

# Generative Adversarial Neural Networks

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This document is the requested PDF conversion of the Jupyter Notebook, including all output cells.

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## 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

## 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

```

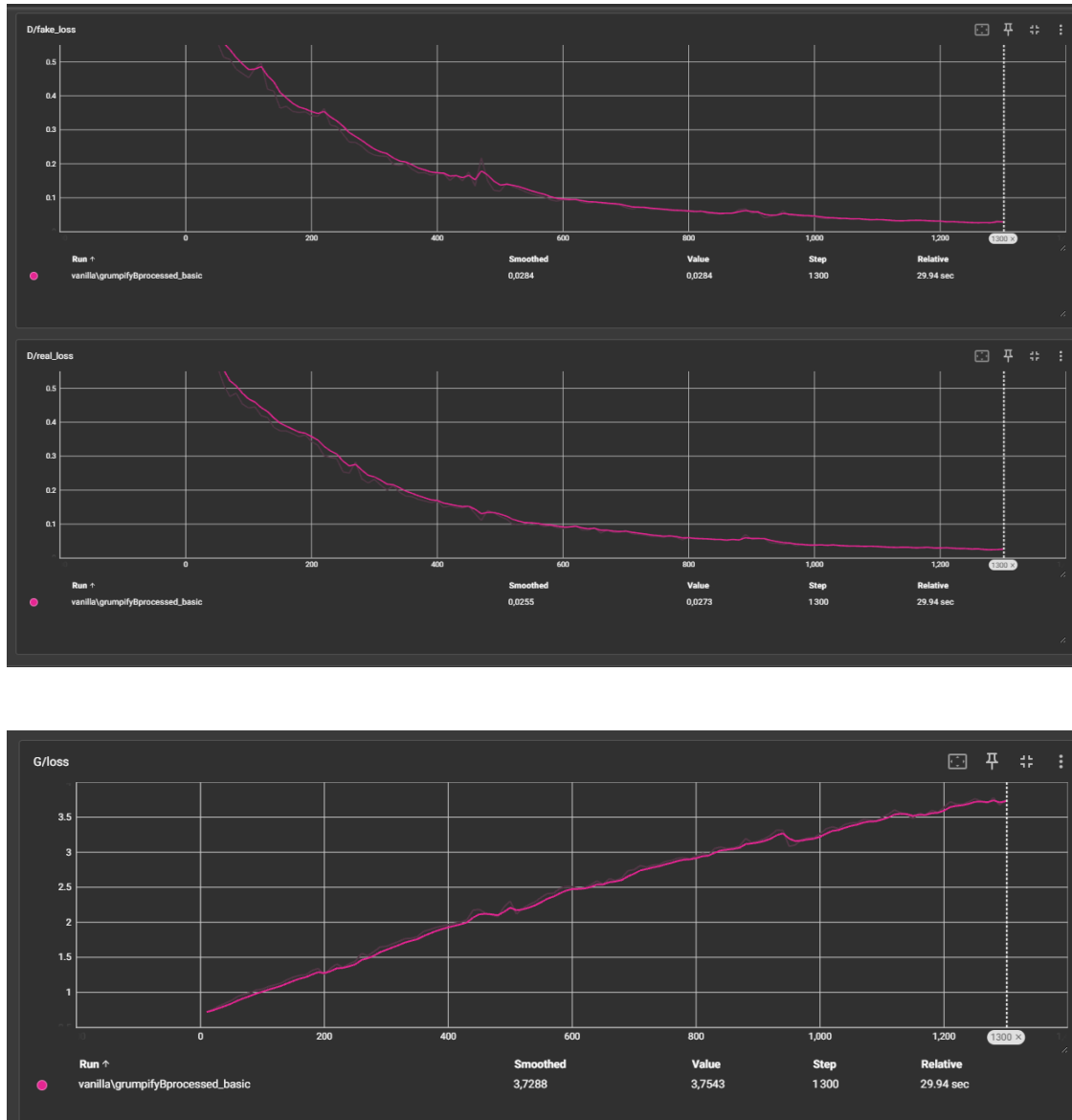
2025-04-18 12:33:59.464338: I tensorflow/core/util/port.cc:153] oneDNN custom operations are on. You may see slightly different numerical results due to floating-point round-off errors from different computation orders. To turn them off, set the environment variable `TF\_ENABLE\_ONEDNN\_OPTS=0`.

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:

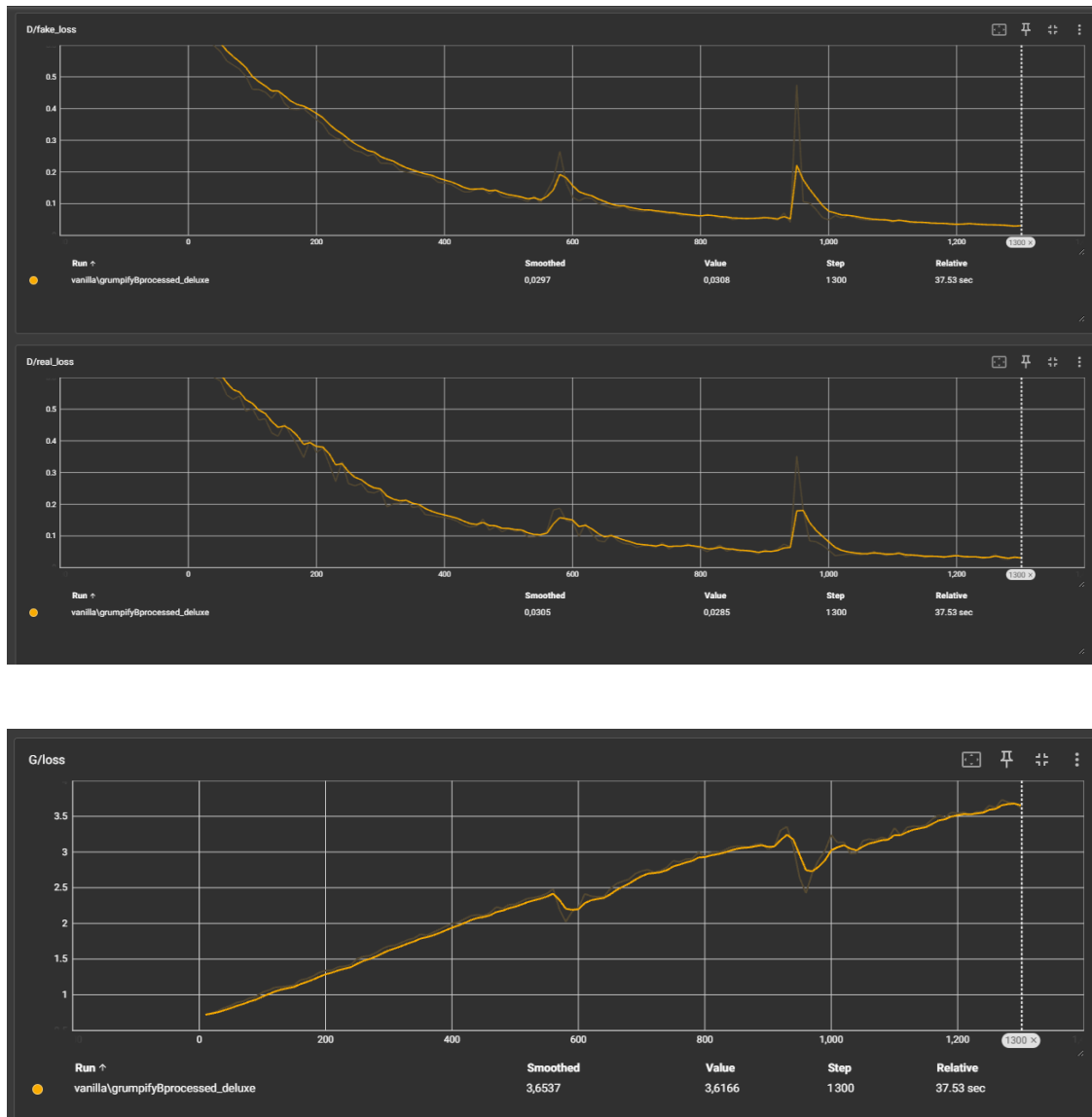
```

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.



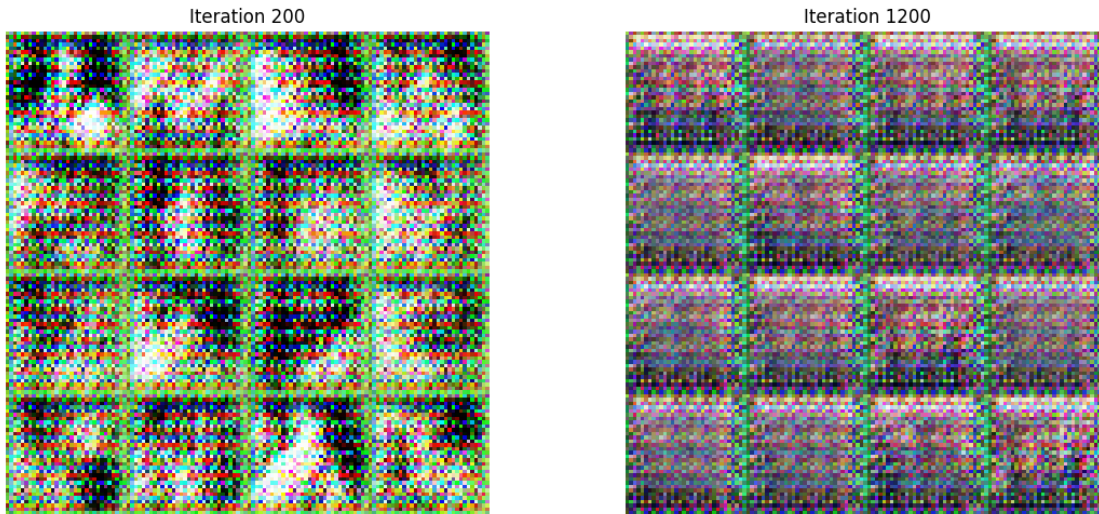
```
[ ]: # Load images from specific iterations
img_early = mpimg.imread("output/vanilla/grumpifyBprocessed_deluxe/
    ↪sample-000200.png")
img_late = mpimg.imread("output/vanilla/grumpifyBprocessed_deluxe/sample-001200.
    ↪png")

# 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

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output/cyclegan\cat\_10deluxe\_instance\_dc\_cycle\_naive\_cycle\sample-000100-X-Y.png

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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:

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0.7221 | d_fake_loss: 1.3173 | g_loss: 2.5136
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output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000200-X-Y.png
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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
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output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000300-X-Y.png
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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:

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0.5705 | d_fake_loss: 1.0059 | g_loss: 3.0168
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output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000400-X-Y.png
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output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000400-Y-X.png
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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
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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:

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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
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output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000600-X-Y.png
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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
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output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000700-X-Y.png
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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:

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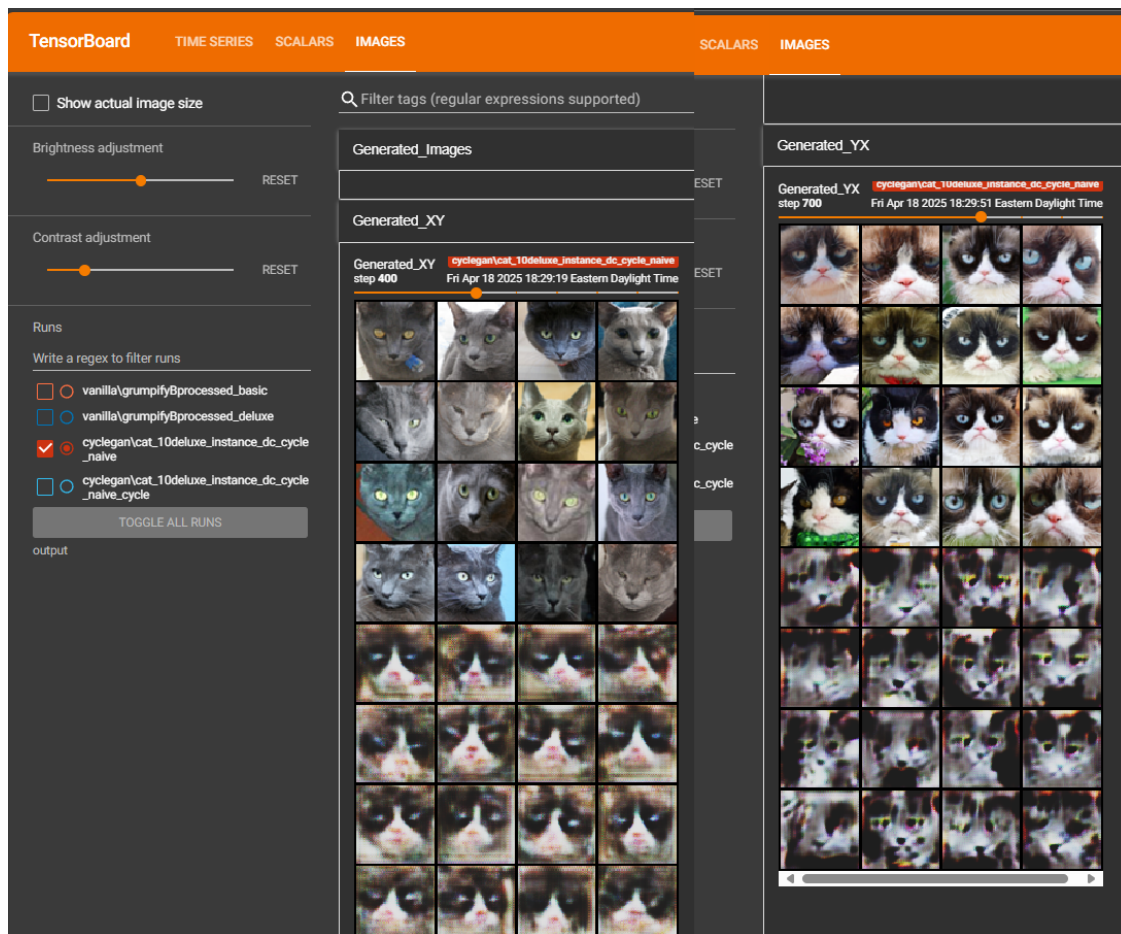
0.4840 | d_fake_loss: 0.7337 | g_loss: 2.8621
Iteration [ 770/ 1000] | d_real_loss: 0.2474 | d_Y_loss: 0.2622 | d_X_loss:
0.3791 | d_fake_loss: 0.6413 | g_loss: 2.8352
Iteration [ 780/ 1000] | d_real_loss: 0.2494 | d_Y_loss: 0.2401 | d_X_loss:
0.4055 | d_fake_loss: 0.6456 | g_loss: 2.9111
Iteration [ 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
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output/cyclegan\cat_10deluxe_instance_dc_cycle_naive_cycle\sample-000800-X-Y.png
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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:

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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
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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

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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

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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

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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



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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

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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

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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

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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

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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

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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



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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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



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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

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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



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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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



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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

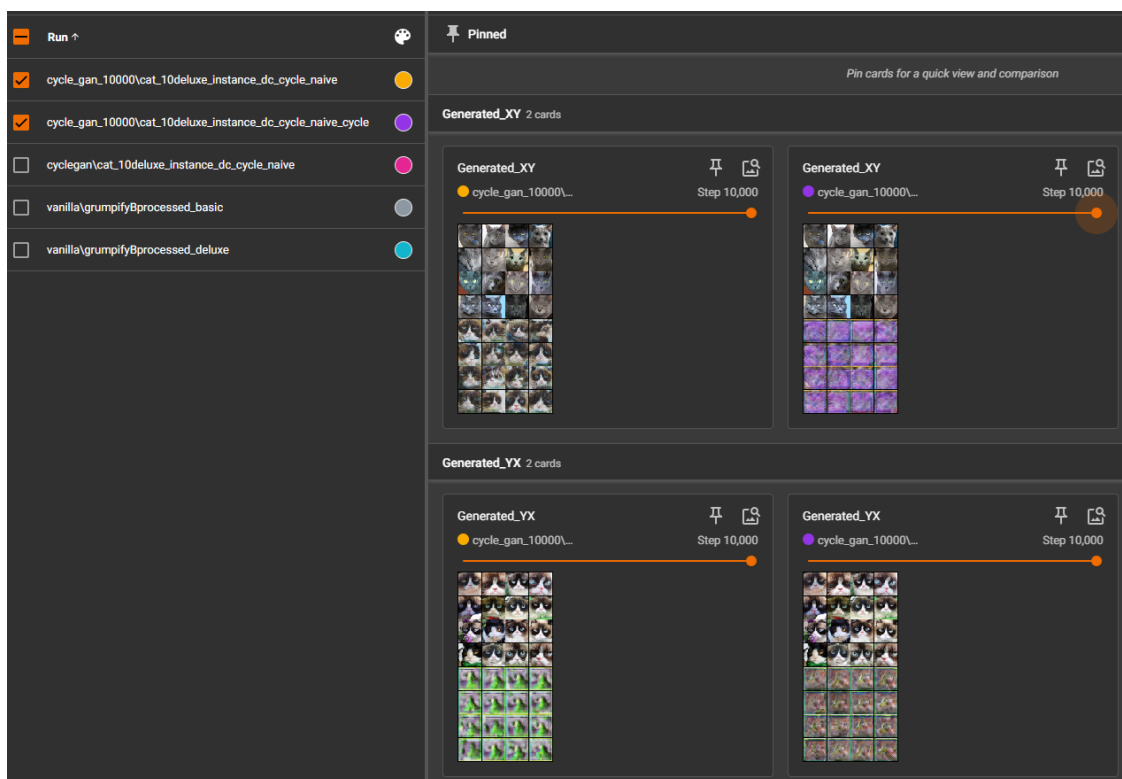
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Iteration [ 9630/10000] | d_real_loss: 0.0588 | d_Y_loss: 0.2210 | d_X_loss:
0.0400 | d_fake_loss: 0.2610 | g_loss: 4.8695
Iteration [ 9640/10000] | d_real_loss: 0.0333 | d_Y_loss: 0.2526 | d_X_loss:
0.0465 | d_fake_loss: 0.2991 | g_loss: 4.5905
Iteration [ 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

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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?** **Answer:** We can see that when we use cycle consistency, the loss curves tend to be more stable, with gradual slopes and fewer extreme fluctuations. This probably happens because the consistency loss acts as a guiding principle that ensures that the networks not only create fake images to “fool” the other network, but also that they maintain

coherence when an image is modified and then reverted to its original state. This guiding principle helps the training to be more stable and helps the networks to learn in a more organized way, instead of simply trying to “fool” each other all the time. The generator seems to learn better when following this principle.

**Provide explanations as to why there might or might not be a noticeable difference between the two sets of results. Answer:** Analyzing the images, one possible explanation as to why we do not see a big difference in the final images, is because the two types of “grumpy cats” we are using are not different in style. If the transformation we want to make is not too significant, the network can probably still learn to perform it correctly, even without the cycle consistency rule. Also, the rule depends on its weight parameter ( $\lambda$ ), and if this parameter is not properly tuned, it may not help the network in its learning process in any meaningful way. In this case, we used  $L_1$  loss, as it was recommended in the original paper. Perhaps, if we trained the model 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. Although the rule helps the learning process to be more stable, to obtain better image quality might require the above-mentioned enhancements