1081 | g_loss: 4.5958
Iteration [ 3570/10000] | d_real_loss: 0.0424 | d_Y_loss: 0.0467 | d_X_loss:
0.0593 | d_fake_loss: 0.1060 | g_loss: 4.6909
Iteration [ 3580/10000] | d_real_loss: 0.0508 | d_Y_loss: 0.0481 | d_X_loss:
0.0647 | d_fake_loss: 0.1128 | g_loss: 4.6453
Iteration [ 3590/10000] | d_real_loss: 0.0415 | d_Y_loss: 0.0393 | d_X_loss:
0.0725 | d_fake_loss: 0.1119 | g_loss: 4.6221
Iteration [ 3600/10000] | d_real_loss: 0.0378 | d_Y_loss: 0.0465 | d_X_loss:
0.0546 | d_fake_loss: 0.1012 | g_loss: 5.0538
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
003600-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
003600-Y-X.png
Iteration [ 3610/10000] | d_real_loss: 0.0537 | d_Y_loss: 0.0433 | d_X_loss:
0.0485 | d_fake_loss: 0.0918 | g_loss: 4.6089
Iteration [ 3620/10000] | d_real_loss: 0.0395 | d_Y_loss: 0.0349 | d_X_loss:
0.0480 | d_fake_loss: 0.0829 | g_loss: 4.7699

```

```

Iteration [ 3630/10000] | d_real_loss: 0.0645 | d_Y_loss: 0.0325 | d_X_loss:
0.0524 | d_fake_loss: 0.0849 | g_loss: 4.6750
Iteration [ 3640/10000] | d_real_loss: 0.0829 | d_Y_loss: 0.0340 | d_X_loss:
0.0721 | d_fake_loss: 0.1060 | g_loss: 4.6798
Iteration [ 3650/10000] | d_real_loss: 0.0754 | d_Y_loss: 0.0396 | d_X_loss:
0.1785 | d_fake_loss: 0.2180 | g_loss: 4.6970
Iteration [ 3660/10000] | d_real_loss: 0.1015 | d_Y_loss: 0.0341 | d_X_loss:
0.0503 | d_fake_loss: 0.0843 | g_loss: 5.0548
Iteration [ 3670/10000] | d_real_loss: 0.0496 | d_Y_loss: 0.0340 | d_X_loss:
0.1175 | d_fake_loss: 0.1516 | g_loss: 4.8283
Iteration [ 3680/10000] | d_real_loss: 0.0419 | d_Y_loss: 0.0487 | d_X_loss:
0.0399 | d_fake_loss: 0.0885 | g_loss: 4.8834
Iteration [ 3690/10000] | d_real_loss: 0.0515 | d_Y_loss: 0.0411 | d_X_loss:
0.0359 | d_fake_loss: 0.0770 | g_loss: 5.2046
Iteration [ 3700/10000] | d_real_loss: 0.0417 | d_Y_loss: 0.0330 | d_X_loss:
0.0350 | d_fake_loss: 0.0680 | g_loss: 4.9163
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
003700-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
003700-Y-X.png
Iteration [ 3710/10000] | d_real_loss: 0.0420 | d_Y_loss: 0.0370 | d_X_loss:
0.0419 | d_fake_loss: 0.0789 | g_loss: 4.8905
Iteration [ 3720/10000] | d_real_loss: 0.0387 | d_Y_loss: 0.0340 | d_X_loss:
0.0437 | d_fake_loss: 0.0777 | g_loss: 5.1014
Iteration [ 3730/10000] | d_real_loss: 0.0368 | d_Y_loss: 0.0672 | d_X_loss:
0.0378 | d_fake_loss: 0.1050 | g_loss: 5.1371
Iteration [ 3740/10000] | d_real_loss: 0.0648 | d_Y_loss: 0.0634 | d_X_loss:
0.0327 | d_fake_loss: 0.0961 | g_loss: 4.6763
Iteration [ 3750/10000] | d_real_loss: 0.0434 | d_Y_loss: 0.1280 | d_X_loss:
0.0340 | d_fake_loss: 0.1621 | g_loss: 5.2396
Iteration [ 3760/10000] | d_real_loss: 0.0647 | d_Y_loss: 0.0538 | d_X_loss:
0.0342 | d_fake_loss: 0.0880 | g_loss: 4.7242
Iteration [ 3770/10000] | d_real_loss: 0.0393 | d_Y_loss: 0.1275 | d_X_loss:
0.0372 | d_fake_loss: 0.1647 | g_loss: 4.7360
Iteration [ 3780/10000] | d_real_loss: 0.0428 | d_Y_loss: 0.0392 | d_X_loss:
0.0451 | d_fake_loss: 0.0843 | g_loss: 4.8589
Iteration [ 3790/10000] | d_real_loss: 0.0375 | d_Y_loss: 0.0300 | d_X_loss:
0.0395 | d_fake_loss: 0.0695 | g_loss: 4.7540
Iteration [ 3800/10000] | d_real_loss: 0.0415 | d_Y_loss: 0.0362 | d_X_loss:
0.0336 | d_fake_loss: 0.0698 | g_loss: 4.7764
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
003800-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
003800-Y-X.png
Iteration [ 3810/10000] | d_real_loss: 0.0328 | d_Y_loss: 0.0327 | d_X_loss:
0.0441 | d_fake_loss: 0.0768 | g_loss: 4.7071
Iteration [ 3820/10000] | d_real_loss: 0.0303 | d_Y_loss: 0.0325 | d_X_loss:
0.0308 | d_fake_loss: 0.0633 | g_loss: 4.6242

```

Iteration [3830/10000] | d_real_loss: 0.0283 | d_Y_loss: 0.0336 | d_X_loss: 0.0316 | d_fake_loss: 0.0652 | g_loss: 4.5218
 Iteration [3840/10000] | d_real_loss: 0.0298 | d_Y_loss: 0.0286 | d_X_loss: 0.0460 | d_fake_loss: 0.0746 | g_loss: 4.7173
 Iteration [3850/10000] | d_real_loss: 0.0294 | d_Y_loss: 0.0264 | d_X_loss: 0.0435 | d_fake_loss: 0.0698 | g_loss: 4.8091
 Iteration [3860/10000] | d_real_loss: 0.0308 | d_Y_loss: 0.0380 | d_X_loss: 0.0396 | d_fake_loss: 0.0776 | g_loss: 4.6083
 Iteration [3870/10000] | d_real_loss: 0.0320 | d_Y_loss: 0.0423 | d_X_loss: 0.0358 | d_fake_loss: 0.0781 | g_loss: 4.6452
 Iteration [3880/10000] | d_real_loss: 0.0453 | d_Y_loss: 0.0274 | d_X_loss: 0.0335 | d_fake_loss: 0.0609 | g_loss: 5.1459
 Iteration [3890/10000] | d_real_loss: 0.0488 | d_Y_loss: 0.1742 | d_X_loss: 0.0420 | d_fake_loss: 0.2162 | g_loss: 5.1874
 Iteration [3900/10000] | d_real_loss: 0.0567 | d_Y_loss: 0.0241 | d_X_loss: 0.0406 | d_fake_loss: 0.0647 | g_loss: 4.9972
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-003900-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-003900-Y-X.png
 Iteration [3910/10000] | d_real_loss: 0.0658 | d_Y_loss: 0.0423 | d_X_loss: 0.0321 | d_fake_loss: 0.0744 | g_loss: 4.5786
 Iteration [3920/10000] | d_real_loss: 0.0485 | d_Y_loss: 0.1050 | d_X_loss: 0.0317 | d_fake_loss: 0.1367 | g_loss: 5.0591
 Iteration [3930/10000] | d_real_loss: 0.4735 | d_Y_loss: 0.6448 | d_X_loss: 0.0560 | d_fake_loss: 0.7008 | g_loss: 2.4155
 Iteration [3940/10000] | d_real_loss: 0.2793 | d_Y_loss: 0.6690 | d_X_loss: 0.0239 | d_fake_loss: 0.6929 | g_loss: 3.1402
 Iteration [3950/10000] | d_real_loss: 0.1173 | d_Y_loss: 0.2691 | d_X_loss: 0.0296 | d_fake_loss: 0.2986 | g_loss: 4.0381
 Iteration [3960/10000] | d_real_loss: 0.0803 | d_Y_loss: 0.5060 | d_X_loss: 0.0279 | d_fake_loss: 0.5339 | g_loss: 4.5535
 Iteration [3970/10000] | d_real_loss: 0.1268 | d_Y_loss: 0.2804 | d_X_loss: 0.0267 | d_fake_loss: 0.3071 | g_loss: 4.7267
 Iteration [3980/10000] | d_real_loss: 0.1408 | d_Y_loss: 0.4775 | d_X_loss: 0.0270 | d_fake_loss: 0.5045 | g_loss: 4.2712
 Iteration [3990/10000] | d_real_loss: 0.1065 | d_Y_loss: 0.1220 | d_X_loss: 0.0260 | d_fake_loss: 0.1480 | g_loss: 4.2098
 Iteration [4000/10000] | d_real_loss: 0.0573 | d_Y_loss: 0.1466 | d_X_loss: 0.0289 | d_fake_loss: 0.1755 | g_loss: 4.4651
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-004000-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-004000-Y-X.png
 Iteration [4010/10000] | d_real_loss: 0.0505 | d_Y_loss: 0.2442 | d_X_loss: 0.0584 | d_fake_loss: 0.3026 | g_loss: 4.7447
 Iteration [4020/10000] | d_real_loss: 0.0807 | d_Y_loss: 0.7079 | d_X_loss: 0.0810 | d_fake_loss: 0.7890 | g_loss: 4.4661

```

Iteration [ 4030/10000] | d_real_loss: 0.1504 | d_Y_loss: 0.1946 | d_X_loss:
0.3345 | d_fake_loss: 0.5291 | g_loss: 4.3442
Iteration [ 4040/10000] | d_real_loss: 0.2554 | d_Y_loss: 0.0821 | d_X_loss:
0.5484 | d_fake_loss: 0.6304 | g_loss: 4.0524
Iteration [ 4050/10000] | d_real_loss: 0.3064 | d_Y_loss: 0.5482 | d_X_loss:
0.5062 | d_fake_loss: 1.0544 | g_loss: 4.1676
Iteration [ 4060/10000] | d_real_loss: 0.1383 | d_Y_loss: 0.2614 | d_X_loss:
0.6286 | d_fake_loss: 0.8901 | g_loss: 4.4366
Iteration [ 4070/10000] | d_real_loss: 0.1400 | d_Y_loss: 0.1051 | d_X_loss:
0.1843 | d_fake_loss: 0.2894 | g_loss: 4.5544
Iteration [ 4080/10000] | d_real_loss: 0.2108 | d_Y_loss: 0.2890 | d_X_loss:
0.1869 | d_fake_loss: 0.4760 | g_loss: 4.2553
Iteration [ 4090/10000] | d_real_loss: 0.1451 | d_Y_loss: 0.1927 | d_X_loss:
1.1258 | d_fake_loss: 1.3185 | g_loss: 4.6267
Iteration [ 4100/10000] | d_real_loss: 0.3692 | d_Y_loss: 0.6342 | d_X_loss:
0.4084 | d_fake_loss: 1.0427 | g_loss: 3.9342
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
004100-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
004100-Y-X.png
Iteration [ 4110/10000] | d_real_loss: 0.1976 | d_Y_loss: 0.1796 | d_X_loss:
0.2583 | d_fake_loss: 0.4379 | g_loss: 3.9058
Iteration [ 4120/10000] | d_real_loss: 0.2375 | d_Y_loss: 0.0652 | d_X_loss:
0.2924 | d_fake_loss: 0.3576 | g_loss: 4.3375
Iteration [ 4130/10000] | d_real_loss: 0.1546 | d_Y_loss: 0.3272 | d_X_loss:
0.0889 | d_fake_loss: 0.4161 | g_loss: 4.4630
Iteration [ 4140/10000] | d_real_loss: 0.1304 | d_Y_loss: 0.2036 | d_X_loss:
0.4964 | d_fake_loss: 0.7000 | g_loss: 4.8000
Iteration [ 4150/10000] | d_real_loss: 0.1506 | d_Y_loss: 0.0857 | d_X_loss:
0.9174 | d_fake_loss: 1.0031 | g_loss: 3.9950
Iteration [ 4160/10000] | d_real_loss: 0.2984 | d_Y_loss: 0.4198 | d_X_loss:
0.3177 | d_fake_loss: 0.7375 | g_loss: 4.4157
Iteration [ 4170/10000] | d_real_loss: 0.3781 | d_Y_loss: 0.8290 | d_X_loss:
0.0913 | d_fake_loss: 0.9203 | g_loss: 2.9592
Iteration [ 4180/10000] | d_real_loss: 0.2200 | d_Y_loss: 0.3714 | d_X_loss:
0.5196 | d_fake_loss: 0.8909 | g_loss: 4.0457
Iteration [ 4190/10000] | d_real_loss: 0.1068 | d_Y_loss: 0.3167 | d_X_loss:
0.2457 | d_fake_loss: 0.5624 | g_loss: 4.8835
Iteration [ 4200/10000] | d_real_loss: 0.1209 | d_Y_loss: 0.1672 | d_X_loss:
0.2879 | d_fake_loss: 0.4551 | g_loss: 4.4217
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
004200-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
004200-Y-X.png
Iteration [ 4210/10000] | d_real_loss: 0.2346 | d_Y_loss: 0.1430 | d_X_loss:
0.4403 | d_fake_loss: 0.5833 | g_loss: 4.4867
Iteration [ 4220/10000] | d_real_loss: 0.1195 | d_Y_loss: 0.0652 | d_X_loss:
0.1094 | d_fake_loss: 0.1746 | g_loss: 4.9843

```


Iteration [4230/10000] | d_real_loss: 0.1060 | d_Y_loss: 0.0573 | d_X_loss: 0.2874 | d_fake_loss: 0.3447 | g_loss: 4.4470
 Iteration [4240/10000] | d_real_loss: 0.0995 | d_Y_loss: 0.0727 | d_X_loss: 0.4647 | d_fake_loss: 0.5373 | g_loss: 4.5172
 Iteration [4250/10000] | d_real_loss: 0.2450 | d_Y_loss: 0.3686 | d_X_loss: 0.1430 | d_fake_loss: 0.5116 | g_loss: 4.1850
 Iteration [4260/10000] | d_real_loss: 0.1741 | d_Y_loss: 0.0493 | d_X_loss: 0.1562 | d_fake_loss: 0.2055 | g_loss: 4.4263
 Iteration [4270/10000] | d_real_loss: 0.1402 | d_Y_loss: 0.4028 | d_X_loss: 0.6012 | d_fake_loss: 1.0040 | g_loss: 4.3060
 Iteration [4280/10000] | d_real_loss: 0.3227 | d_Y_loss: 0.6757 | d_X_loss: 0.6189 | d_fake_loss: 1.2946 | g_loss: 3.7616
 Iteration [4290/10000] | d_real_loss: 0.2096 | d_Y_loss: 0.2419 | d_X_loss: 0.9295 | d_fake_loss: 1.1714 | g_loss: 4.4612
 Iteration [4300/10000] | d_real_loss: 0.1422 | d_Y_loss: 0.1338 | d_X_loss: 0.7598 | d_fake_loss: 0.8935 | g_loss: 4.4350
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-004300-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-004300-Y-X.png
 Iteration [4310/10000] | d_real_loss: 0.1474 | d_Y_loss: 0.1316 | d_X_loss: 0.6693 | d_fake_loss: 0.8009 | g_loss: 4.4267
 Iteration [4320/10000] | d_real_loss: 0.1224 | d_Y_loss: 0.4655 | d_X_loss: 0.2206 | d_fake_loss: 0.6861 | g_loss: 4.4700
 Iteration [4330/10000] | d_real_loss: 0.1354 | d_Y_loss: 0.2053 | d_X_loss: 0.7981 | d_fake_loss: 1.0034 | g_loss: 4.2190
 Iteration [4340/10000] | d_real_loss: 0.4162 | d_Y_loss: 0.3794 | d_X_loss: 0.0725 | d_fake_loss: 0.4519 | g_loss: 3.4315
 Iteration [4350/10000] | d_real_loss: 0.3333 | d_Y_loss: 0.2828 | d_X_loss: 0.0959 | d_fake_loss: 0.3786 | g_loss: 3.9043
 Iteration [4360/10000] | d_real_loss: 0.2485 | d_Y_loss: 0.5112 | d_X_loss: 0.3936 | d_fake_loss: 0.9048 | g_loss: 4.1185
 Iteration [4370/10000] | d_real_loss: 0.3318 | d_Y_loss: 0.5088 | d_X_loss: 0.1760 | d_fake_loss: 0.6848 | g_loss: 3.8252
 Iteration [4380/10000] | d_real_loss: 0.1951 | d_Y_loss: 0.5281 | d_X_loss: 0.1260 | d_fake_loss: 0.6541 | g_loss: 4.1957
 Iteration [4390/10000] | d_real_loss: 0.1655 | d_Y_loss: 0.1615 | d_X_loss: 0.2073 | d_fake_loss: 0.3688 | g_loss: 3.7434
 Iteration [4400/10000] | d_real_loss: 0.1962 | d_Y_loss: 0.2820 | d_X_loss: 0.6893 | d_fake_loss: 0.9713 | g_loss: 4.0772
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-004400-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-004400-Y-X.png
 Iteration [4410/10000] | d_real_loss: 0.0963 | d_Y_loss: 0.2774 | d_X_loss: 0.7778 | d_fake_loss: 1.0552 | g_loss: 4.4992
 Iteration [4420/10000] | d_real_loss: 0.2238 | d_Y_loss: 0.1009 | d_X_loss: 0.2423 | d_fake_loss: 0.3432 | g_loss: 4.3417

Iteration [4430/10000] | d_real_loss: 0.1182 | d_Y_loss: 0.2206 | d_X_loss: 0.1061 | d_fake_loss: 0.3267 | g_loss: 4.4427
 Iteration [4440/10000] | d_real_loss: 0.2131 | d_Y_loss: 0.1632 | d_X_loss: 0.0927 | d_fake_loss: 0.2559 | g_loss: 4.3670
 Iteration [4450/10000] | d_real_loss: 0.0904 | d_Y_loss: 0.2394 | d_X_loss: 0.2853 | d_fake_loss: 0.5247 | g_loss: 4.4949
 Iteration [4460/10000] | d_real_loss: 0.1695 | d_Y_loss: 0.2408 | d_X_loss: 0.3696 | d_fake_loss: 0.6104 | g_loss: 5.0973
 Iteration [4470/10000] | d_real_loss: 0.0667 | d_Y_loss: 0.1661 | d_X_loss: 0.4242 | d_fake_loss: 0.5902 | g_loss: 4.5015
 Iteration [4480/10000] | d_real_loss: 0.1135 | d_Y_loss: 0.1129 | d_X_loss: 0.1420 | d_fake_loss: 0.2549 | g_loss: 4.6736
 Iteration [4490/10000] | d_real_loss: 0.1154 | d_Y_loss: 0.2819 | d_X_loss: 0.3537 | d_fake_loss: 0.6356 | g_loss: 4.4429
 Iteration [4500/10000] | d_real_loss: 0.1047 | d_Y_loss: 0.1974 | d_X_loss: 0.2532 | d_fake_loss: 0.4506 | g_loss: 4.8029
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-004500-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-004500-Y-X.png
 Iteration [4510/10000] | d_real_loss: 0.1006 | d_Y_loss: 0.0592 | d_X_loss: 0.0440 | d_fake_loss: 0.1032 | g_loss: 4.3433
 Iteration [4520/10000] | d_real_loss: 0.1130 | d_Y_loss: 0.0626 | d_X_loss: 0.1225 | d_fake_loss: 0.1851 | g_loss: 4.2457
 Iteration [4530/10000] | d_real_loss: 0.0630 | d_Y_loss: 0.0479 | d_X_loss: 0.2008 | d_fake_loss: 0.2487 | g_loss: 4.3980
 Iteration [4540/10000] | d_real_loss: 0.0758 | d_Y_loss: 0.0546 | d_X_loss: 0.5709 | d_fake_loss: 0.6254 | g_loss: 4.3403
 Iteration [4550/10000] | d_real_loss: 0.0596 | d_Y_loss: 0.0705 | d_X_loss: 0.2564 | d_fake_loss: 0.3269 | g_loss: 4.1982
 Iteration [4560/10000] | d_real_loss: 0.4950 | d_Y_loss: 0.0618 | d_X_loss: 0.1884 | d_fake_loss: 0.2502 | g_loss: 4.1499
 Iteration [4570/10000] | d_real_loss: 0.0794 | d_Y_loss: 0.0679 | d_X_loss: 0.3973 | d_fake_loss: 0.4652 | g_loss: 4.3491
 Iteration [4580/10000] | d_real_loss: 0.2453 | d_Y_loss: 0.0521 | d_X_loss: 0.4900 | d_fake_loss: 0.5421 | g_loss: 4.5777
 Iteration [4590/10000] | d_real_loss: 0.4904 | d_Y_loss: 0.0661 | d_X_loss: 0.2446 | d_fake_loss: 0.3107 | g_loss: 4.4671
 Iteration [4600/10000] | d_real_loss: 0.2316 | d_Y_loss: 0.0585 | d_X_loss: 0.2321 | d_fake_loss: 0.2906 | g_loss: 4.3454
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-004600-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-004600-Y-X.png
 Iteration [4610/10000] | d_real_loss: 0.1008 | d_Y_loss: 0.0468 | d_X_loss: 0.1138 | d_fake_loss: 0.1607 | g_loss: 4.4532
 Iteration [4620/10000] | d_real_loss: 0.1731 | d_Y_loss: 0.0402 | d_X_loss: 0.2885 | d_fake_loss: 0.3286 | g_loss: 4.4750

```

Iteration [ 4630/10000] | d_real_loss: 0.1095 | d_Y_loss: 0.0461 | d_X_loss:
0.2296 | d_fake_loss: 0.2757 | g_loss: 4.4127
Iteration [ 4640/10000] | d_real_loss: 0.1344 | d_Y_loss: 0.0538 | d_X_loss:
0.1154 | d_fake_loss: 0.1692 | g_loss: 4.4210
Iteration [ 4650/10000] | d_real_loss: 0.0971 | d_Y_loss: 0.0507 | d_X_loss:
0.2697 | d_fake_loss: 0.3205 | g_loss: 4.9739
Iteration [ 4660/10000] | d_real_loss: 0.1192 | d_Y_loss: 0.0378 | d_X_loss:
0.2857 | d_fake_loss: 0.3234 | g_loss: 4.8798
Iteration [ 4670/10000] | d_real_loss: 0.0713 | d_Y_loss: 0.0537 | d_X_loss:
0.2234 | d_fake_loss: 0.2772 | g_loss: 4.9590
Iteration [ 4680/10000] | d_real_loss: 0.0917 | d_Y_loss: 0.0452 | d_X_loss:
0.1568 | d_fake_loss: 0.2020 | g_loss: 4.9068
Iteration [ 4690/10000] | d_real_loss: 0.1781 | d_Y_loss: 0.1904 | d_X_loss:
0.7969 | d_fake_loss: 0.9873 | g_loss: 4.7030
Iteration [ 4700/10000] | d_real_loss: 0.1360 | d_Y_loss: 0.1108 | d_X_loss:
0.2968 | d_fake_loss: 0.4076 | g_loss: 5.0706
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
004700-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
004700-Y-X.png
Iteration [ 4710/10000] | d_real_loss: 0.1025 | d_Y_loss: 0.1462 | d_X_loss:
0.2348 | d_fake_loss: 0.3809 | g_loss: 5.0442
Iteration [ 4720/10000] | d_real_loss: 0.1759 | d_Y_loss: 0.1315 | d_X_loss:
0.1395 | d_fake_loss: 0.2710 | g_loss: 5.1697
Iteration [ 4730/10000] | d_real_loss: 0.0996 | d_Y_loss: 0.2285 | d_X_loss:
0.3961 | d_fake_loss: 0.6246 | g_loss: 5.4005
Iteration [ 4740/10000] | d_real_loss: 0.2885 | d_Y_loss: 0.8843 | d_X_loss:
0.0439 | d_fake_loss: 0.9282 | g_loss: 3.5919
Iteration [ 4750/10000] | d_real_loss: 0.1685 | d_Y_loss: 0.3210 | d_X_loss:
0.4248 | d_fake_loss: 0.7458 | g_loss: 4.5445
Iteration [ 4760/10000] | d_real_loss: 0.1122 | d_Y_loss: 0.6019 | d_X_loss:
0.2835 | d_fake_loss: 0.8854 | g_loss: 4.9552
Iteration [ 4770/10000] | d_real_loss: 0.1624 | d_Y_loss: 0.2080 | d_X_loss:
0.2044 | d_fake_loss: 0.4124 | g_loss: 4.4933
Iteration [ 4780/10000] | d_real_loss: 0.0734 | d_Y_loss: 0.0886 | d_X_loss:
0.0785 | d_fake_loss: 0.1671 | g_loss: 5.1241
Iteration [ 4790/10000] | d_real_loss: 0.3075 | d_Y_loss: 0.3811 | d_X_loss:
0.3058 | d_fake_loss: 0.6868 | g_loss: 4.8064
Iteration [ 4800/10000] | d_real_loss: 0.2003 | d_Y_loss: 0.2090 | d_X_loss:
0.1161 | d_fake_loss: 0.3251 | g_loss: 4.6112
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
004800-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
004800-Y-X.png
Iteration [ 4810/10000] | d_real_loss: 0.0948 | d_Y_loss: 0.2948 | d_X_loss:
0.5460 | d_fake_loss: 0.8407 | g_loss: 4.9243
Iteration [ 4820/10000] | d_real_loss: 0.2244 | d_Y_loss: 0.0738 | d_X_loss:
0.2077 | d_fake_loss: 0.2815 | g_loss: 4.4149

```

```

Iteration [ 4830/10000] | d_real_loss: 0.2569 | d_Y_loss: 0.0806 | d_X_loss:
0.1418 | d_fake_loss: 0.2225 | g_loss: 4.4767
Iteration [ 4840/10000] | d_real_loss: 0.1274 | d_Y_loss: 0.5013 | d_X_loss:
0.1754 | d_fake_loss: 0.6767 | g_loss: 4.8431
Iteration [ 4850/10000] | d_real_loss: 0.1584 | d_Y_loss: 0.2585 | d_X_loss:
0.1248 | d_fake_loss: 0.3832 | g_loss: 5.0746
Iteration [ 4860/10000] | d_real_loss: 0.2998 | d_Y_loss: 0.9216 | d_X_loss:
0.0631 | d_fake_loss: 0.9847 | g_loss: 3.4411
Iteration [ 4870/10000] | d_real_loss: 0.2417 | d_Y_loss: 0.6236 | d_X_loss:
0.0496 | d_fake_loss: 0.6731 | g_loss: 4.0577
Iteration [ 4880/10000] | d_real_loss: 0.1383 | d_Y_loss: 0.7003 | d_X_loss:
0.1374 | d_fake_loss: 0.8377 | g_loss: 4.6158
Iteration [ 4890/10000] | d_real_loss: 0.1513 | d_Y_loss: 0.1841 | d_X_loss:
0.0659 | d_fake_loss: 0.2500 | g_loss: 4.4585
Iteration [ 4900/10000] | d_real_loss: 0.1495 | d_Y_loss: 0.4913 | d_X_loss:
0.0698 | d_fake_loss: 0.5611 | g_loss: 3.9831
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
004900-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
004900-Y-X.png
Iteration [ 4910/10000] | d_real_loss: 0.1443 | d_Y_loss: 0.1683 | d_X_loss:
0.2866 | d_fake_loss: 0.4550 | g_loss: 4.8430
Iteration [ 4920/10000] | d_real_loss: 0.2243 | d_Y_loss: 0.1670 | d_X_loss:
0.5407 | d_fake_loss: 0.7077 | g_loss: 5.1322
Iteration [ 4930/10000] | d_real_loss: 0.1748 | d_Y_loss: 0.1779 | d_X_loss:
0.2808 | d_fake_loss: 0.4587 | g_loss: 4.7498
Iteration [ 4940/10000] | d_real_loss: 0.2184 | d_Y_loss: 0.0629 | d_X_loss:
0.2829 | d_fake_loss: 0.3458 | g_loss: 4.3111
Iteration [ 4950/10000] | d_real_loss: 0.1242 | d_Y_loss: 0.3977 | d_X_loss:
0.1960 | d_fake_loss: 0.5936 | g_loss: 4.5748
Iteration [ 4960/10000] | d_real_loss: 0.1443 | d_Y_loss: 0.4618 | d_X_loss:
0.1118 | d_fake_loss: 0.5735 | g_loss: 4.9447
Iteration [ 4970/10000] | d_real_loss: 0.1399 | d_Y_loss: 0.1152 | d_X_loss:
0.2108 | d_fake_loss: 0.3261 | g_loss: 4.2337
Iteration [ 4980/10000] | d_real_loss: 0.1317 | d_Y_loss: 0.2284 | d_X_loss:
0.1374 | d_fake_loss: 0.3658 | g_loss: 4.7338
Iteration [ 4990/10000] | d_real_loss: 0.2377 | d_Y_loss: 0.0988 | d_X_loss:
0.3632 | d_fake_loss: 0.4620 | g_loss: 4.7542
Iteration [ 5000/10000] | d_real_loss: 0.1425 | d_Y_loss: 0.4126 | d_X_loss:
0.3457 | d_fake_loss: 0.7583 | g_loss: 3.4349
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
005000-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
005000-Y-X.png
Iteration [ 5010/10000] | d_real_loss: 0.2024 | d_Y_loss: 0.5839 | d_X_loss:
0.0777 | d_fake_loss: 0.6616 | g_loss: 4.5313
Iteration [ 5020/10000] | d_real_loss: 0.2474 | d_Y_loss: 0.3541 | d_X_loss:
0.3825 | d_fake_loss: 0.7367 | g_loss: 4.2826

```

Iteration [5030/10000] | d_real_loss: 0.1240 | d_Y_loss: 0.1834 | d_X_loss: 0.3731 | d_fake_loss: 0.5566 | g_loss: 4.4798
 Iteration [5040/10000] | d_real_loss: 0.1261 | d_Y_loss: 0.1144 | d_X_loss: 0.9136 | d_fake_loss: 1.0280 | g_loss: 4.6035
 Iteration [5050/10000] | d_real_loss: 0.1858 | d_Y_loss: 0.0733 | d_X_loss: 0.2796 | d_fake_loss: 0.3529 | g_loss: 4.3582
 Iteration [5060/10000] | d_real_loss: 0.1717 | d_Y_loss: 0.5088 | d_X_loss: 0.1608 | d_fake_loss: 0.6696 | g_loss: 4.8959
 Iteration [5070/10000] | d_real_loss: 0.1989 | d_Y_loss: 0.2823 | d_X_loss: 0.1034 | d_fake_loss: 0.3856 | g_loss: 4.4747
 Iteration [5080/10000] | d_real_loss: 0.0979 | d_Y_loss: 0.1254 | d_X_loss: 0.1058 | d_fake_loss: 0.2312 | g_loss: 4.7395
 Iteration [5090/10000] | d_real_loss: 0.1386 | d_Y_loss: 0.3706 | d_X_loss: 0.1391 | d_fake_loss: 0.5097 | g_loss: 4.8747
 Iteration [5100/10000] | d_real_loss: 0.1139 | d_Y_loss: 0.1509 | d_X_loss: 0.0749 | d_fake_loss: 0.2257 | g_loss: 4.6412
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-005100-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-005100-Y-X.png
 Iteration [5110/10000] | d_real_loss: 0.1962 | d_Y_loss: 0.1746 | d_X_loss: 0.1673 | d_fake_loss: 0.3418 | g_loss: 4.6774
 Iteration [5120/10000] | d_real_loss: 0.1386 | d_Y_loss: 0.4619 | d_X_loss: 0.2083 | d_fake_loss: 0.6703 | g_loss: 4.5676
 Iteration [5130/10000] | d_real_loss: 0.1508 | d_Y_loss: 0.0695 | d_X_loss: 0.1171 | d_fake_loss: 0.1867 | g_loss: 4.1251
 Iteration [5140/10000] | d_real_loss: 0.0899 | d_Y_loss: 0.0426 | d_X_loss: 0.2002 | d_fake_loss: 0.2428 | g_loss: 4.5862
 Iteration [5150/10000] | d_real_loss: 0.0837 | d_Y_loss: 0.2315 | d_X_loss: 0.1013 | d_fake_loss: 0.3328 | g_loss: 4.7936
 Iteration [5160/10000] | d_real_loss: 0.1078 | d_Y_loss: 0.8930 | d_X_loss: 0.0759 | d_fake_loss: 0.9689 | g_loss: 5.0039
 Iteration [5170/10000] | d_real_loss: 0.3371 | d_Y_loss: 0.3158 | d_X_loss: 0.3252 | d_fake_loss: 0.6410 | g_loss: 4.2155
 Iteration [5180/10000] | d_real_loss: 0.3565 | d_Y_loss: 0.1391 | d_X_loss: 0.2054 | d_fake_loss: 0.3445 | g_loss: 4.0662
 Iteration [5190/10000] | d_real_loss: 0.1299 | d_Y_loss: 0.0438 | d_X_loss: 0.1048 | d_fake_loss: 0.1485 | g_loss: 4.6127
 Iteration [5200/10000] | d_real_loss: 0.0670 | d_Y_loss: 0.1641 | d_X_loss: 0.1152 | d_fake_loss: 0.2793 | g_loss: 5.3186
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-005200-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-005200-Y-X.png
 Iteration [5210/10000] | d_real_loss: 0.1243 | d_Y_loss: 0.3793 | d_X_loss: 0.1151 | d_fake_loss: 0.4944 | g_loss: 4.5105
 Iteration [5220/10000] | d_real_loss: 0.2110 | d_Y_loss: 0.3615 | d_X_loss: 0.2013 | d_fake_loss: 0.5629 | g_loss: 4.5778

Iteration [5230/10000] | d_real_loss: 0.1930 | d_Y_loss: 0.1926 | d_X_loss: 0.7746 | d_fake_loss: 0.9672 | g_loss: 4.2957
 Iteration [5240/10000] | d_real_loss: 0.2484 | d_Y_loss: 0.5903 | d_X_loss: 0.1427 | d_fake_loss: 0.7330 | g_loss: 4.1915
 Iteration [5250/10000] | d_real_loss: 0.1131 | d_Y_loss: 0.3372 | d_X_loss: 0.4998 | d_fake_loss: 0.8369 | g_loss: 4.7498
 Iteration [5260/10000] | d_real_loss: 0.0905 | d_Y_loss: 0.0520 | d_X_loss: 0.0758 | d_fake_loss: 0.1278 | g_loss: 4.5496
 Iteration [5270/10000] | d_real_loss: 0.1849 | d_Y_loss: 0.2779 | d_X_loss: 0.1752 | d_fake_loss: 0.4531 | g_loss: 4.9937
 Iteration [5280/10000] | d_real_loss: 0.2072 | d_Y_loss: 0.1496 | d_X_loss: 0.1255 | d_fake_loss: 0.2751 | g_loss: 4.7200
 Iteration [5290/10000] | d_real_loss: 0.1941 | d_Y_loss: 0.3693 | d_X_loss: 0.2936 | d_fake_loss: 0.6630 | g_loss: 4.6550
 Iteration [5300/10000] | d_real_loss: 0.0979 | d_Y_loss: 0.1771 | d_X_loss: 0.6981 | d_fake_loss: 0.8752 | g_loss: 3.9474
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-005300-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-005300-Y-X.png
 Iteration [5310/10000] | d_real_loss: 0.3351 | d_Y_loss: 0.1962 | d_X_loss: 0.0745 | d_fake_loss: 0.2707 | g_loss: 4.4790
 Iteration [5320/10000] | d_real_loss: 0.1631 | d_Y_loss: 0.1436 | d_X_loss: 0.4322 | d_fake_loss: 0.5758 | g_loss: 4.4662
 Iteration [5330/10000] | d_real_loss: 0.3487 | d_Y_loss: 0.0446 | d_X_loss: 0.1275 | d_fake_loss: 0.1721 | g_loss: 4.5530
 Iteration [5340/10000] | d_real_loss: 0.2166 | d_Y_loss: 0.4606 | d_X_loss: 0.2348 | d_fake_loss: 0.6954 | g_loss: 4.3718
 Iteration [5350/10000] | d_real_loss: 0.1812 | d_Y_loss: 0.1310 | d_X_loss: 0.2741 | d_fake_loss: 0.4051 | g_loss: 4.0688
 Iteration [5360/10000] | d_real_loss: 0.1417 | d_Y_loss: 0.1126 | d_X_loss: 0.2436 | d_fake_loss: 0.3562 | g_loss: 4.5241
 Iteration [5370/10000] | d_real_loss: 0.2532 | d_Y_loss: 0.0894 | d_X_loss: 0.1344 | d_fake_loss: 0.2239 | g_loss: 4.2019
 Iteration [5380/10000] | d_real_loss: 0.0979 | d_Y_loss: 0.1352 | d_X_loss: 0.4168 | d_fake_loss: 0.5521 | g_loss: 4.6717
 Iteration [5390/10000] | d_real_loss: 0.1679 | d_Y_loss: 0.3016 | d_X_loss: 0.1950 | d_fake_loss: 0.4965 | g_loss: 4.5136
 Iteration [5400/10000] | d_real_loss: 0.4231 | d_Y_loss: 1.2501 | d_X_loss: 0.0820 | d_fake_loss: 1.3320 | g_loss: 3.2411
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-005400-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-005400-Y-X.png
 Iteration [5410/10000] | d_real_loss: 0.1479 | d_Y_loss: 0.5425 | d_X_loss: 0.1879 | d_fake_loss: 0.7305 | g_loss: 4.0436
 Iteration [5420/10000] | d_real_loss: 0.1642 | d_Y_loss: 0.2038 | d_X_loss: 0.1077 | d_fake_loss: 0.3116 | g_loss: 4.2785

```

Iteration [ 5430/10000] | d_real_loss: 0.1110 | d_Y_loss: 0.0955 | d_X_loss:
0.5049 | d_fake_loss: 0.6004 | g_loss: 5.0429
Iteration [ 5440/10000] | d_real_loss: 0.1240 | d_Y_loss: 0.3278 | d_X_loss:
0.2879 | d_fake_loss: 0.6158 | g_loss: 4.4655
Iteration [ 5450/10000] | d_real_loss: 0.2530 | d_Y_loss: 0.3850 | d_X_loss:
0.2353 | d_fake_loss: 0.6203 | g_loss: 3.4790
Iteration [ 5460/10000] | d_real_loss: 0.3111 | d_Y_loss: 0.4929 | d_X_loss:
0.1287 | d_fake_loss: 0.6217 | g_loss: 4.3626
Iteration [ 5470/10000] | d_real_loss: 0.2039 | d_Y_loss: 0.0587 | d_X_loss:
0.1557 | d_fake_loss: 0.2144 | g_loss: 4.3251
Iteration [ 5480/10000] | d_real_loss: 0.3432 | d_Y_loss: 0.1508 | d_X_loss:
0.2659 | d_fake_loss: 0.4168 | g_loss: 4.0188
Iteration [ 5490/10000] | d_real_loss: 0.1015 | d_Y_loss: 0.2290 | d_X_loss:
0.0611 | d_fake_loss: 0.2901 | g_loss: 4.4464
Iteration [ 5500/10000] | d_real_loss: 0.1475 | d_Y_loss: 0.1557 | d_X_loss:
0.4544 | d_fake_loss: 0.6101 | g_loss: 4.8189
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
005500-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
005500-Y-X.png
Iteration [ 5510/10000] | d_real_loss: 0.2012 | d_Y_loss: 0.0840 | d_X_loss:
0.2095 | d_fake_loss: 0.2935 | g_loss: 4.8152
Iteration [ 5520/10000] | d_real_loss: 0.1220 | d_Y_loss: 0.0552 | d_X_loss:
0.7283 | d_fake_loss: 0.7835 | g_loss: 4.6124
Iteration [ 5530/10000] | d_real_loss: 0.1869 | d_Y_loss: 0.1509 | d_X_loss:
0.1016 | d_fake_loss: 0.2525 | g_loss: 4.3897
Iteration [ 5540/10000] | d_real_loss: 0.1374 | d_Y_loss: 0.0610 | d_X_loss:
0.2077 | d_fake_loss: 0.2687 | g_loss: 4.4364
Iteration [ 5550/10000] | d_real_loss: 0.0757 | d_Y_loss: 0.4006 | d_X_loss:
0.0953 | d_fake_loss: 0.4959 | g_loss: 4.7443
Iteration [ 5560/10000] | d_real_loss: 0.1055 | d_Y_loss: 0.2292 | d_X_loss:
0.4045 | d_fake_loss: 0.6337 | g_loss: 4.1624
Iteration [ 5570/10000] | d_real_loss: 0.0940 | d_Y_loss: 0.0527 | d_X_loss:
0.0660 | d_fake_loss: 0.1187 | g_loss: 5.6655
Iteration [ 5580/10000] | d_real_loss: 0.1194 | d_Y_loss: 0.0774 | d_X_loss:
0.1227 | d_fake_loss: 0.2001 | g_loss: 4.2893
Iteration [ 5590/10000] | d_real_loss: 0.0607 | d_Y_loss: 0.0676 | d_X_loss:
0.1150 | d_fake_loss: 0.1826 | g_loss: 4.2304
Iteration [ 5600/10000] | d_real_loss: 0.0939 | d_Y_loss: 0.0769 | d_X_loss:
0.0650 | d_fake_loss: 0.1419 | g_loss: 4.3341
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
005600-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
005600-Y-X.png
Iteration [ 5610/10000] | d_real_loss: 0.0715 | d_Y_loss: 0.0989 | d_X_loss:
0.1427 | d_fake_loss: 0.2417 | g_loss: 4.2257
Iteration [ 5620/10000] | d_real_loss: 0.0552 | d_Y_loss: 0.0599 | d_X_loss:
0.1334 | d_fake_loss: 0.1933 | g_loss: 4.3090

```

Iteration [5630/10000] | d_real_loss: 0.0373 | d_Y_loss: 0.0557 | d_X_loss: 0.1702 | d_fake_loss: 0.2259 | g_loss: 4.4004
 Iteration [5640/10000] | d_real_loss: 0.0785 | d_Y_loss: 0.0501 | d_X_loss: 0.0626 | d_fake_loss: 0.1127 | g_loss: 4.6382
 Iteration [5650/10000] | d_real_loss: 0.0402 | d_Y_loss: 0.0404 | d_X_loss: 0.3580 | d_fake_loss: 0.3984 | g_loss: 4.4138
 Iteration [5660/10000] | d_real_loss: 0.0285 | d_Y_loss: 0.0447 | d_X_loss: 0.0830 | d_fake_loss: 0.1278 | g_loss: 5.0267
 Iteration [5670/10000] | d_real_loss: 0.0504 | d_Y_loss: 0.0461 | d_X_loss: 0.0392 | d_fake_loss: 0.0854 | g_loss: 5.0413
 Iteration [5680/10000] | d_real_loss: 0.0690 | d_Y_loss: 0.0428 | d_X_loss: 0.2008 | d_fake_loss: 0.2436 | g_loss: 4.6547
 Iteration [5690/10000] | d_real_loss: 0.0569 | d_Y_loss: 0.0407 | d_X_loss: 0.2212 | d_fake_loss: 0.2619 | g_loss: 4.7875
 Iteration [5700/10000] | d_real_loss: 0.0596 | d_Y_loss: 0.0362 | d_X_loss: 0.2729 | d_fake_loss: 0.3091 | g_loss: 4.7395
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-005700-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-005700-Y-X.png
 Iteration [5710/10000] | d_real_loss: 0.0481 | d_Y_loss: 0.0474 | d_X_loss: 0.0955 | d_fake_loss: 0.1429 | g_loss: 4.6024
 Iteration [5720/10000] | d_real_loss: 0.1887 | d_Y_loss: 0.0392 | d_X_loss: 0.2695 | d_fake_loss: 0.3088 | g_loss: 4.8691
 Iteration [5730/10000] | d_real_loss: 0.0660 | d_Y_loss: 0.0391 | d_X_loss: 0.0706 | d_fake_loss: 0.1097 | g_loss: 4.8052
 Iteration [5740/10000] | d_real_loss: 0.1780 | d_Y_loss: 0.0363 | d_X_loss: 0.2133 | d_fake_loss: 0.2495 | g_loss: 4.7108
 Iteration [5750/10000] | d_real_loss: 0.0904 | d_Y_loss: 0.0388 | d_X_loss: 0.0517 | d_fake_loss: 0.0905 | g_loss: 4.7728
 Iteration [5760/10000] | d_real_loss: 0.0318 | d_Y_loss: 0.0285 | d_X_loss: 0.0681 | d_fake_loss: 0.0965 | g_loss: 5.0840
 Iteration [5770/10000] | d_real_loss: 0.0309 | d_Y_loss: 0.0366 | d_X_loss: 0.3619 | d_fake_loss: 0.3986 | g_loss: 4.5028
 Iteration [5780/10000] | d_real_loss: 0.0637 | d_Y_loss: 0.0372 | d_X_loss: 0.0616 | d_fake_loss: 0.0988 | g_loss: 4.7528
 Iteration [5790/10000] | d_real_loss: 0.0490 | d_Y_loss: 0.0355 | d_X_loss: 0.0865 | d_fake_loss: 0.1221 | g_loss: 4.6154
 Iteration [5800/10000] | d_real_loss: 0.0459 | d_Y_loss: 0.0412 | d_X_loss: 0.0738 | d_fake_loss: 0.1150 | g_loss: 5.0128
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-005800-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-005800-Y-X.png
 Iteration [5810/10000] | d_real_loss: 0.0431 | d_Y_loss: 0.0350 | d_X_loss: 0.1517 | d_fake_loss: 0.1867 | g_loss: 4.8088
 Iteration [5820/10000] | d_real_loss: 0.0578 | d_Y_loss: 0.0304 | d_X_loss: 0.0540 | d_fake_loss: 0.0844 | g_loss: 4.9852

Iteration [5830/10000] | d_real_loss: 0.2009 | d_Y_loss: 0.0360 | d_X_loss: 0.1685 | d_fake_loss: 0.2046 | g_loss: 4.7823
 Iteration [5840/10000] | d_real_loss: 0.0610 | d_Y_loss: 0.0383 | d_X_loss: 0.2252 | d_fake_loss: 0.2635 | g_loss: 4.6809
 Iteration [5850/10000] | d_real_loss: 0.0461 | d_Y_loss: 0.0418 | d_X_loss: 0.3977 | d_fake_loss: 0.4395 | g_loss: 4.7387
 Iteration [5860/10000] | d_real_loss: 0.0724 | d_Y_loss: 0.0368 | d_X_loss: 0.1058 | d_fake_loss: 0.1426 | g_loss: 4.7281
 Iteration [5870/10000] | d_real_loss: 0.0307 | d_Y_loss: 0.0365 | d_X_loss: 0.4691 | d_fake_loss: 0.5056 | g_loss: 4.6455
 Iteration [5880/10000] | d_real_loss: 0.0855 | d_Y_loss: 0.0325 | d_X_loss: 0.0542 | d_fake_loss: 0.0867 | g_loss: 5.3129
 Iteration [5890/10000] | d_real_loss: 0.1072 | d_Y_loss: 0.0289 | d_X_loss: 0.4221 | d_fake_loss: 0.4510 | g_loss: 5.6864
 Iteration [5900/10000] | d_real_loss: 0.0752 | d_Y_loss: 0.0311 | d_X_loss: 0.1802 | d_fake_loss: 0.2113 | g_loss: 5.1138
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-005900-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-005900-Y-X.png
 Iteration [5910/10000] | d_real_loss: 0.0793 | d_Y_loss: 0.0268 | d_X_loss: 0.0817 | d_fake_loss: 0.1085 | g_loss: 5.0388
 Iteration [5920/10000] | d_real_loss: 0.0350 | d_Y_loss: 0.0315 | d_X_loss: 0.2408 | d_fake_loss: 0.2723 | g_loss: 4.9909
 Iteration [5930/10000] | d_real_loss: 0.0378 | d_Y_loss: 0.0293 | d_X_loss: 0.1161 | d_fake_loss: 0.1454 | g_loss: 5.0666
 Iteration [5940/10000] | d_real_loss: 0.0914 | d_Y_loss: 0.0259 | d_X_loss: 0.2853 | d_fake_loss: 0.3112 | g_loss: 4.9448
 Iteration [5950/10000] | d_real_loss: 0.1129 | d_Y_loss: 0.0385 | d_X_loss: 0.2577 | d_fake_loss: 0.2963 | g_loss: 4.7033
 Iteration [5960/10000] | d_real_loss: 0.0675 | d_Y_loss: 0.0286 | d_X_loss: 0.0740 | d_fake_loss: 0.1026 | g_loss: 5.2043
 Iteration [5970/10000] | d_real_loss: 0.1030 | d_Y_loss: 0.0247 | d_X_loss: 0.3400 | d_fake_loss: 0.3647 | g_loss: 5.3633
 Iteration [5980/10000] | d_real_loss: 0.1485 | d_Y_loss: 0.0310 | d_X_loss: 0.0611 | d_fake_loss: 0.0922 | g_loss: 5.3121
 Iteration [5990/10000] | d_real_loss: 0.1108 | d_Y_loss: 0.0373 | d_X_loss: 0.0841 | d_fake_loss: 0.1214 | g_loss: 5.0486
 Iteration [6000/10000] | d_real_loss: 0.0639 | d_Y_loss: 0.0396 | d_X_loss: 0.2756 | d_fake_loss: 0.3152 | g_loss: 5.0985
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-006000-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-006000-Y-X.png
 Iteration [6010/10000] | d_real_loss: 0.0486 | d_Y_loss: 0.0259 | d_X_loss: 0.2862 | d_fake_loss: 0.3121 | g_loss: 5.2941
 Iteration [6020/10000] | d_real_loss: 0.2644 | d_Y_loss: 0.0910 | d_X_loss: 0.1575 | d_fake_loss: 0.2485 | g_loss: 5.0564

```

Iteration [ 6030/10000] | d_real_loss: 0.2972 | d_Y_loss: 0.0373 | d_X_loss:
0.1438 | d_fake_loss: 0.1810 | g_loss: 5.1664
Iteration [ 6040/10000] | d_real_loss: 0.0876 | d_Y_loss: 0.0228 | d_X_loss:
0.0501 | d_fake_loss: 0.0728 | g_loss: 5.8265
Iteration [ 6050/10000] | d_real_loss: 0.0682 | d_Y_loss: 0.0409 | d_X_loss:
0.0991 | d_fake_loss: 0.1400 | g_loss: 4.6258
Iteration [ 6060/10000] | d_real_loss: 0.0994 | d_Y_loss: 0.0322 | d_X_loss:
0.1547 | d_fake_loss: 0.1870 | g_loss: 5.3225
Iteration [ 6070/10000] | d_real_loss: 0.0446 | d_Y_loss: 0.0269 | d_X_loss:
0.1341 | d_fake_loss: 0.1609 | g_loss: 5.1620
Iteration [ 6080/10000] | d_real_loss: 0.0603 | d_Y_loss: 0.0252 | d_X_loss:
0.2864 | d_fake_loss: 0.3117 | g_loss: 5.0954
Iteration [ 6090/10000] | d_real_loss: 0.1579 | d_Y_loss: 0.0248 | d_X_loss:
0.0478 | d_fake_loss: 0.0726 | g_loss: 5.4622
Iteration [ 6100/10000] | d_real_loss: 0.0455 | d_Y_loss: 0.0504 | d_X_loss:
0.1767 | d_fake_loss: 0.2271 | g_loss: 5.1120
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
006100-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
006100-Y-X.png
Iteration [ 6110/10000] | d_real_loss: 0.0575 | d_Y_loss: 0.0333 | d_X_loss:
0.0621 | d_fake_loss: 0.0954 | g_loss: 5.9748
Iteration [ 6120/10000] | d_real_loss: 0.0948 | d_Y_loss: 0.0406 | d_X_loss:
0.0492 | d_fake_loss: 0.0898 | g_loss: 5.4990
Iteration [ 6130/10000] | d_real_loss: 0.0535 | d_Y_loss: 0.3452 | d_X_loss:
0.2398 | d_fake_loss: 0.5851 | g_loss: 6.2650
Iteration [ 6140/10000] | d_real_loss: 0.0786 | d_Y_loss: 0.0143 | d_X_loss:
0.1129 | d_fake_loss: 0.1272 | g_loss: 5.7268
Iteration [ 6150/10000] | d_real_loss: 0.0417 | d_Y_loss: 0.0356 | d_X_loss:
0.0856 | d_fake_loss: 0.1211 | g_loss: 5.5175
Iteration [ 6160/10000] | d_real_loss: 0.0788 | d_Y_loss: 0.0513 | d_X_loss:
0.0876 | d_fake_loss: 0.1389 | g_loss: 4.9369
Iteration [ 6170/10000] | d_real_loss: 0.1408 | d_Y_loss: 0.0492 | d_X_loss:
0.0805 | d_fake_loss: 0.1297 | g_loss: 5.8130
Iteration [ 6180/10000] | d_real_loss: 0.0564 | d_Y_loss: 0.0325 | d_X_loss:
0.0724 | d_fake_loss: 0.1049 | g_loss: 6.2689
Iteration [ 6190/10000] | d_real_loss: 0.0284 | d_Y_loss: 0.0124 | d_X_loss:
0.1059 | d_fake_loss: 0.1183 | g_loss: 5.8536
Iteration [ 6200/10000] | d_real_loss: 0.0361 | d_Y_loss: 0.1358 | d_X_loss:
0.0542 | d_fake_loss: 0.1900 | g_loss: 5.9410
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
006200-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
006200-Y-X.png
Iteration [ 6210/10000] | d_real_loss: 0.0747 | d_Y_loss: 0.0662 | d_X_loss:
0.0510 | d_fake_loss: 0.1172 | g_loss: 6.0834
Iteration [ 6220/10000] | d_real_loss: 0.0305 | d_Y_loss: 0.1080 | d_X_loss:
0.0759 | d_fake_loss: 0.1839 | g_loss: 6.3198

```

```

Iteration [ 6230/10000] | d_real_loss: 0.3434 | d_Y_loss: 0.8190 | d_X_loss:
0.0514 | d_fake_loss: 0.8704 | g_loss: 2.6153
Iteration [ 6240/10000] | d_real_loss: 0.2627 | d_Y_loss: 0.7717 | d_X_loss:
0.0634 | d_fake_loss: 0.8351 | g_loss: 2.9075
Iteration [ 6250/10000] | d_real_loss: 0.2719 | d_Y_loss: 0.5147 | d_X_loss:
0.0970 | d_fake_loss: 0.6117 | g_loss: 3.4410
Iteration [ 6260/10000] | d_real_loss: 0.2596 | d_Y_loss: 0.2501 | d_X_loss:
0.0694 | d_fake_loss: 0.3195 | g_loss: 4.1456
Iteration [ 6270/10000] | d_real_loss: 0.2469 | d_Y_loss: 0.3131 | d_X_loss:
0.7388 | d_fake_loss: 1.0519 | g_loss: 4.5086
Iteration [ 6280/10000] | d_real_loss: 0.1067 | d_Y_loss: 0.0894 | d_X_loss:
0.1430 | d_fake_loss: 0.2324 | g_loss: 5.0656
Iteration [ 6290/10000] | d_real_loss: 0.0863 | d_Y_loss: 0.1140 | d_X_loss:
0.3035 | d_fake_loss: 0.4175 | g_loss: 4.5849
Iteration [ 6300/10000] | d_real_loss: 0.0914 | d_Y_loss: 0.1387 | d_X_loss:
0.0565 | d_fake_loss: 0.1952 | g_loss: 5.4997
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
006300-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
006300-Y-X.png
Iteration [ 6310/10000] | d_real_loss: 0.3317 | d_Y_loss: 0.6069 | d_X_loss:
0.0197 | d_fake_loss: 0.6266 | g_loss: 3.6914
Iteration [ 6320/10000] | d_real_loss: 0.1661 | d_Y_loss: 0.2754 | d_X_loss:
0.1321 | d_fake_loss: 0.4076 | g_loss: 4.3196
Iteration [ 6330/10000] | d_real_loss: 0.1027 | d_Y_loss: 0.4630 | d_X_loss:
0.0662 | d_fake_loss: 0.5292 | g_loss: 4.7820
Iteration [ 6340/10000] | d_real_loss: 0.1407 | d_Y_loss: 0.0987 | d_X_loss:
0.6105 | d_fake_loss: 0.7093 | g_loss: 4.9797
Iteration [ 6350/10000] | d_real_loss: 0.0951 | d_Y_loss: 0.0789 | d_X_loss:
0.5319 | d_fake_loss: 0.6108 | g_loss: 4.1174
Iteration [ 6360/10000] | d_real_loss: 0.2509 | d_Y_loss: 0.2975 | d_X_loss:
0.3027 | d_fake_loss: 0.6002 | g_loss: 4.2348
Iteration [ 6370/10000] | d_real_loss: 0.0994 | d_Y_loss: 0.3051 | d_X_loss:
0.1354 | d_fake_loss: 0.4405 | g_loss: 5.3104
Iteration [ 6380/10000] | d_real_loss: 0.1291 | d_Y_loss: 0.6897 | d_X_loss:
0.1779 | d_fake_loss: 0.8676 | g_loss: 5.4999
Iteration [ 6390/10000] | d_real_loss: 0.1432 | d_Y_loss: 0.6200 | d_X_loss:
0.3808 | d_fake_loss: 1.0008 | g_loss: 5.1735
Iteration [ 6400/10000] | d_real_loss: 0.3901 | d_Y_loss: 0.3275 | d_X_loss:
0.1506 | d_fake_loss: 0.4780 | g_loss: 4.7652
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
006400-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
006400-Y-X.png
Iteration [ 6410/10000] | d_real_loss: 0.1357 | d_Y_loss: 0.0827 | d_X_loss:
0.1187 | d_fake_loss: 0.2014 | g_loss: 4.9254
Iteration [ 6420/10000] | d_real_loss: 0.1311 | d_Y_loss: 0.0944 | d_X_loss:
0.0590 | d_fake_loss: 0.1534 | g_loss: 4.4073

```

Iteration [6430/10000] | d_real_loss: 0.2502 | d_Y_loss: 0.2336 | d_X_loss: 0.1643 | d_fake_loss: 0.3979 | g_loss: 5.2488
 Iteration [6440/10000] | d_real_loss: 0.0996 | d_Y_loss: 0.1612 | d_X_loss: 0.1144 | d_fake_loss: 0.2756 | g_loss: 5.1341
 Iteration [6450/10000] | d_real_loss: 0.1689 | d_Y_loss: 0.2495 | d_X_loss: 0.1859 | d_fake_loss: 0.4354 | g_loss: 5.1438
 Iteration [6460/10000] | d_real_loss: 0.1107 | d_Y_loss: 0.1501 | d_X_loss: 0.2380 | d_fake_loss: 0.3881 | g_loss: 5.0677
 Iteration [6470/10000] | d_real_loss: 0.1699 | d_Y_loss: 0.0541 | d_X_loss: 0.1559 | d_fake_loss: 0.2100 | g_loss: 4.2463
 Iteration [6480/10000] | d_real_loss: 0.2731 | d_Y_loss: 0.0963 | d_X_loss: 0.3406 | d_fake_loss: 0.4370 | g_loss: 4.2919
 Iteration [6490/10000] | d_real_loss: 0.2248 | d_Y_loss: 0.1356 | d_X_loss: 0.1015 | d_fake_loss: 0.2371 | g_loss: 4.7618
 Iteration [6500/10000] | d_real_loss: 0.1961 | d_Y_loss: 0.0939 | d_X_loss: 0.1710 | d_fake_loss: 0.2648 | g_loss: 5.3630
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-006500-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-006500-Y-X.png
 Iteration [6510/10000] | d_real_loss: 0.1254 | d_Y_loss: 0.0659 | d_X_loss: 0.0324 | d_fake_loss: 0.0983 | g_loss: 5.6105
 Iteration [6520/10000] | d_real_loss: 0.1413 | d_Y_loss: 0.0292 | d_X_loss: 0.0798 | d_fake_loss: 0.1090 | g_loss: 5.0134
 Iteration [6530/10000] | d_real_loss: 0.1291 | d_Y_loss: 0.0661 | d_X_loss: 0.2037 | d_fake_loss: 0.2698 | g_loss: 4.9603
 Iteration [6540/10000] | d_real_loss: 0.0691 | d_Y_loss: 0.3206 | d_X_loss: 0.2124 | d_fake_loss: 0.5330 | g_loss: 4.9967
 Iteration [6550/10000] | d_real_loss: 0.0843 | d_Y_loss: 0.5916 | d_X_loss: 0.1414 | d_fake_loss: 0.7329 | g_loss: 4.8897
 Iteration [6560/10000] | d_real_loss: 0.0609 | d_Y_loss: 0.5045 | d_X_loss: 0.0979 | d_fake_loss: 0.6024 | g_loss: 4.9469
 Iteration [6570/10000] | d_real_loss: 0.1595 | d_Y_loss: 0.3945 | d_X_loss: 0.3451 | d_fake_loss: 0.7397 | g_loss: 5.3247
 Iteration [6580/10000] | d_real_loss: 0.1834 | d_Y_loss: 0.6637 | d_X_loss: 0.1149 | d_fake_loss: 0.7786 | g_loss: 3.3709
 Iteration [6590/10000] | d_real_loss: 0.1445 | d_Y_loss: 0.2521 | d_X_loss: 0.1305 | d_fake_loss: 0.3826 | g_loss: 4.2488
 Iteration [6600/10000] | d_real_loss: 0.2195 | d_Y_loss: 0.4492 | d_X_loss: 0.0762 | d_fake_loss: 0.5255 | g_loss: 4.4846
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-006600-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-006600-Y-X.png
 Iteration [6610/10000] | d_real_loss: 0.2187 | d_Y_loss: 0.1611 | d_X_loss: 0.5863 | d_fake_loss: 0.7474 | g_loss: 4.7162
 Iteration [6620/10000] | d_real_loss: 0.1388 | d_Y_loss: 0.0964 | d_X_loss: 0.0766 | d_fake_loss: 0.1730 | g_loss: 4.5403

Iteration [6630/10000] | d_real_loss: 0.0992 | d_Y_loss: 0.2745 | d_X_loss: 0.2005 | d_fake_loss: 0.4750 | g_loss: 4.5780
 Iteration [6640/10000] | d_real_loss: 0.0796 | d_Y_loss: 0.6995 | d_X_loss: 0.1934 | d_fake_loss: 0.8928 | g_loss: 5.5227
 Iteration [6650/10000] | d_real_loss: 0.1847 | d_Y_loss: 0.4611 | d_X_loss: 0.2144 | d_fake_loss: 0.6755 | g_loss: 3.8117
 Iteration [6660/10000] | d_real_loss: 0.0835 | d_Y_loss: 0.3503 | d_X_loss: 0.2992 | d_fake_loss: 0.6495 | g_loss: 4.8502
 Iteration [6670/10000] | d_real_loss: 0.0999 | d_Y_loss: 0.3228 | d_X_loss: 0.6873 | d_fake_loss: 1.0101 | g_loss: 4.8591
 Iteration [6680/10000] | d_real_loss: 0.1927 | d_Y_loss: 0.2413 | d_X_loss: 0.2677 | d_fake_loss: 0.5090 | g_loss: 4.4945
 Iteration [6690/10000] | d_real_loss: 0.1130 | d_Y_loss: 0.1420 | d_X_loss: 0.2262 | d_fake_loss: 0.3682 | g_loss: 4.7653
 Iteration [6700/10000] | d_real_loss: 0.1030 | d_Y_loss: 0.2981 | d_X_loss: 0.1561 | d_fake_loss: 0.4542 | g_loss: 4.7662
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-006700-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-006700-Y-X.png
 Iteration [6710/10000] | d_real_loss: 0.0799 | d_Y_loss: 0.4822 | d_X_loss: 0.0568 | d_fake_loss: 0.5390 | g_loss: 4.9939
 Iteration [6720/10000] | d_real_loss: 0.1124 | d_Y_loss: 0.4204 | d_X_loss: 0.1064 | d_fake_loss: 0.5268 | g_loss: 4.7648
 Iteration [6730/10000] | d_real_loss: 0.0803 | d_Y_loss: 0.3541 | d_X_loss: 0.3228 | d_fake_loss: 0.6769 | g_loss: 5.0081
 Iteration [6740/10000] | d_real_loss: 0.2693 | d_Y_loss: 0.2488 | d_X_loss: 0.4407 | d_fake_loss: 0.6896 | g_loss: 4.5508
 Iteration [6750/10000] | d_real_loss: 0.1118 | d_Y_loss: 0.2772 | d_X_loss: 0.0433 | d_fake_loss: 0.3204 | g_loss: 4.3479
 Iteration [6760/10000] | d_real_loss: 0.1449 | d_Y_loss: 0.0824 | d_X_loss: 0.5078 | d_fake_loss: 0.5902 | g_loss: 4.7469
 Iteration [6770/10000] | d_real_loss: 0.1649 | d_Y_loss: 0.2174 | d_X_loss: 0.1275 | d_fake_loss: 0.3449 | g_loss: 5.2529
 Iteration [6780/10000] | d_real_loss: 0.1330 | d_Y_loss: 0.0443 | d_X_loss: 0.0837 | d_fake_loss: 0.1281 | g_loss: 4.6513
 Iteration [6790/10000] | d_real_loss: 0.1101 | d_Y_loss: 0.1348 | d_X_loss: 0.3623 | d_fake_loss: 0.4971 | g_loss: 4.5300
 Iteration [6800/10000] | d_real_loss: 0.1098 | d_Y_loss: 0.1700 | d_X_loss: 0.1101 | d_fake_loss: 0.2801 | g_loss: 4.5092
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-006800-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-006800-Y-X.png
 Iteration [6810/10000] | d_real_loss: 0.1126 | d_Y_loss: 0.2289 | d_X_loss: 0.1199 | d_fake_loss: 0.3488 | g_loss: 5.3257
 Iteration [6820/10000] | d_real_loss: 0.0645 | d_Y_loss: 0.1603 | d_X_loss: 0.0633 | d_fake_loss: 0.2235 | g_loss: 4.6092

```

Iteration [ 6830/10000] | d_real_loss: 0.1255 | d_Y_loss: 0.2340 | d_X_loss:
0.0351 | d_fake_loss: 0.2691 | g_loss: 4.8691
Iteration [ 6840/10000] | d_real_loss: 0.0610 | d_Y_loss: 0.1909 | d_X_loss:
0.0891 | d_fake_loss: 0.2800 | g_loss: 5.1159
Iteration [ 6850/10000] | d_real_loss: 0.0944 | d_Y_loss: 0.0840 | d_X_loss:
0.0906 | d_fake_loss: 0.1746 | g_loss: 4.6273
Iteration [ 6860/10000] | d_real_loss: 0.2765 | d_Y_loss: 0.1280 | d_X_loss:
0.1092 | d_fake_loss: 0.2371 | g_loss: 4.6976
Iteration [ 6870/10000] | d_real_loss: 0.0622 | d_Y_loss: 0.3116 | d_X_loss:
0.0206 | d_fake_loss: 0.3322 | g_loss: 5.0427
Iteration [ 6880/10000] | d_real_loss: 0.1089 | d_Y_loss: 0.4058 | d_X_loss:
0.2037 | d_fake_loss: 0.6095 | g_loss: 4.8797
Iteration [ 6890/10000] | d_real_loss: 0.1401 | d_Y_loss: 0.2456 | d_X_loss:
0.0467 | d_fake_loss: 0.2923 | g_loss: 4.7695
Iteration [ 6900/10000] | d_real_loss: 0.1462 | d_Y_loss: 0.0866 | d_X_loss:
0.2535 | d_fake_loss: 0.3401 | g_loss: 5.0268
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
006900-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
006900-Y-X.png
Iteration [ 6910/10000] | d_real_loss: 0.1013 | d_Y_loss: 0.2780 | d_X_loss:
0.0278 | d_fake_loss: 0.3058 | g_loss: 4.5617
Iteration [ 6920/10000] | d_real_loss: 0.1608 | d_Y_loss: 0.1539 | d_X_loss:
0.0266 | d_fake_loss: 0.1805 | g_loss: 5.2376
Iteration [ 6930/10000] | d_real_loss: 0.1802 | d_Y_loss: 0.2531 | d_X_loss:
0.0432 | d_fake_loss: 0.2963 | g_loss: 4.6335
Iteration [ 6940/10000] | d_real_loss: 0.1224 | d_Y_loss: 0.1351 | d_X_loss:
0.0933 | d_fake_loss: 0.2284 | g_loss: 4.5885
Iteration [ 6950/10000] | d_real_loss: 0.1253 | d_Y_loss: 0.2705 | d_X_loss:
0.0204 | d_fake_loss: 0.2909 | g_loss: 4.5749
Iteration [ 6960/10000] | d_real_loss: 0.1621 | d_Y_loss: 0.0918 | d_X_loss:
0.0318 | d_fake_loss: 0.1236 | g_loss: 4.3958
Iteration [ 6970/10000] | d_real_loss: 0.1166 | d_Y_loss: 0.3220 | d_X_loss:
0.2237 | d_fake_loss: 0.5457 | g_loss: 4.7260
Iteration [ 6980/10000] | d_real_loss: 0.1056 | d_Y_loss: 0.1322 | d_X_loss:
0.0303 | d_fake_loss: 0.1625 | g_loss: 4.0362
Iteration [ 6990/10000] | d_real_loss: 0.1931 | d_Y_loss: 0.5573 | d_X_loss:
0.1872 | d_fake_loss: 0.7445 | g_loss: 4.2408
Iteration [ 7000/10000] | d_real_loss: 0.1091 | d_Y_loss: 0.5292 | d_X_loss:
0.2598 | d_fake_loss: 0.7890 | g_loss: 4.1409
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
007000-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
007000-Y-X.png
Iteration [ 7010/10000] | d_real_loss: 0.0980 | d_Y_loss: 0.0906 | d_X_loss:
0.3635 | d_fake_loss: 0.4541 | g_loss: 5.2099
Iteration [ 7020/10000] | d_real_loss: 0.0974 | d_Y_loss: 0.1461 | d_X_loss:
0.0666 | d_fake_loss: 0.2127 | g_loss: 4.9964

```

Iteration [7030/10000] | d_real_loss: 0.0541 | d_Y_loss: 0.2670 | d_X_loss: 0.1914 | d_fake_loss: 0.4584 | g_loss: 5.0563
 Iteration [7040/10000] | d_real_loss: 0.0848 | d_Y_loss: 0.3002 | d_X_loss: 0.0327 | d_fake_loss: 0.3329 | g_loss: 5.8664
 Iteration [7050/10000] | d_real_loss: 0.1119 | d_Y_loss: 0.0385 | d_X_loss: 0.2761 | d_fake_loss: 0.3147 | g_loss: 4.7236
 Iteration [7060/10000] | d_real_loss: 0.0572 | d_Y_loss: 0.2300 | d_X_loss: 0.0661 | d_fake_loss: 0.2961 | g_loss: 5.1672
 Iteration [7070/10000] | d_real_loss: 0.1227 | d_Y_loss: 0.0731 | d_X_loss: 0.0520 | d_fake_loss: 0.1250 | g_loss: 4.9519
 Iteration [7080/10000] | d_real_loss: 0.1434 | d_Y_loss: 0.3092 | d_X_loss: 0.0322 | d_fake_loss: 0.3414 | g_loss: 4.7609
 Iteration [7090/10000] | d_real_loss: 0.1087 | d_Y_loss: 0.1205 | d_X_loss: 0.0462 | d_fake_loss: 0.1668 | g_loss: 4.8680
 Iteration [7100/10000] | d_real_loss: 0.0587 | d_Y_loss: 0.1348 | d_X_loss: 0.4682 | d_fake_loss: 0.6030 | g_loss: 4.8320
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-007100-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-007100-Y-X.png
 Iteration [7110/10000] | d_real_loss: 0.2322 | d_Y_loss: 0.1030 | d_X_loss: 0.1036 | d_fake_loss: 0.2066 | g_loss: 4.6945
 Iteration [7120/10000] | d_real_loss: 0.1324 | d_Y_loss: 0.0624 | d_X_loss: 0.0510 | d_fake_loss: 0.1134 | g_loss: 4.7942
 Iteration [7130/10000] | d_real_loss: 0.0958 | d_Y_loss: 0.2450 | d_X_loss: 0.1040 | d_fake_loss: 0.3490 | g_loss: 5.0176
 Iteration [7140/10000] | d_real_loss: 0.1252 | d_Y_loss: 0.2625 | d_X_loss: 0.0266 | d_fake_loss: 0.2891 | g_loss: 4.4004
 Iteration [7150/10000] | d_real_loss: 0.0974 | d_Y_loss: 0.1578 | d_X_loss: 0.0362 | d_fake_loss: 0.1939 | g_loss: 4.3132
 Iteration [7160/10000] | d_real_loss: 0.1124 | d_Y_loss: 0.6545 | d_X_loss: 0.6617 | d_fake_loss: 1.3162 | g_loss: 4.8715
 Iteration [7170/10000] | d_real_loss: 0.0642 | d_Y_loss: 0.2438 | d_X_loss: 0.1052 | d_fake_loss: 0.3490 | g_loss: 4.8625
 Iteration [7180/10000] | d_real_loss: 0.2021 | d_Y_loss: 0.1824 | d_X_loss: 0.1204 | d_fake_loss: 0.3028 | g_loss: 4.8061
 Iteration [7190/10000] | d_real_loss: 0.0840 | d_Y_loss: 0.1378 | d_X_loss: 0.0652 | d_fake_loss: 0.2030 | g_loss: 4.2059
 Iteration [7200/10000] | d_real_loss: 0.1329 | d_Y_loss: 0.2319 | d_X_loss: 0.2264 | d_fake_loss: 0.4583 | g_loss: 5.3698
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-007200-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-007200-Y-X.png
 Iteration [7210/10000] | d_real_loss: 0.0535 | d_Y_loss: 0.0351 | d_X_loss: 0.6073 | d_fake_loss: 0.6423 | g_loss: 4.4757
 Iteration [7220/10000] | d_real_loss: 0.3138 | d_Y_loss: 0.3556 | d_X_loss: 0.1604 | d_fake_loss: 0.5159 | g_loss: 5.4195

Iteration [7230/10000] | d_real_loss: 0.1237 | d_Y_loss: 0.1623 | d_X_loss: 0.1681 | d_fake_loss: 0.3304 | g_loss: 4.9419
 Iteration [7240/10000] | d_real_loss: 0.0949 | d_Y_loss: 0.1280 | d_X_loss: 0.1713 | d_fake_loss: 0.2993 | g_loss: 4.8308
 Iteration [7250/10000] | d_real_loss: 0.1320 | d_Y_loss: 0.1184 | d_X_loss: 0.1858 | d_fake_loss: 0.3042 | g_loss: 5.0531
 Iteration [7260/10000] | d_real_loss: 0.0447 | d_Y_loss: 0.2615 | d_X_loss: 0.1175 | d_fake_loss: 0.3789 | g_loss: 5.2105
 Iteration [7270/10000] | d_real_loss: 0.1093 | d_Y_loss: 0.0574 | d_X_loss: 0.1287 | d_fake_loss: 0.1861 | g_loss: 5.0990
 Iteration [7280/10000] | d_real_loss: 0.1220 | d_Y_loss: 0.4621 | d_X_loss: 0.2594 | d_fake_loss: 0.7215 | g_loss: 5.6394
 Iteration [7290/10000] | d_real_loss: 0.1436 | d_Y_loss: 0.4063 | d_X_loss: 0.1409 | d_fake_loss: 0.5472 | g_loss: 4.6976
 Iteration [7300/10000] | d_real_loss: 0.0718 | d_Y_loss: 0.1530 | d_X_loss: 0.0956 | d_fake_loss: 0.2485 | g_loss: 4.8795
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-007300-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-007300-Y-X.png
 Iteration [7310/10000] | d_real_loss: 0.0516 | d_Y_loss: 0.3127 | d_X_loss: 0.0303 | d_fake_loss: 0.3430 | g_loss: 5.1721
 Iteration [7320/10000] | d_real_loss: 0.0679 | d_Y_loss: 0.4830 | d_X_loss: 0.2989 | d_fake_loss: 0.7818 | g_loss: 4.9798
 Iteration [7330/10000] | d_real_loss: 0.0846 | d_Y_loss: 0.3053 | d_X_loss: 0.2631 | d_fake_loss: 0.5684 | g_loss: 4.9502
 Iteration [7340/10000] | d_real_loss: 0.0756 | d_Y_loss: 0.2114 | d_X_loss: 0.3371 | d_fake_loss: 0.5484 | g_loss: 5.2414
 Iteration [7350/10000] | d_real_loss: 0.0880 | d_Y_loss: 0.1867 | d_X_loss: 0.0419 | d_fake_loss: 0.2285 | g_loss: 4.3924
 Iteration [7360/10000] | d_real_loss: 0.1356 | d_Y_loss: 0.1219 | d_X_loss: 0.0765 | d_fake_loss: 0.1984 | g_loss: 4.9642
 Iteration [7370/10000] | d_real_loss: 0.1877 | d_Y_loss: 0.2568 | d_X_loss: 0.0492 | d_fake_loss: 0.3060 | g_loss: 4.7475
 Iteration [7380/10000] | d_real_loss: 0.0995 | d_Y_loss: 0.1356 | d_X_loss: 0.0993 | d_fake_loss: 0.2349 | g_loss: 4.8001
 Iteration [7390/10000] | d_real_loss: 0.1073 | d_Y_loss: 0.5819 | d_X_loss: 0.1232 | d_fake_loss: 0.7051 | g_loss: 5.1394
 Iteration [7400/10000] | d_real_loss: 0.0366 | d_Y_loss: 0.0455 | d_X_loss: 0.0521 | d_fake_loss: 0.0975 | g_loss: 4.8716
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-007400-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-007400-Y-X.png
 Iteration [7410/10000] | d_real_loss: 0.0494 | d_Y_loss: 0.0468 | d_X_loss: 0.1019 | d_fake_loss: 0.1487 | g_loss: 4.7532
 Iteration [7420/10000] | d_real_loss: 0.0483 | d_Y_loss: 0.0525 | d_X_loss: 0.0425 | d_fake_loss: 0.0950 | g_loss: 5.1169

Iteration [7430/10000] | d_real_loss: 0.0839 | d_Y_loss: 0.1298 | d_X_loss: 0.1438 | d_fake_loss: 0.2736 | g_loss: 6.0731
 Iteration [7440/10000] | d_real_loss: 0.0749 | d_Y_loss: 0.1645 | d_X_loss: 0.0760 | d_fake_loss: 0.2405 | g_loss: 5.1482
 Iteration [7450/10000] | d_real_loss: 0.0799 | d_Y_loss: 0.3844 | d_X_loss: 0.0345 | d_fake_loss: 0.4189 | g_loss: 5.9950
 Iteration [7460/10000] | d_real_loss: 0.1318 | d_Y_loss: 0.1798 | d_X_loss: 0.0214 | d_fake_loss: 0.2012 | g_loss: 4.9613
 Iteration [7470/10000] | d_real_loss: 0.0492 | d_Y_loss: 0.2724 | d_X_loss: 0.0892 | d_fake_loss: 0.3616 | g_loss: 5.1802
 Iteration [7480/10000] | d_real_loss: 0.0699 | d_Y_loss: 0.1358 | d_X_loss: 0.2163 | d_fake_loss: 0.3521 | g_loss: 5.1068
 Iteration [7490/10000] | d_real_loss: 0.1575 | d_Y_loss: 0.4107 | d_X_loss: 0.0750 | d_fake_loss: 0.4857 | g_loss: 4.4231
 Iteration [7500/10000] | d_real_loss: 0.0958 | d_Y_loss: 0.2355 | d_X_loss: 0.0545 | d_fake_loss: 0.2900 | g_loss: 5.2220
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-007500-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-007500-Y-X.png
 Iteration [7510/10000] | d_real_loss: 0.1131 | d_Y_loss: 0.0898 | d_X_loss: 0.0753 | d_fake_loss: 0.1651 | g_loss: 4.2868
 Iteration [7520/10000] | d_real_loss: 0.2497 | d_Y_loss: 0.4552 | d_X_loss: 0.0912 | d_fake_loss: 0.5464 | g_loss: 5.4131
 Iteration [7530/10000] | d_real_loss: 0.2182 | d_Y_loss: 0.4413 | d_X_loss: 0.0900 | d_fake_loss: 0.5313 | g_loss: 4.0395
 Iteration [7540/10000] | d_real_loss: 0.1685 | d_Y_loss: 0.2728 | d_X_loss: 0.1259 | d_fake_loss: 0.3988 | g_loss: 4.6380
 Iteration [7550/10000] | d_real_loss: 0.0771 | d_Y_loss: 0.6102 | d_X_loss: 0.4789 | d_fake_loss: 1.0891 | g_loss: 4.9636
 Iteration [7560/10000] | d_real_loss: 0.2017 | d_Y_loss: 0.1027 | d_X_loss: 0.0350 | d_fake_loss: 0.1377 | g_loss: 4.4952
 Iteration [7570/10000] | d_real_loss: 0.1255 | d_Y_loss: 0.1406 | d_X_loss: 0.1164 | d_fake_loss: 0.2570 | g_loss: 4.9953
 Iteration [7580/10000] | d_real_loss: 0.0803 | d_Y_loss: 0.2366 | d_X_loss: 0.0994 | d_fake_loss: 0.3360 | g_loss: 4.8945
 Iteration [7590/10000] | d_real_loss: 0.1794 | d_Y_loss: 0.3130 | d_X_loss: 0.1334 | d_fake_loss: 0.4464 | g_loss: 4.3684
 Iteration [7600/10000] | d_real_loss: 0.0653 | d_Y_loss: 0.2781 | d_X_loss: 0.0228 | d_fake_loss: 0.3008 | g_loss: 4.8186
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-007600-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-007600-Y-X.png
 Iteration [7610/10000] | d_real_loss: 0.1460 | d_Y_loss: 0.1639 | d_X_loss: 0.1432 | d_fake_loss: 0.3071 | g_loss: 4.9067
 Iteration [7620/10000] | d_real_loss: 0.0667 | d_Y_loss: 0.1190 | d_X_loss: 0.0928 | d_fake_loss: 0.2118 | g_loss: 5.1796

```

Iteration [ 7630/10000] | d_real_loss: 0.0589 | d_Y_loss: 0.6435 | d_X_loss:
0.0263 | d_fake_loss: 0.6698 | g_loss: 4.6139
Iteration [ 7640/10000] | d_real_loss: 0.1637 | d_Y_loss: 0.6111 | d_X_loss:
0.0796 | d_fake_loss: 0.6907 | g_loss: 5.1166
Iteration [ 7650/10000] | d_real_loss: 0.0907 | d_Y_loss: 0.4801 | d_X_loss:
0.3039 | d_fake_loss: 0.7840 | g_loss: 4.6321
Iteration [ 7660/10000] | d_real_loss: 0.1249 | d_Y_loss: 0.1581 | d_X_loss:
0.0126 | d_fake_loss: 0.1707 | g_loss: 4.7018
Iteration [ 7670/10000] | d_real_loss: 0.0616 | d_Y_loss: 0.2814 | d_X_loss:
0.1077 | d_fake_loss: 0.3891 | g_loss: 4.9803
Iteration [ 7680/10000] | d_real_loss: 0.0712 | d_Y_loss: 0.0656 | d_X_loss:
0.0160 | d_fake_loss: 0.0816 | g_loss: 4.5664
Iteration [ 7690/10000] | d_real_loss: 0.1383 | d_Y_loss: 0.4417 | d_X_loss:
0.0133 | d_fake_loss: 0.4549 | g_loss: 5.2611
Iteration [ 7700/10000] | d_real_loss: 0.2025 | d_Y_loss: 0.2026 | d_X_loss:
0.1320 | d_fake_loss: 0.3346 | g_loss: 4.4070
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
007700-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
007700-Y-X.png
Iteration [ 7710/10000] | d_real_loss: 0.1302 | d_Y_loss: 0.0867 | d_X_loss:
0.1307 | d_fake_loss: 0.2174 | g_loss: 4.6835
Iteration [ 7720/10000] | d_real_loss: 0.0514 | d_Y_loss: 0.1819 | d_X_loss:
0.0180 | d_fake_loss: 0.1999 | g_loss: 5.1145
Iteration [ 7730/10000] | d_real_loss: 0.0419 | d_Y_loss: 0.1869 | d_X_loss:
0.0630 | d_fake_loss: 0.2499 | g_loss: 5.4219
Iteration [ 7740/10000] | d_real_loss: 0.0644 | d_Y_loss: 0.0314 | d_X_loss:
0.0315 | d_fake_loss: 0.0630 | g_loss: 5.5300
Iteration [ 7750/10000] | d_real_loss: 0.0322 | d_Y_loss: 0.0734 | d_X_loss:
0.0355 | d_fake_loss: 0.1089 | g_loss: 4.3626
Iteration [ 7760/10000] | d_real_loss: 0.0465 | d_Y_loss: 0.0715 | d_X_loss:
0.0599 | d_fake_loss: 0.1314 | g_loss: 4.6713
Iteration [ 7770/10000] | d_real_loss: 0.0309 | d_Y_loss: 0.0844 | d_X_loss:
0.0930 | d_fake_loss: 0.1774 | g_loss: 4.4251
Iteration [ 7780/10000] | d_real_loss: 0.0331 | d_Y_loss: 0.0675 | d_X_loss:
0.0155 | d_fake_loss: 0.0830 | g_loss: 4.9023
Iteration [ 7790/10000] | d_real_loss: 0.0343 | d_Y_loss: 0.0428 | d_X_loss:
0.0200 | d_fake_loss: 0.0629 | g_loss: 4.9406
Iteration [ 7800/10000] | d_real_loss: 0.0389 | d_Y_loss: 0.0662 | d_X_loss:
0.0328 | d_fake_loss: 0.0991 | g_loss: 4.7481
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
007800-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
007800-Y-X.png
Iteration [ 7810/10000] | d_real_loss: 0.0418 | d_Y_loss: 0.0484 | d_X_loss:
0.0205 | d_fake_loss: 0.0689 | g_loss: 4.7993
Iteration [ 7820/10000] | d_real_loss: 0.0478 | d_Y_loss: 0.0375 | d_X_loss:
0.0967 | d_fake_loss: 0.1343 | g_loss: 4.9597

```

```

Iteration [ 7830/10000] | d_real_loss: 0.0230 | d_Y_loss: 0.0531 | d_X_loss:
0.0473 | d_fake_loss: 0.1004 | g_loss: 4.7516
Iteration [ 7840/10000] | d_real_loss: 0.0657 | d_Y_loss: 0.0765 | d_X_loss:
0.0219 | d_fake_loss: 0.0983 | g_loss: 5.0883
Iteration [ 7850/10000] | d_real_loss: 0.0287 | d_Y_loss: 0.0622 | d_X_loss:
0.2511 | d_fake_loss: 0.3133 | g_loss: 5.0602
Iteration [ 7860/10000] | d_real_loss: 0.1444 | d_Y_loss: 0.1166 | d_X_loss:
0.0697 | d_fake_loss: 0.1863 | g_loss: 5.3721
Iteration [ 7870/10000] | d_real_loss: 0.0243 | d_Y_loss: 0.0527 | d_X_loss:
0.4964 | d_fake_loss: 0.5491 | g_loss: 5.5916
Iteration [ 7880/10000] | d_real_loss: 0.1948 | d_Y_loss: 0.0432 | d_X_loss:
0.4479 | d_fake_loss: 0.4911 | g_loss: 5.0602
Iteration [ 7890/10000] | d_real_loss: 0.2123 | d_Y_loss: 0.0529 | d_X_loss:
0.2047 | d_fake_loss: 0.2576 | g_loss: 5.1715
Iteration [ 7900/10000] | d_real_loss: 0.0948 | d_Y_loss: 0.0220 | d_X_loss:
0.0416 | d_fake_loss: 0.0636 | g_loss: 5.3339
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
007900-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
007900-Y-X.png
Iteration [ 7910/10000] | d_real_loss: 0.0829 | d_Y_loss: 0.1773 | d_X_loss:
0.0810 | d_fake_loss: 0.2583 | g_loss: 5.6041
Iteration [ 7920/10000] | d_real_loss: 0.0922 | d_Y_loss: 0.0204 | d_X_loss:
0.0506 | d_fake_loss: 0.0709 | g_loss: 5.4301
Iteration [ 7930/10000] | d_real_loss: 0.0873 | d_Y_loss: 0.0309 | d_X_loss:
0.3866 | d_fake_loss: 0.4175 | g_loss: 5.1796
Iteration [ 7940/10000] | d_real_loss: 0.0729 | d_Y_loss: 0.0723 | d_X_loss:
0.0446 | d_fake_loss: 0.1170 | g_loss: 5.0070
Iteration [ 7950/10000] | d_real_loss: 0.0491 | d_Y_loss: 0.0562 | d_X_loss:
0.0716 | d_fake_loss: 0.1278 | g_loss: 5.1077
Iteration [ 7960/10000] | d_real_loss: 0.1022 | d_Y_loss: 0.0882 | d_X_loss:
0.0994 | d_fake_loss: 0.1876 | g_loss: 5.7814
Iteration [ 7970/10000] | d_real_loss: 0.0638 | d_Y_loss: 0.0160 | d_X_loss:
0.1822 | d_fake_loss: 0.1982 | g_loss: 5.7815
Iteration [ 7980/10000] | d_real_loss: 0.0743 | d_Y_loss: 0.0390 | d_X_loss:
0.0886 | d_fake_loss: 0.1276 | g_loss: 5.3462
Iteration [ 7990/10000] | d_real_loss: 0.1043 | d_Y_loss: 0.1017 | d_X_loss:
0.0144 | d_fake_loss: 0.1161 | g_loss: 5.1067
Iteration [ 8000/10000] | d_real_loss: 0.0756 | d_Y_loss: 0.5352 | d_X_loss:
0.1058 | d_fake_loss: 0.6410 | g_loss: 5.5572
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008000-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008000-Y-X.png
Iteration [ 8010/10000] | d_real_loss: 0.5157 | d_Y_loss: 0.9314 | d_X_loss:
0.0450 | d_fake_loss: 0.9764 | g_loss: 2.7642
Iteration [ 8020/10000] | d_real_loss: 0.0870 | d_Y_loss: 0.6805 | d_X_loss:
0.2172 | d_fake_loss: 0.8977 | g_loss: 4.6807

```

```

Iteration [ 8030/10000] | d_real_loss: 0.0807 | d_Y_loss: 0.2442 | d_X_loss:
0.0592 | d_fake_loss: 0.3034 | g_loss: 5.0461
Iteration [ 8040/10000] | d_real_loss: 0.0881 | d_Y_loss: 0.0843 | d_X_loss:
0.0644 | d_fake_loss: 0.1487 | g_loss: 4.4507
Iteration [ 8050/10000] | d_real_loss: 0.1132 | d_Y_loss: 0.0438 | d_X_loss:
0.0441 | d_fake_loss: 0.0880 | g_loss: 6.1621
Iteration [ 8060/10000] | d_real_loss: 0.0468 | d_Y_loss: 0.0657 | d_X_loss:
0.0823 | d_fake_loss: 0.1479 | g_loss: 4.7446
Iteration [ 8070/10000] | d_real_loss: 0.0681 | d_Y_loss: 0.1163 | d_X_loss:
0.1108 | d_fake_loss: 0.2271 | g_loss: 6.0236
Iteration [ 8080/10000] | d_real_loss: 0.0968 | d_Y_loss: 0.1856 | d_X_loss:
0.0802 | d_fake_loss: 0.2658 | g_loss: 5.3174
Iteration [ 8090/10000] | d_real_loss: 0.1323 | d_Y_loss: 0.2417 | d_X_loss:
0.1754 | d_fake_loss: 0.4171 | g_loss: 4.8487
Iteration [ 8100/10000] | d_real_loss: 0.0470 | d_Y_loss: 0.3127 | d_X_loss:
0.1704 | d_fake_loss: 0.4831 | g_loss: 5.6548
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008100-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008100-Y-X.png
Iteration [ 8110/10000] | d_real_loss: 0.3055 | d_Y_loss: 0.7026 | d_X_loss:
0.1351 | d_fake_loss: 0.8377 | g_loss: 3.3126
Iteration [ 8120/10000] | d_real_loss: 0.1748 | d_Y_loss: 0.3190 | d_X_loss:
0.0552 | d_fake_loss: 0.3742 | g_loss: 4.6043
Iteration [ 8130/10000] | d_real_loss: 0.2305 | d_Y_loss: 0.3095 | d_X_loss:
0.0751 | d_fake_loss: 0.3845 | g_loss: 4.9824
Iteration [ 8140/10000] | d_real_loss: 0.1336 | d_Y_loss: 0.4298 | d_X_loss:
0.0466 | d_fake_loss: 0.4765 | g_loss: 5.2091
Iteration [ 8150/10000] | d_real_loss: 0.2497 | d_Y_loss: 0.7192 | d_X_loss:
0.4265 | d_fake_loss: 1.1457 | g_loss: 3.9403
Iteration [ 8160/10000] | d_real_loss: 0.2537 | d_Y_loss: 0.6117 | d_X_loss:
0.6247 | d_fake_loss: 1.2364 | g_loss: 4.8071
Iteration [ 8170/10000] | d_real_loss: 0.2989 | d_Y_loss: 0.3173 | d_X_loss:
0.0960 | d_fake_loss: 0.4134 | g_loss: 4.5281
Iteration [ 8180/10000] | d_real_loss: 0.1106 | d_Y_loss: 0.2483 | d_X_loss:
0.0264 | d_fake_loss: 0.2747 | g_loss: 5.3954
Iteration [ 8190/10000] | d_real_loss: 0.2025 | d_Y_loss: 0.2028 | d_X_loss:
0.1103 | d_fake_loss: 0.3131 | g_loss: 4.9894
Iteration [ 8200/10000] | d_real_loss: 0.0641 | d_Y_loss: 0.1731 | d_X_loss:
0.1869 | d_fake_loss: 0.3600 | g_loss: 5.0528
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008200-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008200-Y-X.png
Iteration [ 8210/10000] | d_real_loss: 0.0737 | d_Y_loss: 0.1891 | d_X_loss:
0.2625 | d_fake_loss: 0.4516 | g_loss: 4.5010
Iteration [ 8220/10000] | d_real_loss: 0.1331 | d_Y_loss: 0.3901 | d_X_loss:
0.1424 | d_fake_loss: 0.5325 | g_loss: 4.9262

```

```

Iteration [ 8230/10000] | d_real_loss: 0.1154 | d_Y_loss: 0.4302 | d_X_loss:
0.0219 | d_fake_loss: 0.4521 | g_loss: 4.5823
Iteration [ 8240/10000] | d_real_loss: 0.1071 | d_Y_loss: 0.3665 | d_X_loss:
0.1479 | d_fake_loss: 0.5144 | g_loss: 4.9336
Iteration [ 8250/10000] | d_real_loss: 0.1274 | d_Y_loss: 0.1576 | d_X_loss:
0.0331 | d_fake_loss: 0.1906 | g_loss: 4.8133
Iteration [ 8260/10000] | d_real_loss: 0.3012 | d_Y_loss: 0.1992 | d_X_loss:
0.0275 | d_fake_loss: 0.2267 | g_loss: 5.4533
Iteration [ 8270/10000] | d_real_loss: 0.0837 | d_Y_loss: 0.1273 | d_X_loss:
0.0742 | d_fake_loss: 0.2015 | g_loss: 4.9922
Iteration [ 8280/10000] | d_real_loss: 0.0694 | d_Y_loss: 0.1696 | d_X_loss:
0.1832 | d_fake_loss: 0.3529 | g_loss: 5.3877
Iteration [ 8290/10000] | d_real_loss: 0.0858 | d_Y_loss: 0.4933 | d_X_loss:
0.0682 | d_fake_loss: 0.5615 | g_loss: 5.7317
Iteration [ 8300/10000] | d_real_loss: 0.1711 | d_Y_loss: 0.4487 | d_X_loss:
0.0539 | d_fake_loss: 0.5027 | g_loss: 4.9606
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008300-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008300-Y-X.png
Iteration [ 8310/10000] | d_real_loss: 0.1036 | d_Y_loss: 0.5169 | d_X_loss:
0.1669 | d_fake_loss: 0.6839 | g_loss: 5.1359
Iteration [ 8320/10000] | d_real_loss: 0.1050 | d_Y_loss: 0.5214 | d_X_loss:
0.0561 | d_fake_loss: 0.5774 | g_loss: 4.8034
Iteration [ 8330/10000] | d_real_loss: 0.0638 | d_Y_loss: 0.3215 | d_X_loss:
0.0665 | d_fake_loss: 0.3880 | g_loss: 5.3337
Iteration [ 8340/10000] | d_real_loss: 0.1001 | d_Y_loss: 0.1306 | d_X_loss:
0.0524 | d_fake_loss: 0.1831 | g_loss: 5.3594
Iteration [ 8350/10000] | d_real_loss: 0.1203 | d_Y_loss: 0.4038 | d_X_loss:
0.0333 | d_fake_loss: 0.4372 | g_loss: 4.6571
Iteration [ 8360/10000] | d_real_loss: 0.2175 | d_Y_loss: 0.0743 | d_X_loss:
0.0327 | d_fake_loss: 0.1069 | g_loss: 4.5588
Iteration [ 8370/10000] | d_real_loss: 0.2672 | d_Y_loss: 0.1235 | d_X_loss:
0.1781 | d_fake_loss: 0.3015 | g_loss: 5.1618
Iteration [ 8380/10000] | d_real_loss: 0.3813 | d_Y_loss: 0.0649 | d_X_loss:
0.2403 | d_fake_loss: 0.3052 | g_loss: 4.6498
Iteration [ 8390/10000] | d_real_loss: 0.1958 | d_Y_loss: 0.2135 | d_X_loss:
0.2557 | d_fake_loss: 0.4692 | g_loss: 4.8093
Iteration [ 8400/10000] | d_real_loss: 0.1699 | d_Y_loss: 0.1292 | d_X_loss:
0.2797 | d_fake_loss: 0.4089 | g_loss: 5.1411
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008400-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008400-Y-X.png
Iteration [ 8410/10000] | d_real_loss: 0.1788 | d_Y_loss: 0.1640 | d_X_loss:
0.3412 | d_fake_loss: 0.5052 | g_loss: 4.5955
Iteration [ 8420/10000] | d_real_loss: 0.0769 | d_Y_loss: 0.1306 | d_X_loss:
0.2629 | d_fake_loss: 0.3935 | g_loss: 5.3110

```

Iteration [8430/10000] | d_real_loss: 0.0445 | d_Y_loss: 0.1116 | d_X_loss: 0.1853 | d_fake_loss: 0.2969 | g_loss: 5.4058
 Iteration [8440/10000] | d_real_loss: 0.1409 | d_Y_loss: 0.0403 | d_X_loss: 0.0782 | d_fake_loss: 0.1185 | g_loss: 4.9472
 Iteration [8450/10000] | d_real_loss: 0.0820 | d_Y_loss: 0.3044 | d_X_loss: 0.4228 | d_fake_loss: 0.7271 | g_loss: 5.0812
 Iteration [8460/10000] | d_real_loss: 0.1178 | d_Y_loss: 0.0885 | d_X_loss: 0.1260 | d_fake_loss: 0.2145 | g_loss: 4.7764
 Iteration [8470/10000] | d_real_loss: 0.0611 | d_Y_loss: 0.1057 | d_X_loss: 0.1728 | d_fake_loss: 0.2785 | g_loss: 5.5473
 Iteration [8480/10000] | d_real_loss: 0.0797 | d_Y_loss: 0.2277 | d_X_loss: 0.0198 | d_fake_loss: 0.2475 | g_loss: 5.1890
 Iteration [8490/10000] | d_real_loss: 0.3738 | d_Y_loss: 0.1031 | d_X_loss: 0.0730 | d_fake_loss: 0.1761 | g_loss: 4.6968
 Iteration [8500/10000] | d_real_loss: 0.1378 | d_Y_loss: 0.0584 | d_X_loss: 0.1891 | d_fake_loss: 0.2475 | g_loss: 4.7281
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-008500-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-008500-Y-X.png
 Iteration [8510/10000] | d_real_loss: 0.3046 | d_Y_loss: 0.1528 | d_X_loss: 0.4127 | d_fake_loss: 0.5655 | g_loss: 4.4354
 Iteration [8520/10000] | d_real_loss: 0.1204 | d_Y_loss: 0.1529 | d_X_loss: 0.1441 | d_fake_loss: 0.2970 | g_loss: 5.0535
 Iteration [8530/10000] | d_real_loss: 0.0930 | d_Y_loss: 0.1838 | d_X_loss: 0.3268 | d_fake_loss: 0.5105 | g_loss: 5.0948
 Iteration [8540/10000] | d_real_loss: 0.0840 | d_Y_loss: 0.1069 | d_X_loss: 0.0562 | d_fake_loss: 0.1631 | g_loss: 4.9046
 Iteration [8550/10000] | d_real_loss: 0.1400 | d_Y_loss: 0.0689 | d_X_loss: 0.0259 | d_fake_loss: 0.0948 | g_loss: 4.5940
 Iteration [8560/10000] | d_real_loss: 0.0813 | d_Y_loss: 0.2322 | d_X_loss: 0.0392 | d_fake_loss: 0.2714 | g_loss: 5.6294
 Iteration [8570/10000] | d_real_loss: 0.1031 | d_Y_loss: 0.0721 | d_X_loss: 0.0539 | d_fake_loss: 0.1259 | g_loss: 4.8132
 Iteration [8580/10000] | d_real_loss: 0.1405 | d_Y_loss: 0.1018 | d_X_loss: 0.0469 | d_fake_loss: 0.1487 | g_loss: 5.1365
 Iteration [8590/10000] | d_real_loss: 0.0312 | d_Y_loss: 0.1311 | d_X_loss: 0.1303 | d_fake_loss: 0.2614 | g_loss: 4.7687
 Iteration [8600/10000] | d_real_loss: 0.1226 | d_Y_loss: 0.2313 | d_X_loss: 0.0776 | d_fake_loss: 0.3089 | g_loss: 4.6398
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-008600-X-Y.png
 Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-008600-Y-X.png
 Iteration [8610/10000] | d_real_loss: 0.1081 | d_Y_loss: 0.2619 | d_X_loss: 0.0491 | d_fake_loss: 0.3110 | g_loss: 5.4284
 Iteration [8620/10000] | d_real_loss: 0.0554 | d_Y_loss: 0.2909 | d_X_loss: 0.0374 | d_fake_loss: 0.3283 | g_loss: 5.2968

```

Iteration [ 8630/10000] | d_real_loss: 0.1646 | d_Y_loss: 0.3406 | d_X_loss:
0.0484 | d_fake_loss: 0.3890 | g_loss: 4.8141
Iteration [ 8640/10000] | d_real_loss: 0.2197 | d_Y_loss: 0.5469 | d_X_loss:
0.1882 | d_fake_loss: 0.7351 | g_loss: 4.9763
Iteration [ 8650/10000] | d_real_loss: 0.1131 | d_Y_loss: 0.1607 | d_X_loss:
0.0245 | d_fake_loss: 0.1852 | g_loss: 4.8199
Iteration [ 8660/10000] | d_real_loss: 0.0661 | d_Y_loss: 0.1705 | d_X_loss:
0.0221 | d_fake_loss: 0.1926 | g_loss: 4.6247
Iteration [ 8670/10000] | d_real_loss: 0.0987 | d_Y_loss: 0.1949 | d_X_loss:
0.0211 | d_fake_loss: 0.2160 | g_loss: 4.8305
Iteration [ 8680/10000] | d_real_loss: 0.0854 | d_Y_loss: 0.1792 | d_X_loss:
0.0626 | d_fake_loss: 0.2417 | g_loss: 5.1897
Iteration [ 8690/10000] | d_real_loss: 0.0790 | d_Y_loss: 0.2683 | d_X_loss:
0.0548 | d_fake_loss: 0.3232 | g_loss: 5.7923
Iteration [ 8700/10000] | d_real_loss: 0.0749 | d_Y_loss: 0.1640 | d_X_loss:
0.8376 | d_fake_loss: 1.0016 | g_loss: 5.4919
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008700-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008700-Y-X.png
Iteration [ 8710/10000] | d_real_loss: 0.1361 | d_Y_loss: 0.1748 | d_X_loss:
0.0475 | d_fake_loss: 0.2223 | g_loss: 5.0854
Iteration [ 8720/10000] | d_real_loss: 0.1850 | d_Y_loss: 0.1583 | d_X_loss:
0.0318 | d_fake_loss: 0.1900 | g_loss: 4.6566
Iteration [ 8730/10000] | d_real_loss: 0.3984 | d_Y_loss: 0.2265 | d_X_loss:
0.1022 | d_fake_loss: 0.3287 | g_loss: 5.4353
Iteration [ 8740/10000] | d_real_loss: 0.0633 | d_Y_loss: 0.2115 | d_X_loss:
0.0980 | d_fake_loss: 0.3095 | g_loss: 5.8301
Iteration [ 8750/10000] | d_real_loss: 0.0569 | d_Y_loss: 0.1791 | d_X_loss:
0.1383 | d_fake_loss: 0.3174 | g_loss: 5.1810
Iteration [ 8760/10000] | d_real_loss: 0.0811 | d_Y_loss: 0.2560 | d_X_loss:
0.0323 | d_fake_loss: 0.2884 | g_loss: 5.4236
Iteration [ 8770/10000] | d_real_loss: 0.1287 | d_Y_loss: 0.4327 | d_X_loss:
0.0484 | d_fake_loss: 0.4811 | g_loss: 4.7460
Iteration [ 8780/10000] | d_real_loss: 0.2068 | d_Y_loss: 0.3691 | d_X_loss:
0.0259 | d_fake_loss: 0.3950 | g_loss: 4.6633
Iteration [ 8790/10000] | d_real_loss: 0.2065 | d_Y_loss: 0.2121 | d_X_loss:
0.0679 | d_fake_loss: 0.2800 | g_loss: 4.5630
Iteration [ 8800/10000] | d_real_loss: 0.3952 | d_Y_loss: 0.3739 | d_X_loss:
0.0527 | d_fake_loss: 0.4266 | g_loss: 4.8202
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008800-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008800-Y-X.png
Iteration [ 8810/10000] | d_real_loss: 0.1171 | d_Y_loss: 0.1382 | d_X_loss:
0.0111 | d_fake_loss: 0.1493 | g_loss: 4.6879
Iteration [ 8820/10000] | d_real_loss: 0.0814 | d_Y_loss: 0.4124 | d_X_loss:
0.2111 | d_fake_loss: 0.6235 | g_loss: 4.6068

```

```

Iteration [ 8830/10000] | d_real_loss: 0.0738 | d_Y_loss: 0.2889 | d_X_loss:
0.0522 | d_fake_loss: 0.3411 | g_loss: 5.1872
Iteration [ 8840/10000] | d_real_loss: 0.0744 | d_Y_loss: 0.2692 | d_X_loss:
0.0565 | d_fake_loss: 0.3256 | g_loss: 4.7858
Iteration [ 8850/10000] | d_real_loss: 0.1211 | d_Y_loss: 0.2586 | d_X_loss:
0.0428 | d_fake_loss: 0.3014 | g_loss: 4.4754
Iteration [ 8860/10000] | d_real_loss: 0.1483 | d_Y_loss: 0.2549 | d_X_loss:
0.0504 | d_fake_loss: 0.3053 | g_loss: 5.0387
Iteration [ 8870/10000] | d_real_loss: 0.0528 | d_Y_loss: 0.2180 | d_X_loss:
0.0157 | d_fake_loss: 0.2337 | g_loss: 5.1504
Iteration [ 8880/10000] | d_real_loss: 0.0589 | d_Y_loss: 0.3180 | d_X_loss:
0.1016 | d_fake_loss: 0.4197 | g_loss: 5.0037
Iteration [ 8890/10000] | d_real_loss: 0.0789 | d_Y_loss: 0.3168 | d_X_loss:
0.1753 | d_fake_loss: 0.4922 | g_loss: 4.7849
Iteration [ 8900/10000] | d_real_loss: 0.1240 | d_Y_loss: 0.1464 | d_X_loss:
0.1124 | d_fake_loss: 0.2589 | g_loss: 5.2886
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008900-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
008900-Y-X.png
Iteration [ 8910/10000] | d_real_loss: 0.1331 | d_Y_loss: 0.2868 | d_X_loss:
0.1440 | d_fake_loss: 0.4308 | g_loss: 5.2238
Iteration [ 8920/10000] | d_real_loss: 0.1781 | d_Y_loss: 0.1352 | d_X_loss:
0.0575 | d_fake_loss: 0.1927 | g_loss: 4.9042
Iteration [ 8930/10000] | d_real_loss: 0.0951 | d_Y_loss: 0.2295 | d_X_loss:
0.0368 | d_fake_loss: 0.2663 | g_loss: 4.6105
Iteration [ 8940/10000] | d_real_loss: 0.1278 | d_Y_loss: 0.2243 | d_X_loss:
0.0433 | d_fake_loss: 0.2676 | g_loss: 4.4726
Iteration [ 8950/10000] | d_real_loss: 0.0812 | d_Y_loss: 0.2691 | d_X_loss:
0.2182 | d_fake_loss: 0.4873 | g_loss: 4.8233
Iteration [ 8960/10000] | d_real_loss: 0.1414 | d_Y_loss: 0.2071 | d_X_loss:
0.0604 | d_fake_loss: 0.2675 | g_loss: 4.9234
Iteration [ 8970/10000] | d_real_loss: 0.1791 | d_Y_loss: 0.0738 | d_X_loss:
0.0697 | d_fake_loss: 0.1436 | g_loss: 5.2743
Iteration [ 8980/10000] | d_real_loss: 0.0342 | d_Y_loss: 0.0892 | d_X_loss:
0.0633 | d_fake_loss: 0.1525 | g_loss: 4.4106
Iteration [ 8990/10000] | d_real_loss: 0.0690 | d_Y_loss: 0.0852 | d_X_loss:
0.0529 | d_fake_loss: 0.1381 | g_loss: 4.8345
Iteration [ 9000/10000] | d_real_loss: 0.0483 | d_Y_loss: 0.1747 | d_X_loss:
0.1545 | d_fake_loss: 0.3292 | g_loss: 4.7487
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009000-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009000-Y-X.png
Iteration [ 9010/10000] | d_real_loss: 0.0582 | d_Y_loss: 0.0576 | d_X_loss:
0.0323 | d_fake_loss: 0.0899 | g_loss: 5.0728
Iteration [ 9020/10000] | d_real_loss: 0.0430 | d_Y_loss: 0.0699 | d_X_loss:
0.0544 | d_fake_loss: 0.1244 | g_loss: 4.9622

```



```

Iteration [ 9030/10000] | d_real_loss: 0.0793 | d_Y_loss: 0.4069 | d_X_loss:
0.0698 | d_fake_loss: 0.4767 | g_loss: 5.5886
Iteration [ 9040/10000] | d_real_loss: 0.0267 | d_Y_loss: 0.0756 | d_X_loss:
0.0480 | d_fake_loss: 0.1235 | g_loss: 4.3815
Iteration [ 9050/10000] | d_real_loss: 0.0316 | d_Y_loss: 0.0477 | d_X_loss:
0.0234 | d_fake_loss: 0.0712 | g_loss: 4.6436
Iteration [ 9060/10000] | d_real_loss: 0.0280 | d_Y_loss: 0.0483 | d_X_loss:
0.0207 | d_fake_loss: 0.0690 | g_loss: 4.9092
Iteration [ 9070/10000] | d_real_loss: 0.0408 | d_Y_loss: 0.1488 | d_X_loss:
0.6913 | d_fake_loss: 0.8401 | g_loss: 5.3779
Iteration [ 9080/10000] | d_real_loss: 0.0495 | d_Y_loss: 0.0700 | d_X_loss:
0.1798 | d_fake_loss: 0.2499 | g_loss: 5.8328
Iteration [ 9090/10000] | d_real_loss: 0.0959 | d_Y_loss: 0.0513 | d_X_loss:
0.5815 | d_fake_loss: 0.6328 | g_loss: 5.5992
Iteration [ 9100/10000] | d_real_loss: 0.1247 | d_Y_loss: 0.0537 | d_X_loss:
0.0112 | d_fake_loss: 0.0649 | g_loss: 5.2140
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009100-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009100-Y-X.png
Iteration [ 9110/10000] | d_real_loss: 0.1264 | d_Y_loss: 0.5658 | d_X_loss:
0.0143 | d_fake_loss: 0.5801 | g_loss: 5.2083
Iteration [ 9120/10000] | d_real_loss: 0.1458 | d_Y_loss: 0.3543 | d_X_loss:
0.0139 | d_fake_loss: 0.3682 | g_loss: 4.3443
Iteration [ 9130/10000] | d_real_loss: 0.1386 | d_Y_loss: 0.2856 | d_X_loss:
0.0620 | d_fake_loss: 0.3476 | g_loss: 4.1791
Iteration [ 9140/10000] | d_real_loss: 0.1120 | d_Y_loss: 0.1689 | d_X_loss:
0.0148 | d_fake_loss: 0.1838 | g_loss: 4.8618
Iteration [ 9150/10000] | d_real_loss: 0.1354 | d_Y_loss: 0.1648 | d_X_loss:
0.0132 | d_fake_loss: 0.1780 | g_loss: 4.7298
Iteration [ 9160/10000] | d_real_loss: 0.0883 | d_Y_loss: 0.2366 | d_X_loss:
0.0472 | d_fake_loss: 0.2838 | g_loss: 5.3151
Iteration [ 9170/10000] | d_real_loss: 0.0758 | d_Y_loss: 0.2311 | d_X_loss:
0.0221 | d_fake_loss: 0.2532 | g_loss: 5.3433
Iteration [ 9180/10000] | d_real_loss: 0.0606 | d_Y_loss: 0.3352 | d_X_loss:
0.0125 | d_fake_loss: 0.3477 | g_loss: 5.7605
Iteration [ 9190/10000] | d_real_loss: 0.0711 | d_Y_loss: 0.7092 | d_X_loss:
0.0619 | d_fake_loss: 0.7711 | g_loss: 5.0029
Iteration [ 9200/10000] | d_real_loss: 0.1833 | d_Y_loss: 0.3207 | d_X_loss:
0.0140 | d_fake_loss: 0.3347 | g_loss: 4.4583
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009200-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009200-Y-X.png
Iteration [ 9210/10000] | d_real_loss: 0.1021 | d_Y_loss: 0.1455 | d_X_loss:
0.0706 | d_fake_loss: 0.2161 | g_loss: 4.3703
Iteration [ 9220/10000] | d_real_loss: 0.0856 | d_Y_loss: 0.1860 | d_X_loss:
0.0270 | d_fake_loss: 0.2130 | g_loss: 4.9263

```

```

Iteration [ 9230/10000] | d_real_loss: 0.1114 | d_Y_loss: 0.1092 | d_X_loss:
0.0613 | d_fake_loss: 0.1704 | g_loss: 5.3798
Iteration [ 9240/10000] | d_real_loss: 0.1651 | d_Y_loss: 0.1232 | d_X_loss:
0.0338 | d_fake_loss: 0.1571 | g_loss: 4.7262
Iteration [ 9250/10000] | d_real_loss: 0.0748 | d_Y_loss: 0.2327 | d_X_loss:
0.0642 | d_fake_loss: 0.2969 | g_loss: 5.3345
Iteration [ 9260/10000] | d_real_loss: 0.0717 | d_Y_loss: 0.1119 | d_X_loss:
0.0185 | d_fake_loss: 0.1304 | g_loss: 5.3589
Iteration [ 9270/10000] | d_real_loss: 0.0825 | d_Y_loss: 0.0761 | d_X_loss:
0.0199 | d_fake_loss: 0.0960 | g_loss: 5.5222
Iteration [ 9280/10000] | d_real_loss: 0.0707 | d_Y_loss: 0.2632 | d_X_loss:
0.0520 | d_fake_loss: 0.3153 | g_loss: 5.4624
Iteration [ 9290/10000] | d_real_loss: 0.1446 | d_Y_loss: 0.2772 | d_X_loss:
0.1300 | d_fake_loss: 0.4072 | g_loss: 5.5734
Iteration [ 9300/10000] | d_real_loss: 0.2690 | d_Y_loss: 0.1882 | d_X_loss:
0.0446 | d_fake_loss: 0.2328 | g_loss: 4.3546
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009300-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009300-Y-X.png
Iteration [ 9310/10000] | d_real_loss: 0.0746 | d_Y_loss: 0.2723 | d_X_loss:
0.0807 | d_fake_loss: 0.3530 | g_loss: 5.3402
Iteration [ 9320/10000] | d_real_loss: 0.0910 | d_Y_loss: 0.1797 | d_X_loss:
0.0122 | d_fake_loss: 0.1919 | g_loss: 5.2352
Iteration [ 9330/10000] | d_real_loss: 0.0564 | d_Y_loss: 0.2941 | d_X_loss:
0.0127 | d_fake_loss: 0.3068 | g_loss: 5.2722
Iteration [ 9340/10000] | d_real_loss: 0.1183 | d_Y_loss: 0.1040 | d_X_loss:
0.0311 | d_fake_loss: 0.1351 | g_loss: 5.2983
Iteration [ 9350/10000] | d_real_loss: 0.0945 | d_Y_loss: 0.0897 | d_X_loss:
0.0435 | d_fake_loss: 0.1332 | g_loss: 5.6225
Iteration [ 9360/10000] | d_real_loss: 0.0569 | d_Y_loss: 0.2562 | d_X_loss:
0.0246 | d_fake_loss: 0.2808 | g_loss: 5.2858
Iteration [ 9370/10000] | d_real_loss: 0.1943 | d_Y_loss: 0.8093 | d_X_loss:
0.1097 | d_fake_loss: 0.9190 | g_loss: 3.7086
Iteration [ 9380/10000] | d_real_loss: 0.2758 | d_Y_loss: 0.3044 | d_X_loss:
0.3837 | d_fake_loss: 0.6881 | g_loss: 4.5384
Iteration [ 9390/10000] | d_real_loss: 0.0799 | d_Y_loss: 0.0910 | d_X_loss:
0.3435 | d_fake_loss: 0.4345 | g_loss: 5.3781
Iteration [ 9400/10000] | d_real_loss: 0.1947 | d_Y_loss: 0.2093 | d_X_loss:
0.1270 | d_fake_loss: 0.3362 | g_loss: 5.6466
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009400-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009400-Y-X.png
Iteration [ 9410/10000] | d_real_loss: 0.1268 | d_Y_loss: 0.1510 | d_X_loss:
0.0282 | d_fake_loss: 0.1792 | g_loss: 5.1157
Iteration [ 9420/10000] | d_real_loss: 0.1430 | d_Y_loss: 0.3652 | d_X_loss:
0.2740 | d_fake_loss: 0.6392 | g_loss: 5.0905

```

```

Iteration [ 9430/10000] | d_real_loss: 0.0982 | d_Y_loss: 0.2302 | d_X_loss:
0.0433 | d_fake_loss: 0.2735 | g_loss: 5.1006
Iteration [ 9440/10000] | d_real_loss: 0.0564 | d_Y_loss: 0.1552 | d_X_loss:
0.0779 | d_fake_loss: 0.2332 | g_loss: 4.7131
Iteration [ 9450/10000] | d_real_loss: 0.2371 | d_Y_loss: 0.2039 | d_X_loss:
0.4924 | d_fake_loss: 0.6964 | g_loss: 5.4259
Iteration [ 9460/10000] | d_real_loss: 0.1180 | d_Y_loss: 0.2141 | d_X_loss:
0.0579 | d_fake_loss: 0.2720 | g_loss: 5.5452
Iteration [ 9470/10000] | d_real_loss: 0.1064 | d_Y_loss: 0.1067 | d_X_loss:
0.0525 | d_fake_loss: 0.1591 | g_loss: 5.4986
Iteration [ 9480/10000] | d_real_loss: 0.1693 | d_Y_loss: 0.2764 | d_X_loss:
0.1323 | d_fake_loss: 0.4087 | g_loss: 5.5541
Iteration [ 9490/10000] | d_real_loss: 0.0778 | d_Y_loss: 0.1553 | d_X_loss:
0.0231 | d_fake_loss: 0.1784 | g_loss: 4.7084
Iteration [ 9500/10000] | d_real_loss: 0.1434 | d_Y_loss: 0.3485 | d_X_loss:
0.1279 | d_fake_loss: 0.4764 | g_loss: 4.8516
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009500-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009500-Y-X.png
Iteration [ 9510/10000] | d_real_loss: 0.0943 | d_Y_loss: 0.7430 | d_X_loss:
0.0425 | d_fake_loss: 0.7855 | g_loss: 5.1386
Iteration [ 9520/10000] | d_real_loss: 0.1116 | d_Y_loss: 0.3340 | d_X_loss:
0.0316 | d_fake_loss: 0.3655 | g_loss: 4.9099
Iteration [ 9530/10000] | d_real_loss: 0.0523 | d_Y_loss: 0.3593 | d_X_loss:
0.0167 | d_fake_loss: 0.3760 | g_loss: 5.3834
Iteration [ 9540/10000] | d_real_loss: 0.2477 | d_Y_loss: 0.2012 | d_X_loss:
0.1400 | d_fake_loss: 0.3412 | g_loss: 4.3939
Iteration [ 9550/10000] | d_real_loss: 0.1424 | d_Y_loss: 0.2128 | d_X_loss:
0.0404 | d_fake_loss: 0.2531 | g_loss: 4.4899
Iteration [ 9560/10000] | d_real_loss: 0.0720 | d_Y_loss: 0.4540 | d_X_loss:
0.0502 | d_fake_loss: 0.5043 | g_loss: 5.0192
Iteration [ 9570/10000] | d_real_loss: 0.0645 | d_Y_loss: 0.2264 | d_X_loss:
0.0795 | d_fake_loss: 0.3059 | g_loss: 4.8992
Iteration [ 9580/10000] | d_real_loss: 0.1075 | d_Y_loss: 0.1989 | d_X_loss:
0.0577 | d_fake_loss: 0.2566 | g_loss: 4.4880
Iteration [ 9590/10000] | d_real_loss: 0.0560 | d_Y_loss: 0.2235 | d_X_loss:
0.0177 | d_fake_loss: 0.2411 | g_loss: 5.5052
Iteration [ 9600/10000] | d_real_loss: 0.0965 | d_Y_loss: 0.0907 | d_X_loss:
0.1457 | d_fake_loss: 0.2364 | g_loss: 5.2131
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009600-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009600-Y-X.png
Iteration [ 9610/10000] | d_real_loss: 0.0899 | d_Y_loss: 0.2120 | d_X_loss:
0.0527 | d_fake_loss: 0.2648 | g_loss: 4.9196
Iteration [ 9620/10000] | d_real_loss: 0.1181 | d_Y_loss: 0.2404 | d_X_loss:
0.0394 | d_fake_loss: 0.2798 | g_loss: 5.3000

```

```

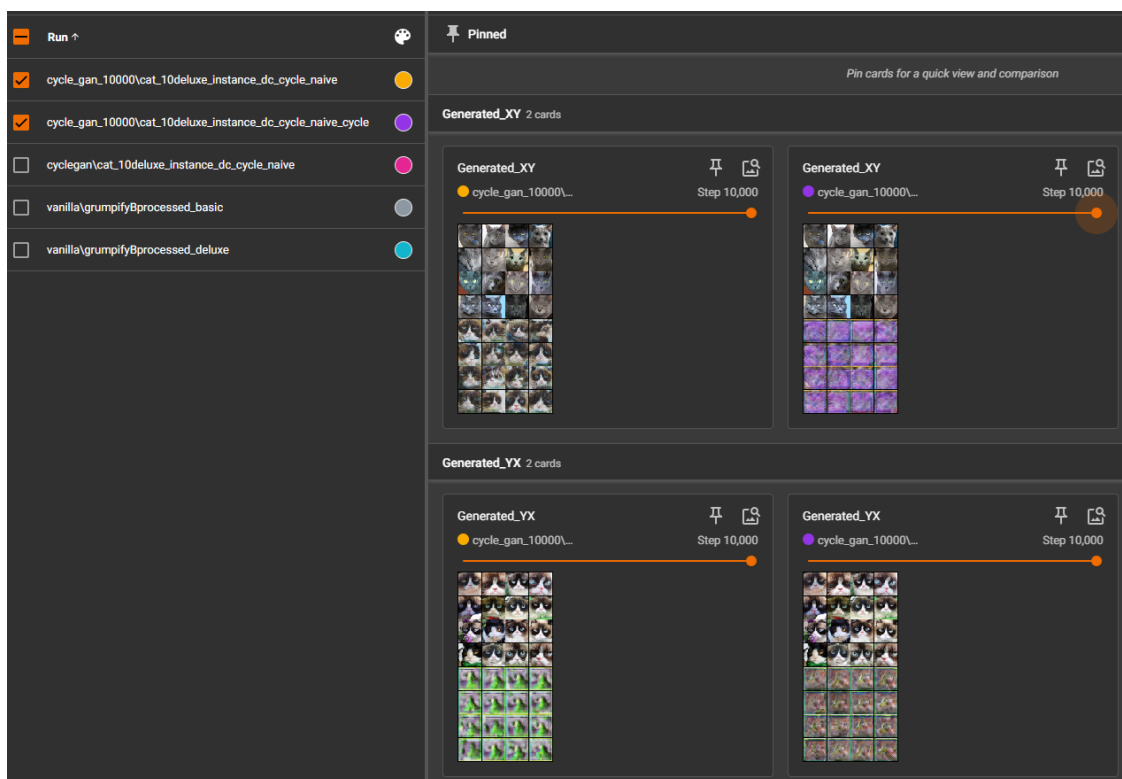
Iteration [ 9630/10000] | d_real_loss: 0.0588 | d_Y_loss: 0.2210 | d_X_loss:
0.0400 | d_fake_loss: 0.2610 | g_loss: 4.8695
Iteration [ 9640/10000] | d_real_loss: 0.0333 | d_Y_loss: 0.2526 | d_X_loss:
0.0465 | d_fake_loss: 0.2991 | g_loss: 4.5905
Iteration [ 9650/10000] | d_real_loss: 0.0936 | d_Y_loss: 0.1597 | d_X_loss:
0.0395 | d_fake_loss: 0.1992 | g_loss: 5.2843
Iteration [ 9660/10000] | d_real_loss: 0.0899 | d_Y_loss: 0.1706 | d_X_loss:
0.0233 | d_fake_loss: 0.1939 | g_loss: 5.0598
Iteration [ 9670/10000] | d_real_loss: 0.2205 | d_Y_loss: 0.1759 | d_X_loss:
0.0150 | d_fake_loss: 0.1909 | g_loss: 4.5296
Iteration [ 9680/10000] | d_real_loss: 0.0973 | d_Y_loss: 0.0595 | d_X_loss:
0.0356 | d_fake_loss: 0.0950 | g_loss: 5.1489
Iteration [ 9690/10000] | d_real_loss: 0.0444 | d_Y_loss: 0.2413 | d_X_loss:
0.1594 | d_fake_loss: 0.4007 | g_loss: 5.0192
Iteration [ 9700/10000] | d_real_loss: 0.1231 | d_Y_loss: 0.1168 | d_X_loss:
0.1809 | d_fake_loss: 0.2977 | g_loss: 4.8311
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009700-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009700-Y-X.png
Iteration [ 9710/10000] | d_real_loss: 0.0582 | d_Y_loss: 0.3897 | d_X_loss:
0.0811 | d_fake_loss: 0.4708 | g_loss: 5.3883
Iteration [ 9720/10000] | d_real_loss: 0.0908 | d_Y_loss: 0.2316 | d_X_loss:
0.0084 | d_fake_loss: 0.2400 | g_loss: 4.9958
Iteration [ 9730/10000] | d_real_loss: 0.1046 | d_Y_loss: 0.2182 | d_X_loss:
0.0121 | d_fake_loss: 0.2303 | g_loss: 5.0959
Iteration [ 9740/10000] | d_real_loss: 0.1430 | d_Y_loss: 0.6173 | d_X_loss:
0.0203 | d_fake_loss: 0.6376 | g_loss: 5.5678
Iteration [ 9750/10000] | d_real_loss: 0.1461 | d_Y_loss: 0.1521 | d_X_loss:
0.1299 | d_fake_loss: 0.2820 | g_loss: 5.3096
Iteration [ 9760/10000] | d_real_loss: 0.1016 | d_Y_loss: 0.3040 | d_X_loss:
0.0284 | d_fake_loss: 0.3324 | g_loss: 5.8519
Iteration [ 9770/10000] | d_real_loss: 0.1243 | d_Y_loss: 0.2002 | d_X_loss:
0.0069 | d_fake_loss: 0.2071 | g_loss: 5.5969
Iteration [ 9780/10000] | d_real_loss: 0.1881 | d_Y_loss: 0.2478 | d_X_loss:
0.0556 | d_fake_loss: 0.3034 | g_loss: 4.6233
Iteration [ 9790/10000] | d_real_loss: 0.0778 | d_Y_loss: 0.2020 | d_X_loss:
0.0123 | d_fake_loss: 0.2143 | g_loss: 5.1730
Iteration [ 9800/10000] | d_real_loss: 0.0953 | d_Y_loss: 0.2573 | d_X_loss:
0.0231 | d_fake_loss: 0.2804 | g_loss: 5.3722
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009800-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009800-Y-X.png
Iteration [ 9810/10000] | d_real_loss: 0.1243 | d_Y_loss: 0.0715 | d_X_loss:
0.0165 | d_fake_loss: 0.0881 | g_loss: 5.5288
Iteration [ 9820/10000] | d_real_loss: 0.0313 | d_Y_loss: 0.0825 | d_X_loss:
0.0180 | d_fake_loss: 0.1005 | g_loss: 4.6526

```

```

Iteration [ 9830/10000] | d_real_loss: 0.0742 | d_Y_loss: 0.0546 | d_X_loss:
0.0511 | d_fake_loss: 0.1057 | g_loss: 5.0410
Iteration [ 9840/10000] | d_real_loss: 0.1039 | d_Y_loss: 0.1684 | d_X_loss:
0.0191 | d_fake_loss: 0.1875 | g_loss: 4.9431
Iteration [ 9850/10000] | d_real_loss: 0.0771 | d_Y_loss: 0.0954 | d_X_loss:
0.0307 | d_fake_loss: 0.1261 | g_loss: 5.4690
Iteration [ 9860/10000] | d_real_loss: 0.0358 | d_Y_loss: 0.2080 | d_X_loss:
0.0232 | d_fake_loss: 0.2312 | g_loss: 6.0363
Iteration [ 9870/10000] | d_real_loss: 0.0360 | d_Y_loss: 0.0683 | d_X_loss:
0.0201 | d_fake_loss: 0.0884 | g_loss: 4.9489
Iteration [ 9880/10000] | d_real_loss: 0.0209 | d_Y_loss: 0.0551 | d_X_loss:
0.0340 | d_fake_loss: 0.0891 | g_loss: 4.8338
Iteration [ 9890/10000] | d_real_loss: 0.0134 | d_Y_loss: 0.0683 | d_X_loss:
0.0703 | d_fake_loss: 0.1386 | g_loss: 4.8609
Iteration [ 9900/10000] | d_real_loss: 0.0221 | d_Y_loss: 0.0439 | d_X_loss:
0.0248 | d_fake_loss: 0.0687 | g_loss: 4.9759
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009900-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
009900-Y-X.png
Iteration [ 9910/10000] | d_real_loss: 0.0253 | d_Y_loss: 0.0630 | d_X_loss:
0.0138 | d_fake_loss: 0.0768 | g_loss: 4.5417
Iteration [ 9920/10000] | d_real_loss: 0.0172 | d_Y_loss: 0.0413 | d_X_loss:
0.0107 | d_fake_loss: 0.0521 | g_loss: 4.7406
Iteration [ 9930/10000] | d_real_loss: 0.0679 | d_Y_loss: 0.0372 | d_X_loss:
0.0228 | d_fake_loss: 0.0600 | g_loss: 4.7658
Iteration [ 9940/10000] | d_real_loss: 0.0177 | d_Y_loss: 0.0395 | d_X_loss:
0.0116 | d_fake_loss: 0.0511 | g_loss: 4.9208
Iteration [ 9950/10000] | d_real_loss: 0.0117 | d_Y_loss: 0.0349 | d_X_loss:
0.0224 | d_fake_loss: 0.0572 | g_loss: 4.8564
Iteration [ 9960/10000] | d_real_loss: 0.0076 | d_Y_loss: 0.0333 | d_X_loss:
0.0253 | d_fake_loss: 0.0585 | g_loss: 4.9077
Iteration [ 9970/10000] | d_real_loss: 0.0090 | d_Y_loss: 0.0510 | d_X_loss:
0.0174 | d_fake_loss: 0.0685 | g_loss: 4.7484
Iteration [ 9980/10000] | d_real_loss: 0.0137 | d_Y_loss: 0.0646 | d_X_loss:
0.0182 | d_fake_loss: 0.0829 | g_loss: 4.9502
Iteration [ 9990/10000] | d_real_loss: 0.0118 | d_Y_loss: 0.0404 | d_X_loss:
0.0214 | d_fake_loss: 0.0618 | g_loss: 4.8733
Iteration [10000/10000] | d_real_loss: 0.0101 | d_Y_loss: 0.0456 | d_X_loss:
0.0169 | d_fake_loss: 0.0625 | g_loss: 4.9011
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
010000-X-Y.png
Saved output/cycle_gan_10000\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-
010000-Y-X.png

```



Results TensorBoard

Can you account for these differences? We can see that when we use cycle consistency, the loss curves appear more stable, as their slopes are generally gradual, without any major peaks. This could happen because the consistency loss acts as a rule that tells the networks not only to create fake images that “fool” the other network, but also to make sure that if you change an image

and then change it back again, then it looks like the original image you started from. This rule helps the training to be more stable and helps the networks learn in a more organized way, rather than in a disorganized way, trying to “fool” each other all the time. The generator seems to learn better when we this rule applies.

Provide explanations as to why there might or might not be a noticeable difference between the two sets of results. Analyzing the images, one possible explanation as to why we do not see a big difference in the images in the end, is because the two types of “grumpy cats” we are using are not that different in style. If the change we want to make is not too significant, the network can probably learn to do it right, even without the cycle consistency rule. Also, the rule has a weight (λ), that if we do not adjust correctly, it may not help the network in its learning process. Additionally, in this case we use L_1 loss, as the original paper suggested. Perhaps, if we trained longer or used larger networks, or if the difference between cat styles was more noticeable, we would see a significant improvement in the images produced, when we use the cycle coherence rule. This indicates that the rule helps the learning process to be more stable. However, for the images to look much better, we could apply further augmentations or train for longer.