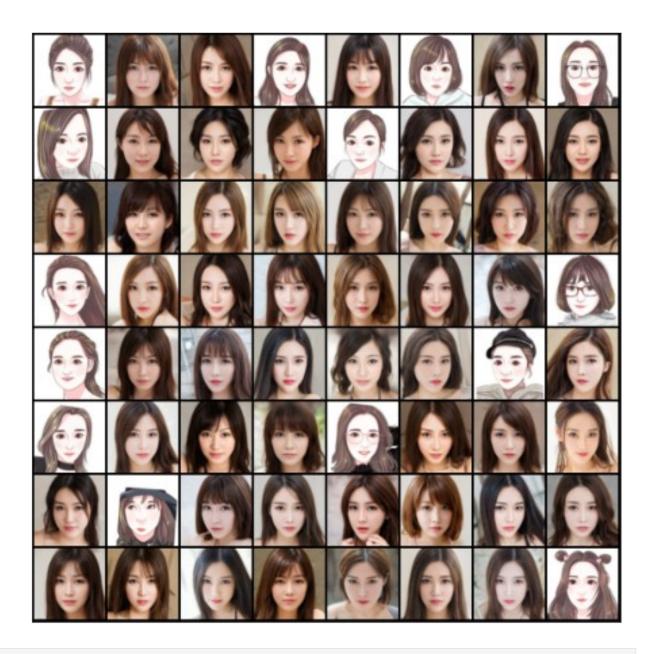
```
!pip install opendatasets --upgrade --quiet
import opendatasets as od
dataset url = 'https://www.kaggle.com/srrrrr/photo2cartoon'
od.download(dataset url)
Please provide your Kaggle credentials to download this dataset. Learn
more: http://bit.ly/kaggle-creds
Your Kaggle username: shailysarker
Your Kaggle Key: ·····
   0% | 0.00/91.6M [00:00<?, ?B/s]
Downloading photo2cartoon.zip to ./photo2cartoon
100% | 91.6M/91.6M [00:03<00:00, 31.4MB/s]
import os
DATA DIR = '/content/photo2cartoon'
print(os.listdir(DATA DIR))
['photo2cartoon']
from torch.utils.data import DataLoader
from torchvision.datasets import ImageFolder
import torchvision.transforms as T
image size = 64
batch size = 128
stats = (0.5, 0.5, 0.5), (0.5, 0.5, 0.5)
train ds = ImageFolder(DATA DIR, transform=T.Compose([
   T.Resize(image size),
   T.CenterCrop(image size),
   T.ToTensor(),
   T.Normalize(*stats)]))
train dl = DataLoader(train ds, batch size, shuffle=True,
num workers=3, pin memory=True)
/usr/local/lib/python3.7/dist-packages/torch/utils/data/
dataloader.py:481: UserWarning: This DataLoader will create 3 worker
processes in total. Our suggested max number of worker in current
```

```
system is 2, which is smaller than what this DataLoader is going to
create. Please be aware that excessive worker creation might get
DataLoader running slow or even freeze, lower the worker number to
avoid potential slowness/freeze if necessary.
  cpuset checked))
import torch
from torchvision.utils import make grid
import matplotlib.pyplot as plt
%matplotlib inline
def denorm(img_tensors):
    return img tensors * stats[1][0] + stats[0][0]
def show images(images, nmax=64):
    fig, ax = plt.subplots(figsize=(8, 8))
    ax.set xticks([]); ax.set yticks([])
    ax.imshow(make grid(denorm(images.detach()[:nmax]),
nrow=8).permute(1, 2, 0))
def show batch(dl, nmax=64):
    for images, _ in dl:
        show images(images, nmax)
        break
show batch(train dl)
/usr/local/lib/python3.7/dist-packages/torch/utils/data/
dataloader.py:481: UserWarning: This DataLoader will create 3 worker
processes in total. Our suggested max number of worker in current
system is 2, which is smaller than what this DataLoader is going to
create. Please be aware that excessive worker creation might get
DataLoader running slow or even freeze, lower the worker number to
avoid potential slowness/freeze if necessary.
  cpuset checked))
```

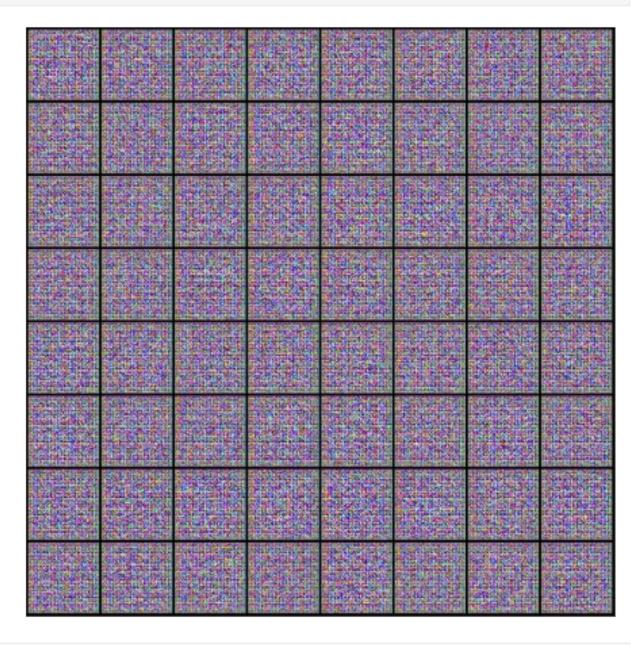


```
def get_default_device():
    """Pick GPU if available, else CPU"""
    if torch.cuda.is_available():
        return torch.device('cuda')
    else:
        return torch.device('cpu')

def to_device(data, device):
    """Move tensor(s) to chosen device"""
    if isinstance(data, (list,tuple)):
        return [to_device(x, device) for x in data]
    return data.to(device, non_blocking=True)
```

```
class DeviceDataLoader():
    """Wrap a dataloader to move data to a device"""
    def __init__(self, dl, device):
        self.dl = dl
        self.device = device
    def iter (self):
       """Yield a batch of data after moving it to device"""
        for b in self.dl:
            vield to device(b, self.device)
        len (self):
        """Number of batches"""
        return len(self.dl)
device = get default device()
device
device(type='cuda')
train dl = DeviceDataLoader(train dl, device)
import torch.nn as nn
discriminator = nn.Sequential(
    # in: 3 x 64 x 64
    nn.Conv2d(3, 64, kernel size=4, stride=2, padding=1, bias=False),
    nn.BatchNorm2d(64),
    nn.LeakyReLU(0.2, inplace=True),
    # out: 64 x 32 x 32
    nn.Conv2d(64, 128, kernel size=4, stride=2, padding=1,
bias=False).
    nn.BatchNorm2d(128),
    nn.LeakyReLU(0.2, inplace=True),
    # out: 128 x 16 x 16
    nn.Conv2d(128, 256, kernel size=4, stride=2, padding=1,
bias=False),
    nn.BatchNorm2d(256),
    nn.LeakyReLU(0.2, inplace=True),
    # out: 256 x 8 x 8
    nn.Conv2d(256, 512, kernel size=4, stride=2, padding=1,
bias=False),
    nn.BatchNorm2d(512),
    nn.LeakyReLU(0.2, inplace=True),
    # out: 512 x 4 x 4
```

```
nn.Conv2d(512, 1, kernel size=4, stride=1, padding=0, bias=False),
    # out: 1 x 1 x 1
    nn.Flatten(),
    nn.Sigmoid())
discriminator = to device(discriminator, device)
latent size = 128
generator = nn.Sequential(
    # in: latent size x 1 x 1
    nn.ConvTranspose2d(latent size, 512, kernel size=4, stride=1,
padding=0, bias=False),
    nn.BatchNorm2d(512),
    nn.ReLU(True),
    # out: 512 x 4 x 4
    nn.ConvTranspose2d(512, 256, kernel size=4, stride=2, padding=1,
bias=False).
    nn.BatchNorm2d(256),
    nn.ReLU(True),
    # out: 256 x 8 x 8
    nn.ConvTranspose2d(256, 128, kernel size=4, stride=2, padding=1,
bias=False),
    nn.BatchNorm2d(128),
    nn.ReLU(True),
    # out: 128 x 16 x 16
    nn.ConvTranspose2d(128, 64, kernel size=4, stride=2, padding=1,
bias=False),
    nn.BatchNorm2d(64),
    nn.ReLU(True).
    # out: 64 x 32 x 32
    nn.ConvTranspose2d(64, 3, kernel size=4, stride=2, padding=1,
bias=False),
    nn.Tanh()
    # out: 3 x 64 x 64
)
xb = torch.randn(batch size, latent size, 1, 1) # random latent
fake images = generator(xb)
print(fake images.shape)
show images(fake images)
```



```
generator = to_device(generator, device)

def train_discriminator(real_images, opt_d):
    # Clear discriminator gradients
    opt_d.zero_grad()

# Pass real images through discriminator
    real_preds = discriminator(real_images)
    real_targets = torch.ones(real_images.size(0), 1, device=device)
    real_loss = F.binary_cross_entropy(real_preds, real_targets)
    real_score = torch.mean(real_preds).item()
```

```
# Generate fake images
    latent = torch.randn(batch_size, latent_size, 1, 1, device=device)
    fake images = generator(latent)
    # Pass fake images through discriminator
    fake_targets = torch.zeros(fake_images.size(0), 1, device=device)
    fake preds = discriminator(fake images)
    fake_loss = F.binary_cross_entropy(fake_preds, fake_targets)
    fake_score = torch.mean(fake_preds).item()
    # Update discriminator weights
    loss = real loss + fake loss
    loss.backward()
    opt d.step()
    return loss.item(), real_score, fake_score
def train generator(opt g):
    # Clear generator gradients
    opt g.zero grad()
    # Generate fake images
    latent = torch.randn(batch size, latent size, 1, 1, device=device)
    fake images = generator(latent)
    # Try to fool the discriminator
    preds = discriminator(fake images)
    targets = torch.ones(batch size, 1, device=device)
    loss = F.binary cross entropy(preds, targets)
    # Update generator weights
    loss.backward()
    opt g.step()
    return loss.item()
from torchvision.utils import save image
sample dir = 'Photo2Cartoon generated'
os.makedirs(sample dir, exist ok=True)
def save samples(index, latent tensors, show=True):
    fake images = generator(latent tensors)
    fake fname = 'generated-images-{0:0=4d}.png'.format(index)
    save image(denorm(fake images), os.path.join(sample dir,
fake fname), nrow=8)
    print('Saving', fake fname)
    if show:
```

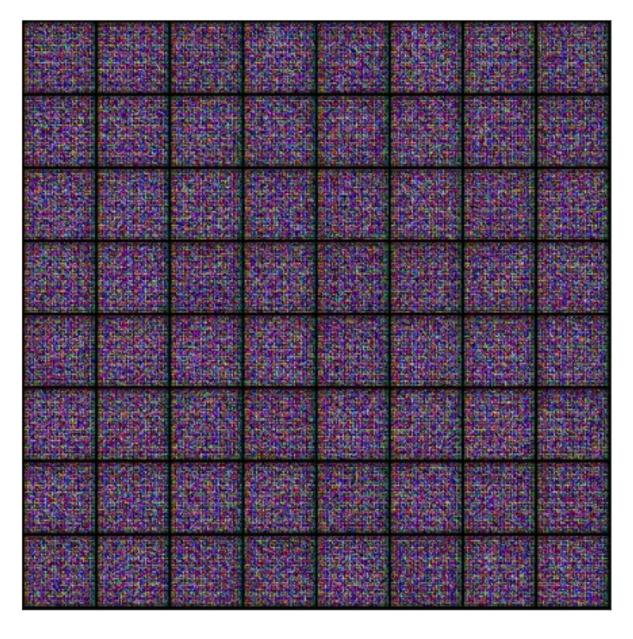
```
fig, ax = plt.subplots(figsize=(8, 8))
    ax.set_xticks([]); ax.set_yticks([])
    ax.imshow(make_grid(fake_images.cpu().detach(),
nrow=8).permute(1, 2, 0))

fixed_latent = torch.randn(64, latent_size, 1, 1, device=device)

save_samples(0, fixed_latent)

Clipping input data to the valid range for imshow with RGB data
([0..1] for floats or [0..255] for integers).

Saving generated-images-0000.png
```



```
from tgdm.notebook import tgdm
import torch.nn.functional as F
def fit(epochs, lr, start_idx=1):
    torch.cuda.empty cache()
    # Losses & scores
    losses_g = []
    losses d = []
    real scores = []
    fake scores = []
    # Create optimizers
    opt d = torch.optim.Adam(discriminator.parameters(), lr=lr,
betas=(0.5, 0.999))
    opt g = torch.optim.Adam(generator.parameters(), lr=lr,
betas=(0.5, 0.999))
    for epoch in range(epochs):
        for real_images, _ in tqdm(train_dl):
            # Train discriminator
            loss_d, real_score, fake_score =
train discriminator(real images, opt d)
            # Train generator
            loss_g = train_generator(opt g)
        # Record losses & scores
        losses g.append(loss g)
        losses d.append(loss d)
        real scores.append(real score)
        fake scores.append(fake score)
        # Log losses & scores (last batch)
        print("Epoch [{}/{}], loss g: {:.4f}, loss d: {:.4f},
real_score: {:.4f}, fake_score: {:.4f}".format(
            epoch+1, epochs, loss_g, loss_d, real_score, fake_score))
        # Save generated images
        save samples(epoch+start idx, fixed latent, show=False)
    return losses_g, losses_d, real_scores, fake scores
lr = 0.0001
epochs = 500
history = fit(epochs, lr)
```

```
{"model id": "2b343b1fd221443fb80c818300918bc9", "version major": 2, "vers
ion minor":0}
/usr/local/lib/python3.7/dist-packages/torch/utils/data/
dataloader.py:481: UserWarning: This DataLoader will create 3 worker
processes in total. Our suggested max number of worker in current
system is 2, which is smaller than what this DataLoader is going to
create. Please be aware that excessive worker creation might get
DataLoader running slow or even freeze, lower the worker number to
avoid potential slowness/freeze if necessary.
  cpuset checked))
Epoch [1/500], loss g: 4.6156, loss d: 0.0789, real score: 0.9849,
fake score: 0.0612
Saving generated-images-0001.png
{"model id": "03635241910248ec9d5c84beca068e9f", "version major": 2, "vers
ion minor":0}
Epoch [2/500], loss g: 5.6078, loss d: 0.0395, real score: 0.9885,
fake score: 0.0269
Saving generated-images-0002.png
{"model id":"11c07e9599c84129b5245e513bad7f62","version major":2,"vers
ion minor":0}
Epoch [3/500], loss g: 6.1412, loss d: 0.0348, real score: 0.9848,
fake score: 0.0167
Saving generated-images-0003.png
{"model id":"e23530eb77944608ae3a164cb615b032","version major":2,"vers
ion minor":0}
Epoch [4/500], loss q: 6.7186, loss d: 0.0340, real score: 0.9813,
fake score: 0.0117
Saving generated-images-0004.png
{"model id":"7e4d93c4c51b4ef9a07e3a6f95b136ef","version major":2,"vers
ion minor":0}
Epoch [5/500], loss g: 6.9692, loss d: 0.0158, real score: 0.9979,
fake score: 0.0136
Saving generated-images-0005.png
{"model id":"fff4054076904d4499595af49223c6a3","version major":2,"vers
ion minor":0}
```

```
Epoch [6/500], loss q: 7.1195, loss d: 0.0140, real score: 0.9941,
fake score: 0.0080
Saving generated-images-0006.png
{"model id": "3e5e771d8d8c4ef38c2c44c72f391cee", "version major": 2, "vers
ion minor":0}
Epoch [7/500], loss g: 6.9422, loss d: 0.0186, real score: 0.9897,
fake score: 0.0078
Saving generated-images-0007.png
{"model id":"60cc09c042744998a34e3d28443927fa","version major":2,"vers
ion minor":0}
Epoch [8/500], loss q: 7.5553, loss d: 0.0091, real score: 0.9989,
fake score: 0.0079
Saving generated-images-0008.png
{"model id": "59ded7b800614bala94e6ed6bf66f721", "version major": 2, "vers
ion minor":0}
Epoch [9/500], loss g: 7.2703, loss d: 0.0171, real score: 0.9889,
fake score: 0.0057
Saving generated-images-0009.png
{"model id":"c19ad11596c24ab694cc6b58c0cec2d6","version major":2,"vers
ion minor":0}
Epoch [10/500], loss_g: 7.7176, loss_d: 0.0054, real_score: 0.9990,
fake score: 0.0044
Saving generated-images-0010.png
{"model id": "7b17a8cdb4414f878402ed4dca3879ed", "version major": 2, "vers
ion minor":0}
Epoch [11/500], loss q: 7.6871, loss d: 0.0072, real score: 0.9971,
fake score: 0.0043
Saving generated-images-0011.png
{"model id": "e21f5a09f3b94ec68e9a3c8ab5ee3471", "version major": 2, "vers
ion minor":0}
Epoch [12/500], loss g: 7.6551, loss d: 0.0056, real score: 0.9982,
fake score: 0.0037
Saving generated-images-0012.png
```

```
{"model id": "ad1b9d9f8e99455abbb6e03360c80912", "version major": 2, "vers
ion minor":0}
Epoch [13/500], loss g: 7.6937, loss d: 0.0050, real score: 0.9981,
fake score: 0.0031
Saving generated-images-0013.png
{"model id": "91593dffccee498bbf8835e24420cfc2", "version major": 2, "vers
ion minor":0}
Epoch [14/500], loss g: 7.9013, loss d: 0.0039, real score: 0.9997,
fake score: 0.0037
Saving generated-images-0014.png
{"model_id": "eabe14beb61344caabc422e5bef4453f", "version_major": 2, "vers
ion minor":0}
Epoch [15/500], loss g: 7.4467, loss d: 0.0087, real score: 0.9945,
fake_score: 0.0029
Saving generated-images-0015.png
{"model id":"4c597a00373a4ab7b29fcb035e9c12ea","version major":2,"vers
ion minor":0}
Epoch [16/500], loss g: 7.5258, loss d: 0.0077, real score: 0.9951,
fake score: 0.0025
Saving generated-images-0016.png
{"model id":"ca317ed3992b4c3895ede6d63962b0a1","version major":2,"vers
ion minor":0}
Epoch [17/500], loss g: 7.4386, loss d: 0.0135, real score: 0.9895,
fake score: 0.0023
Saving generated-images-0017.png
{"model id": "258fe1f2c15548bf90a4da4d1a312820", "version major": 2, "vers
ion minor":0}
Epoch [18/500], loss g: 7.9346, loss d: 0.0053, real score: 0.9967,
fake score: 0.0019
Saving generated-images-0018.png
{"model id":"63f23cf4c504449ea37e56ad89851f80","version major":2,"vers
ion minor":0}
Epoch [19/500], loss g: 8.0387, loss d: 0.0022, real score: 0.9997,
```

```
fake score: 0.0020
Saving generated-images-0019.png
{"model id": "4f2c35ee00b142e6bac63ddb5873cbf0", "version major": 2, "vers
ion minor":0}
Epoch [20/500], loss q: 7.9491, loss d: 0.0030, real score: 0.9986,
fake score: 0.0016
Saving generated-images-0020.png
{"model id": "0333e116faaa49bb8163554020eed59e", "version major": 2, "vers
ion minor":0}
Epoch [21/500], loss g: 7.6886, loss d: 0.0052, real score: 0.9963,
fake score: 0.0014
Saving generated-images-0021.png
{"model id":"b9d03bdd8ac5410fb0209ba0f4725cdd","version major":2,"vers
ion minor":0}
Epoch [22/500], loss g: 8.1512, loss d: 0.0013, real score: 0.9998,
fake score: 0.0011
Saving generated-images-0022.png
{"model id": "002ecc652f9e4f2b922d0688b7c9d86c", "version major": 2, "vers
ion minor":0}
Epoch [23/500], loss g: 7.9691, loss d: 0.0019, real score: 0.9997,
fake score: 0.0016
Saving generated-images-0023.png
{"model id": "de82e85f214e46b7b8c33295a1c63aef", "version major": 2, "vers
ion minor":0}
Epoch [24/500], loss g: 8.1164, loss d: 0.0012, real score: 0.9998,
fake score: 0.0010
Saving generated-images-0024.png
{"model id":"ec31a37f19c54dc2bd885d60b77ea610","version major":2,"vers
ion minor":0}
Epoch [25/500], loss g: 8.2123, loss d: 0.0014, real score: 1.0000,
fake score: 0.0014
Saving generated-images-0025.png
{"model id": "74abd45e24294c86a6de1237a7ededb7", "version major": 2, "vers
ion minor":0}
```

```
Epoch [26/500], loss q: 7.8812, loss d: 0.0029, real score: 0.9981,
fake score: 0.0010
Saving generated-images-0026.png
{"model id": "0aa1bad3df4d4dfeb86163a487649720", "version major": 2, "vers
ion minor":0}
Epoch [27/500], loss g: 7.9419, loss d: 0.0026, real score: 0.9984,
fake score: 0.0010
Saving generated-images-0027.png
{"model id": "41831866f6e9444a9afaba0d993ec401", "version major": 2, "vers
ion minor":0}
Epoch [28/500], loss q: 7.8871, loss d: 0.0031, real score: 0.9977,
fake score: 0.0008
Saving generated-images-0028.png
{"model id":"c952cfc4344a4bc9b6c2f77b42fc2e52","version major":2,"vers
ion minor":0}
Epoch [29/500], loss g: 8.0192, loss d: 0.0017, real score: 0.9991,
fake score: 0.0008
Saving generated-images-0029.png
{"model id":"15d355ed6cad4ee3b50008e0c95d360e","version major":2,"vers
ion minor":0}
Epoch [30/500], loss_g: 8.0537, loss_d: 0.0012, real_score: 0.9996,
fake score: 0.0008
Saving generated-images-0030.png
{"model id": "b8e0a4e9d7654dfea0cd24a563e7a207", "version major": 2, "vers
ion minor":0}
Epoch [31/500], loss q: 8.4370, loss d: 0.0008, real score: 0.9995,
fake score: 0.0004
Saving generated-images-0031.png
{"model id": "5790fa67edf040a2a7d7bfc0f56a66a9", "version major": 2, "vers
ion minor":0}
Epoch [32/500], loss g: 8.2459, loss d: 0.0009, real score: 0.9999,
fake score: 0.0008
Saving generated-images-0032.png
```

```
{"model id": ad5dfcbfd8d8473eb4e9a0aed4180bc7", version major": 2, vers
ion minor":0}
Epoch [33/500], loss g: 8.2009, loss d: 0.0012, real score: 0.9994,
fake score: 0.0006
Saving generated-images-0033.png
{"model id": "033dfb0b6f7443e1a87970f4c58081a8", "version major": 2, "vers
ion minor":0}
Epoch [34/500], loss g: 8.4171, loss d: 0.0006, real score: 0.9999,
fake score: 0.0004
Saving generated-images-0034.png
{"model_id": "a3e8e61f69c74edbaa34adc236b96183", "version_major": 2, "vers
ion minor":0}
Epoch [35/500], loss g: 8.2956, loss d: 0.0009, real score: 0.9996,
fake_score: 0.0005
Saving generated-images-0035.png
{"model id":"6811397c459844d491fb7c660a1606d5","version major":2,"vers
ion minor":0}
Epoch [36/500], loss g: 7.8101, loss d: 0.0027, real score: 0.9980,
fake score: 0.0006
Saving generated-images-0036.png
{"model id":"eecabf5142964ccd9d4ba6b3063476ce","version major":2,"vers
ion minor":0}
Epoch [37/500], loss g: 8.2809, loss d: 0.0008, real score: 0.9999,
fake score: 0.0008
Saving generated-images-0037.png
{"model id":"cfc63313dacc4af5a5b1cc38f9f78cc4","version major":2,"vers
ion minor":0}
Epoch [38/500], loss g: 8.3155, loss d: 0.0010, real score: 0.9996,
fake score: 0.0006
Saving generated-images-0038.png
{"model id":"7f4bdb7af6f646ec962a6e8a2539815f","version major":2,"vers
ion minor":0}
Epoch [39/500], loss g: 8.3298, loss d: 0.0012, real score: 0.9992,
```

```
fake score: 0.0004
Saving generated-images-0039.png
{"model id": "0f603741c2f6476c987d587edec163d4", "version major": 2, "vers
ion minor":0}
Epoch [40/500], loss q: 8.4256, loss d: 0.0006, real score: 0.9998,
fake score: 0.0005
Saving generated-images-0040.png
{"model id": "d31538989e804b7891b09e149d919bbc", "version major": 2, "vers
ion minor":0}
Epoch [41/500], loss g: 8.4087, loss d: 0.0016, real score: 0.9988,
fake score: 0.0004
Saving generated-images-0041.png
{"model id":"c67499f4724b421baee5b7f44b0a16b7","version major":2,"vers
ion minor":0}
Epoch [42/500], loss g: 8.5445, loss d: 0.0004, real score: 0.9999,
fake score: 0.0004
Saving generated-images-0042.png
{"model id": "9573f421a8ff46df8d8b755f55ca0b85", "version major": 2, "vers
ion minor":0}
Epoch [43/500], loss g: 8.3130, loss d: 0.0012, real score: 0.9992,
fake score: 0.0004
Saving generated-images-0043.png
{"model id": "5de73ccd2bb44358878ab01b42812938", "version major": 2, "vers
ion minor":0}
Epoch [44/500], loss g: 8.6247, loss d: 0.0004, real score: 0.9999,
fake score: 0.0003
Saving generated-images-0044.png
{"model id":"9efff42668fe4d58972045a2a9d6b720","version major":2,"vers
ion minor":0}
Epoch [45/500], loss g: 8.6275, loss d: 0.0004, real score: 0.9999,
fake score: 0.0003
Saving generated-images-0045.png
{"model id": "81b3764483ec4483b7a73a9d52b7ac43", "version major": 2, "vers
ion minor":0}
```

```
Epoch [46/500], loss q: 8.7335, loss d: 0.0003, real score: 0.9999,
fake score: 0.0002
Saving generated-images-0046.png
{"model id": "alaf1f48bad04a648d820efccc432698", "version major": 2, "vers
ion minor":0}
Epoch [47/500], loss g: 8.5424, loss d: 0.0006, real score: 0.9998,
fake score: 0.0004
Saving generated-images-0047.png
{"model id": "73594150d86846f4a8f7d41429b2feec", "version major": 2, "vers
ion minor":0}
Epoch [48/500], loss q: 8.6271, loss d: 0.0004, real score: 0.9999,
fake score: 0.0003
Saving generated-images-0048.png
{"model id":"a40fc32383754123b918c6aa61f86ba4","version major":2,"vers
ion minor":0}
Epoch [49/500], loss q: 8.8339, loss d: 0.0004, real_score: 0.9998,
fake score: 0.0003
Saving generated-images-0049.png
{"model id":"b25a4ac4f01742828ed53ff45531286e","version major":2,"vers
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Epoch [50/500], loss_g: 8.7941, loss_d: 0.0003, real_score: 0.9999,
fake score: 0.0003
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{"model id": "d49bf3526f9d481abb96670e278483b3", "version major": 2, "vers
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Epoch [51/500], loss q: 8.8463, loss d: 0.0003, real score: 0.9999,
fake score: 0.0003
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{"model id": "7f912908fe4c4572a953748389f9fa0c", "version major": 2, "vers
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Epoch [52/500], loss g: 8.7904, loss d: 0.0004, real score: 0.9999,
fake score: 0.0003
Saving generated-images-0052.png
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{"model id":"1cfd29fec67349a1b8958bcc42c87042","version major":2,"vers
ion minor":0}
Epoch [53/500], loss g: 8.7129, loss d: 0.0003, real score: 1.0000,
fake score: 0.0003
Saving generated-images-0053.png
{"model id": "9e086aa43f0b4be59aa3ecfc0f987d6d", "version major": 2, "vers
ion minor":0}
Epoch [54/500], loss g: 8.7217, loss d: 0.0006, real score: 0.9997,
fake score: 0.0003
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{"model_id": "89809a53893d48608314b9a1d847b4be", "version_major": 2, "vers
ion minor":0}
Epoch [55/500], loss g: 8.7090, loss d: 0.0010, real score: 0.9992,
fake_score: 0.0002
Saving generated-images-0055.png
{"model id": "3c3da73a87b7498cac3d2c0bf2ec2099", "version major": 2, "vers
ion minor":0}
Epoch [56/500], loss g: 8.6972, loss d: 0.0004, real score: 0.9999,
fake score: 0.0003
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{"model id":"36ce7b6c08df477a8c3595ca853b2831","version major":2,"vers
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Epoch [57/500], loss g: 8.8555, loss d: 0.0004, real score: 0.9998,
fake score: 0.0003
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{"model id": "3ac5b1cf357f443dbaf564ef8ec6fbfa", "version major": 2, "vers
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Epoch [58/500], loss g: 8.9076, loss d: 0.0004, real score: 0.9999,
fake score: 0.0003
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{"model id":"0a08d37f83f94b77ab154d06d2764773","version major":2,"vers
ion minor":0}
Epoch [59/500], loss g: 5.2088, loss d: 0.0033, real score: 0.9970,
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fake score: 0.0002
Saving generated-images-0059.png
{"model id": "803dee5ed3974edf984521ba8ca367df", "version major": 2, "vers
ion minor":0}
Epoch [60/500], loss q: 7.2716, loss d: 0.0770, real score: 0.9402,
fake score: 0.0052
Saving generated-images-0060.png
{"model id":"10cea7cd55c6427189ef6c7a89639254","version major":2,"vers
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Epoch [61/500], loss g: 11.1324, loss d: 0.0003, real score: 0.9997,
fake score: 0.0000
Saving generated-images-0061.png
{"model id":"010d5ece30724831b31203ec8bfeb04e","version major":2,"vers
ion minor":0}
Epoch [62/500], loss g: 8.3063, loss d: 0.0017, real score: 0.9996,
fake score: 0.0012
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{"model id": "320b69c1831540b3accd04c165b75d6e", "version major": 2, "vers
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Epoch [63/500], loss g: 11.0976, loss d: 0.0448, real score: 0.9587,
fake score: 0.0000
Saving generated-images-0063.png
{"model id":"41d8fd6fc4604fc2b6c657033155f4b4","version major":2,"vers
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Epoch [64/500], loss g: 18.0764, loss d: 0.0080, real score: 0.9925,
fake score: 0.0000
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{"model id":"2b7285fd29b64bbba25510e0777b4434","version major":2,"vers
ion minor":0}
Epoch [65/500], loss g: 7.7862, loss d: 0.0550, real score: 0.9979,
fake score: 0.0509
Saving generated-images-0065.png
{"model id": "c3b5ccea031943ff85cd0f746a12369a", "version major": 2, "vers
ion minor":0}
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Epoch [66/500], loss q: 6.0222, loss d: 0.0128, real score: 0.9948,
fake score: 0.0074
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{"model id": "aca5dd1b67cc40f1becdca853b068a88", "version major": 2, "vers
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Epoch [67/500], loss g: 6.4586, loss d: 0.0464, real score: 0.9993,
fake score: 0.0444
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{"model id": "83f2581250454d13955d6fb538043df9", "version major": 2, "vers
ion minor":0}
Epoch [68/500], loss q: 7.5251, loss d: 0.0166, real score: 0.9986,
fake score: 0.0151
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{"model id": "851d89fbe52b498d8affccfdf5315569", "version major": 2, "vers
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Epoch [69/500], loss g: 8.5514, loss d: 0.0090, real score: 0.9953,
fake score: 0.0042
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{"model id":"28643f0aec844bb0b751e740a5610112","version major":2,"vers
ion minor":0}
Epoch [70/500], loss_g: 7.4147, loss_d: 0.0182, real_score: 0.9947,
fake score: 0.0126
Saving generated-images-0070.png
{"model id": "9d967fb2b1d943b7b157fac9349415d5", "version major": 2, "vers
ion minor":0}
Epoch [71/500], loss q: 6.6140, loss d: 0.0094, real score: 0.9961,
fake score: 0.0053
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{"model id": "3757873edefc4de49c3828c7a16555a7", "version major": 2, "vers
ion minor":0}
Epoch [72/500], loss g: 7.2666, loss d: 0.0103, real score: 0.9913,
fake score: 0.0012
Saving generated-images-0072.png
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{"model id": "d9e87903de8d42a68d9818b058a621ca", "version major": 2, "vers
ion minor":0}
Epoch [73/500], loss g: 6.7059, loss d: 0.0113, real score: 0.9949,
fake score: 0.0060
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{"model id": "5333eec9e612407ab03a0c0b6a6262e5", "version major": 2, "vers
ion minor":0}
Epoch [74/500], loss g: 6.9426, loss d: 0.0050, real score: 0.9981,
fake score: 0.0032
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{"model_id": "8b8a92c972184e59b502c050350ca332", "version_major": 2, "vers
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Epoch [75/500], loss g: 6.9189, loss d: 0.0061, real score: 0.9976,
fake_score: 0.0037
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{"model id":"156febe9b8d64f4497254068b5a600b2","version major":2,"vers
ion minor":0}
Epoch [76/500], loss g: 6.8795, loss d: 0.0051, real score: 0.9974,
fake score: 0.0024
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{"model id":"4deace59dede4618ba365f1790b90c2d","version major":2,"vers
ion minor":0}
Epoch [77/500], loss g: 6.8252, loss d: 0.0029, real score: 0.9992,
fake score: 0.0020
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{"model_id": "842fee6ec85946329e15f9b5246a7335", "version major": 2, "vers
ion minor":0}
Epoch [78/500], loss g: 6.7747, loss d: 0.0029, real score: 0.9997,
fake score: 0.0025
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{"model id":"6a9047e7afe34fcf88bdda21a532eac7","version major":2,"vers
ion minor":0}
Epoch [79/500], loss g: 6.9548, loss d: 0.0052, real score: 0.9963,
```

```
fake score: 0.0014
Saving generated-images-0079.png
{"model id":"fb10e7e54acf47b3a905b93e7c8105bc","version major":2,"vers
ion minor":0}
Epoch [80/500], loss q: 7.0402, loss d: 0.0022, real score: 0.9991,
fake score: 0.0013
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{"model id": "6ec31e4e538c443ea5c367d7a71f2aa8", "version major": 2, "vers
ion minor":0}
Epoch [81/500], loss g: 6.9709, loss d: 0.0029, real score: 0.9999,
fake score: 0.0028
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{"model id": "31003230a61647ed80e97a39fb47a7ed", "version major": 2, "vers
ion minor":0}
Epoch [82/500], loss g: 7.2755, loss d: 0.0025, real score: 0.9985,
fake score: 0.0011
Saving generated-images-0082.png
{"model id":"8892bc42c7914ef7aab9ceab5c885433","version major":2,"vers
ion minor":0}
Epoch [83/500], loss q: 7.2546, loss d: 0.0045, real_score: 0.9966,
fake score: 0.0010
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{"model id": "360c4235092d4940a9fed880c990a193", "version major": 2, "vers
ion minor":0}
Epoch [84/500], loss g: 7.2420, loss d: 0.0019, real score: 0.9994,
fake score: 0.0013
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{"model id":"c64b79537fac42fbb1d2c1a6bcf25ae8","version major":2,"vers
ion minor":0}
Epoch [85/500], loss g: 7.1630, loss d: 0.0020, real score: 0.9997,
fake score: 0.0017
Saving generated-images-0085.png
{"model id": "46908f407db84e5eb74820fa70ad184c", "version major": 2, "vers
ion minor":0}
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Epoch [86/500], loss g: 7.8931, loss d: 0.0012, real score: 0.9994,
fake score: 0.0006
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{"model id": "0c032b3554e743ab95bec5130faffdd4", "version major": 2, "vers
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Epoch [87/500], loss g: 7.6891, loss d: 0.0012, real score: 0.9996,
fake score: 0.0008
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{"model id":"0996ff1d291349069cc8f7734c7cd1d9","version major":2,"vers
ion minor":0}
Epoch [88/500], loss q: 7.7596, loss d: 0.0017, real score: 0.9989,
fake score: 0.0006
Saving generated-images-0088.png
{"model id":"9c11b2e8b8c443638985775af4b72a9b","version major":2,"vers
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Epoch [89/500], loss g: 7.6136, loss d: 0.0018, real score: 0.9989,
fake score: 0.0007
Saving generated-images-0089.png
{"model id":"21778e869c434be8ad049975fd3429f9","version major":2,"vers
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Epoch [90/500], loss g: 7.9764, loss d: 0.0007, real score: 0.9998,
fake score: 0.0005
Saving generated-images-0090.png
{"model id": "af3b6d0966c94bc3a7e1d04c969e8ae0", "version major": 2, "vers
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Epoch [91/500], loss q: 7.6586, loss d: 0.0009, real score: 0.9999,
fake score: 0.0008
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{"model id": "3d3b042373df4c56a188935612043390", "version major": 2, "vers
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Epoch [92/500], loss g: 7.8209, loss d: 0.0007, real score: 0.9999,
fake score: 0.0005
Saving generated-images-0092.png
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{"model id": "afdf74deddf34238a66079b92dab25c8", "version major": 2, "vers
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Epoch [93/500], loss g: 7.4331, loss d: 0.0019, real score: 0.9990,
fake score: 0.0009
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{"model id": "a198c23810df436298b891e330ece2c7", "version major": 2, "vers
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Epoch [94/500], loss g: 7.6050, loss d: 0.0008, real score: 0.9999,
fake score: 0.0008
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{"model id": "86f52faac91e45208f696993d2ccd0da", "version major": 2, "vers
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Epoch [95/500], loss g: 7.7599, loss d: 0.0014, real score: 0.9992,
fake_score: 0.0005
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{"model id": "03b507920b354ed581ecd68d29298b79", "version major": 2, "vers
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Epoch [96/500], loss g: 7.8149, loss d: 0.0008, real score: 0.9997,
fake score: 0.0005
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{"model id": "39a734d4d2934512a93157430cfe610b", "version major": 2, "vers
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Epoch [97/500], loss g: 8.0047, loss d: 0.0006, real score: 0.9998,
fake score: 0.0004
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{"model id": "a57d841563914e14bd3ee197f7f59b14", "version major": 2, "vers
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Epoch [98/500], loss g: 7.6254, loss d: 0.0018, real score: 0.9989,
fake score: 0.0006
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{"model id":"1f5b410a657a4a5195d439e30c192ea5","version major":2,"vers
ion minor":0}
Epoch [99/500], loss q: 7.4016, loss d: 0.0013, real score: 0.9996,
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fake score: 0.0009
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{"model id": "9cf3830b5f8b4caf8e1aa5cb4f04ae2d", "version major": 2, "vers
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Epoch [100/500], loss q: 7.6392, loss d: 0.0024, real score: 0.9981,
fake score: 0.0005
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{"model id": "295bc32beaa84d058361bc97c3f25da3", "version major": 2, "vers
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Epoch [101/500], loss q: 8.0580, loss d: 0.0008, real score: 0.9996,
fake score: 0.0004
Saving generated-images-0101.png
{"model id": "5de45c4861624cf780960a8241c3f609", "version major": 2, "vers
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Epoch [102/500], loss g: 8.0448, loss d: 0.0006, real score: 0.9998,
fake score: 0.0004
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{"model id": "891655e42abb47f19605047ad4f6fb53", "version major": 2, "vers
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Epoch [103/500], loss g: 8.2757, loss d: 0.0007, real score: 0.9996,
fake score: 0.0003
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{"model id": "9e172bc99c4f430fb904e40c9f78b8bd", "version major": 2, "vers
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Epoch [104/500], loss g: 8.1109, loss d: 0.0009, real score: 0.9995,
fake score: 0.0004
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{"model id":"50c7ffcfbd294186858988e120e311d1","version major":2,"vers
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Epoch [105/500], loss_g: 7.9177, loss_d: 0.0006, real score: 0.9999,
fake score: 0.0005
Saving generated-images-0105.png
{"model id": "ba03a3991ccd4842b2caaa84222d189e", "version major": 2, "vers
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Epoch [106/500], loss q: 8.3407, loss d: 0.0006, real score: 0.9997,
fake score: 0.0003
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{"model id": "5c61bc22ba9347cd8440577477635c13", "version major": 2, "vers
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Epoch [107/500], loss q: 8.6492, loss d: 0.0007, real score: 0.9995,
fake score: 0.0002
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{"model id":"10dc5facabf240de8885182cda63dd71","version major":2,"vers
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Epoch [108/500], loss q: 8.6670, loss d: 0.0003, real score: 0.9999,
fake score: 0.0002
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{"model id":"0eeb5a3c5e2e48feb478faf99b1904ae","version major":2,"vers
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Epoch [109/500], loss g: 8.4339, loss d: 0.0003, real score: 1.0000,
fake score: 0.0002
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{"model id":"985a59a760d34f40893387eleb4581c1","version major":2,"vers
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Epoch [110/500], loss g: 8.2233, loss d: 0.0006, real score: 0.9997,
fake score: 0.0003
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Epoch [111/500], loss q: 7.9507, loss d: 0.0005, real score: 0.9999,
fake score: 0.0004
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Epoch [112/500], loss g: 8.0381, loss d: 0.0005, real score: 0.9999,
fake score: 0.0004
Saving generated-images-0112.png
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{"model id": "c021d7efed514da390dd40c3f4370985", "version major": 2, "vers
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fake score: 0.0003
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fake score: 0.0003
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Epoch [115/500], loss q: 8.1377, loss d: 0.0007, real score: 0.9996,
fake_score: 0.0003
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{"model id":"e21e5f2a1c4943858d9e3671b26136f1","version major":2,"vers
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Epoch [116/500], loss g: 8.0772, loss d: 0.0004, real score: 1.0000,
fake score: 0.0004
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{"model id":"965270362f74498eb2ae675bd119bea6","version major":2,"vers
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Epoch [117/500], loss g: 8.1112, loss d: 0.0006, real score: 0.9998,
fake score: 0.0003
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{"model id":"f7776d11308d48abbe9aa3d05327f653","version major":2,"vers
ion minor":0}
Epoch [118/500], loss q: 8.4583, loss d: 0.0003, real score: 0.9999,
fake score: 0.0002
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{"model id":"d2f566cadd7f4656bc4cd2076fc60860","version major":2,"vers
ion minor":0}
Epoch [119/500], loss g: 8.1021, loss d: 0.0005, real score: 0.9998,
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fake score: 0.0004
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{"model id":"d1306dbac0824717b53762a07f0817ad","version major":2,"vers
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Epoch [120/500], loss q: 8.5274, loss d: 0.0005, real score: 0.9997,
fake score: 0.0002
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{"model id": "07dd1832da85482195b09035276f6c24", "version major": 2, "vers
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Epoch [121/500], loss q: 8.2250, loss d: 0.0004, real score: 0.9999,
fake score: 0.0003
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{"model id": "882bd4f799de4b0ca91e4da67244aa0d", "version major": 2, "vers
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Epoch [122/500], loss g: 8.4969, loss d: 0.0002, real score: 1.0000,
fake score: 0.0002
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Epoch [123/500], loss g: 8.7302, loss d: 0.0004, real score: 0.9998,
fake score: 0.0002
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{"model id": "8ec2611bf2d144d8be571958fdaecfbc", "version major": 2, "vers
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Epoch [124/500], loss g: 8.4093, loss d: 0.0015, real score: 0.9987,
fake score: 0.0002
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{"model id":"ad50d10089824e6999426757351d07ae","version major":2,"vers
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Epoch [125/500], loss g: 8.4568, loss d: 0.0003, real score: 1.0000,
fake score: 0.0002
Saving generated-images-0125.png
{"model id":"f92c46c243fd4cb1b062c61d310bce0f","version major":2,"vers
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Epoch [126/500], loss q: 8.5198, loss d: 0.0003, real score: 1.0000,
fake score: 0.0002
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{"model id": "09a3bd3b5704412fa05b9798248db93f", "version major": 2, "vers
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fake score: 0.0002
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{"model id":"45339be292fb4c26b3afadc8592ae74c","version major":2,"vers
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Epoch [128/500], loss q: 8.7047, loss d: 0.0002, real score: 1.0000,
fake score: 0.0002
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{"model id": "9dfb6cad1d8b481c99b74baeaf152fd0", "version major": 2, "vers
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Epoch [129/500], loss g: 8.6135, loss d: 0.0002, real score: 1.0000,
fake score: 0.0002
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{"model id":"d9487cfc42fd4191876304537a2b3058","version major":2,"vers
ion minor":0}
Epoch [130/500], loss g: 8.3662, loss d: 0.0003, real score: 0.9999,
fake score: 0.0003
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{"model id": "2501695e101c468793faed31d6ae089e", "version major": 2, "vers
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Epoch [131/500], loss q: 8.6626, loss d: 0.0005, real score: 0.9997,
fake score: 0.0002
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{"model id": "2a4198768049443791b8eba760a29f1c", "version major": 2, "vers
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Epoch [132/500], loss g: 8.1925, loss d: 0.0007, real score: 0.9996,
fake score: 0.0003
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{"model id":"f0d59cfb09c747efa9fb8a312b594257","version major":2,"vers
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Epoch [133/500], loss q: 8.6686, loss d: 0.0003, real score: 0.9999,
fake score: 0.0002
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Epoch [134/500], loss q: 8.5752, loss d: 0.0003, real score: 1.0000,
fake score: 0.0002
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{"model_id":"b15eb9021cf448ca9173442e8437115c","version major":2,"vers
ion minor":0}
Epoch [135/500], loss q: 8.2368, loss d: 0.0010, real score: 0.9993,
fake score: 0.0003
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{"model id": "896c6c4e7ad248faa76eb9958009f9a4", "version major": 2, "vers
ion minor":0}
Epoch [136/500], loss g: 8.4031, loss d: 0.0003, real score: 1.0000,
fake score: 0.0003
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{"model id":"e2972a9594a44e7e947eb68181cb6238","version major":2,"vers
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Epoch [137/500], loss g: 8.4080, loss d: 0.0009, real score: 0.9994,
fake score: 0.0002
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{"model id":"153ff6ac24b44cf18835f7b052c28393","version major":2,"vers
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Epoch [138/500], loss q: 8.0867, loss d: 0.0009, real score: 0.9994,
fake score: 0.0003
Saving generated-images-0138.png
{"model id":"3ad5706b9bdf4ce3b159679aed1864d2","version major":2,"vers
ion minor":0}
Epoch [139/500], loss g: 8.2050, loss d: 0.0004, real score: 0.9999,
```

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fake score: 0.0004
Saving generated-images-0139.png
{"model id": "afbff790fb1d461480b822889bbd9d75", "version major": 2, "vers
ion minor":0}
Epoch [140/500], loss q: 7.8123, loss d: 0.0015, real score: 0.9990,
fake score: 0.0005
Saving generated-images-0140.png
{"model id": "063ebeldedfb480bb0ff042beb0d3885", "version major": 2, "vers
ion minor":0}
Epoch [141/500], loss q: 6.8545, loss d: 0.0032, real score: 0.9977,
fake score: 0.0009
Saving generated-images-0141.png
{"model id":"0c24858c4e91457f967b3c48ea64b8c2","version major":2,"vers
ion minor":0}
Epoch [142/500], loss g: 0.5275, loss d: 7.2614, real score: 0.0100,
fake score: 0.0000
Saving generated-images-0142.png
{"model id": "01a9dbddd39446c890ff8c6400f5a02c", "version major": 2, "vers
ion minor":0}
Epoch [143/500], loss g: 7.2325, loss d: 0.3684, real score: 0.9183,
fake score: 0.1945
Saving generated-images-0143.png
{"model id": "fa9b5ac60f854a09b5bd2f8fa2596c6f", "version major": 2, "vers
ion minor":0}
Epoch [144/500], loss g: 5.9928, loss d: 0.1207, real score: 0.9471,
fake score: 0.0596
Saving generated-images-0144.png
{"model id":"1e50f6839ece466e97705e744bdb5b9f","version major":2,"vers
ion minor":0}
Epoch [145/500], loss g: 8.5983, loss d: 0.0427, real score: 0.9604,
fake score: 0.0009
Saving generated-images-0145.png
{"model id": "83aa431506a24a85819fc747b8618a5d", "version major": 2, "vers
ion minor":0}
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Epoch [146/500], loss q: 14.5666, loss d: 0.0048, real score: 0.9954,
fake score: 0.0000
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{"model id":"f772a00a336d413f8c4a0e784c33fad6","version major":2,"vers
ion minor":0}
Epoch [147/500], loss q: 5.0572, loss d: 0.0629, real score: 0.9589,
fake score: 0.0150
Saving generated-images-0147.png
{"model id":"f6d67a84cd4b4deab3b21c7fd2b83ad6","version major":2,"vers
ion minor":0}
Epoch [148/500], loss q: 4.2201, loss d: 0.1438, real score: 0.9226,
fake score: 0.0493
Saving generated-images-0148.png
{"model id":"8905d7d548a2485f8a64f4ade12d254c","version major":2,"vers
ion minor":0}
Epoch [149/500], loss g: 3.9887, loss d: 0.1108, real score: 0.9340,
fake score: 0.0377
Saving generated-images-0149.png
{"model id":"c48e9a27d74244b783e998e4ba9d9e42","version major":2,"vers
ion minor":0}
Epoch [150/500], loss g: 5.0495, loss d: 0.0965, real score: 0.9599,
fake score: 0.0477
Saving generated-images-0150.png
{"model id":"2d27962e220b4a189f9fd04995a54c85","version major":2,"vers
ion minor":0}
Epoch [151/500], loss q: 3.9699, loss d: 0.0937, real score: 0.9658,
fake score: 0.0538
Saving generated-images-0151.png
{"model id": "d07288cff252442892f276039acaf7ef", "version major": 2, "vers
ion minor":0}
Epoch [152/500], loss g: 4.1357, loss d: 0.1107, real score: 0.9275,
fake score: 0.0327
Saving generated-images-0152.png
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{"model id": "b92ea0db66c94084a2a190aaa8aeaf9e", "version major": 2, "vers
ion minor":0}
Epoch [153/500], loss g: 9.6031, loss d: 0.2283, real score: 0.8320,
fake score: 0.0009
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{"model id": "3e427d19e51942e4b40d082f68fa7860", "version major": 2, "vers
ion minor":0}
Epoch [154/500], loss q: 5.7083, loss d: 0.1676, real score: 0.9519,
fake score: 0.1044
Saving generated-images-0154.png
{"model_id": "91a7d89bb84b44539ba3debf6e7b2a6b", "version_major": 2, "vers
ion minor":0}
Epoch [155/500], loss g: 2.8391, loss d: 0.6760, real score: 0.9944,
fake score: 0.4472
Saving generated-images-0155.png
{"model id": "99301244c071433cb691ee8051073c9d", "version major": 2, "vers
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Epoch [156/500], loss g: 3.6765, loss d: 0.2161, real score: 0.9223,
fake score: 0.1208
Saving generated-images-0156.png
{"model id":"df4d00146c3745a58b3976a0bab4b271","version major":2,"vers
ion minor":0}
Epoch [157/500], loss g: 6.8304, loss d: 0.1994, real score: 0.9775,
fake score: 0.1574
Saving generated-images-0157.png
{"model id":"612b964749d6463fb4bb51d08b88fc4c","version major":2,"vers
ion minor":0}
Epoch [158/500], loss q: 3.6667, loss d: 0.2307, real score: 0.8896,
fake score: 0.0914
Saving generated-images-0158.png
{"model id":"6ac199663cf44d12be6e9ef6fe92e1c6","version major":2,"vers
ion minor":0}
Epoch [159/500], loss g: 9.2945, loss d: 1.8568, real score: 0.2840,
```

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fake score: 0.0001
Saving generated-images-0159.png
{"model id": "e8017738d40e47f7b39e5a401f42e941", "version major": 2, "vers
ion minor":0}
Epoch [160/500], loss q: 4.9896, loss d: 0.3369, real score: 0.8893,
fake score: 0.1816
Saving generated-images-0160.png
{"model id": "b2613593d6db4a6f87f271da09cd15d2", "version major": 2, "vers
ion minor":0}
Epoch [161/500], loss q: 3.7770, loss d: 0.0731, real score: 0.9403,
fake score: 0.0092
Saving generated-images-0161.png
{"model id": "380ec6f419cc4ed0a09ddbc9ba0ff5e8", "version major": 2, "vers
ion minor":0}
Epoch [162/500], loss g: 2.5025, loss d: 0.5446, real score: 0.6429,
fake score: 0.0056
Saving generated-images-0162.png
{"model id": "44a5f836eecc4b1985acfb768fe4c96e", "version major": 2, "vers
ion minor":0}
Epoch [163/500], loss g: 5.0671, loss d: 0.1328, real score: 0.9733,
fake score: 0.0976
Saving generated-images-0163.png
{"model id":"437f0520190e47d7a5454014283ed5e9","version major":2,"vers
ion minor":0}
Epoch [164/500], loss g: 4.8293, loss d: 8.1273, real score: 0.9999,
fake score: 0.9984
Saving generated-images-0164.png
{"model id":"43a14509a42b4dc9ad065c5c0ccda8ef","version major":2,"vers
ion minor":0}
Epoch [165/500], loss q: 2.4003, loss d: 0.3756, real score: 0.8045,
fake score: 0.1273
Saving generated-images-0165.png
{"model id": "d08624618a6c4e3ca46e88eb3e073a1a", "version major": 2, "vers
ion minor":0}
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Epoch [166/500], loss q: 2.2048, loss d: 0.4185, real score: 0.7799,
fake score: 0.1192
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{"model id": "abfa3a52e5214cc8b3146dbcf502440f", "version major": 2, "vers
ion minor":0}
Epoch [167/500], loss q: 4.0043, loss d: 0.2242, real score: 0.9122,
fake score: 0.1164
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{"model id": "c6a68ea6d2f74ad483c0efb45253f57b", "version major": 2, "vers
ion minor":0}
Epoch [168/500], loss q: 1.9049, loss d: 0.4561, real score: 0.7168,
fake score: 0.0196
Saving generated-images-0168.png
{"model id":"falfa8b06849499a8899429dlaaa0194","version major":2,"vers
ion minor":0}
Epoch [169/500], loss q: 3.6338, loss d: 0.0611, real score: 0.9788,
fake score: 0.0381
Saving generated-images-0169.png
{"model id":"53b78f09b196415dbaf22ababfcc71bf","version major":2,"vers
ion minor":0}
Epoch [170/500], loss g: 0.3878, loss d: 0.6399, real score: 0.6605,
fake score: 0.0176
Saving generated-images-0170.png
{"model id":"457822cb23f742da9c49fb8bf7eabd1b","version major":2,"vers
ion minor":0}
Epoch [171/500], loss q: 3.8558, loss d: 0.2223, real score: 0.9391,
fake score: 0.1346
Saving generated-images-0171.png
{"model id": "9ab9c521e1b7450a8163f6dde4ced25e", "version major": 2, "vers
ion minor":0}
Epoch [172/500], loss q: 3.5738, loss d: 0.1423, real score: 0.9327,
fake score: 0.0642
Saving generated-images-0172.png
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{"model id": "151e607f348a4c6da408b3a8b9ef024e", "version major": 2, "vers
ion minor":0}
Epoch [173/500], loss q: 4.2085, loss d: 0.1194, real score: 0.9618,
fake score: 0.0706
Saving generated-images-0173.png
{"model id": "e963427d37df435c917e7d34d3fe4ae6", "version major": 2, "vers
ion minor":0}
Epoch [174/500], loss q: 3.6845, loss d: 0.0463, real score: 0.9774,
fake score: 0.0223
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{"model_id":"21371514bd46454d923e7a71a4d2239d","version_major":2,"vers
ion minor":0}
Epoch [175/500], loss q: 2.5016, loss d: 0.5590, real score: 0.7132,
fake score: 0.1180
Saving generated-images-0175.png
{"model id": "3cc5accff636424098032390fd798f2e", "version major": 2, "vers
ion minor":0}
Epoch [176/500], loss g: 2.4738, loss d: 0.3356, real score: 0.8340,
fake score: 0.1152
Saving generated-images-0176.png
{"model id":"973ff8ef26794da1b0c6fbfc8b59f2b5","version major":2,"vers
ion minor":0}
Epoch [177/500], loss g: 3.7995, loss d: 0.1497, real score: 0.8975,
fake score: 0.0323
Saving generated-images-0177.png
{"model id":"b9cc3d9bda1a4135bb6f5e18e9598057","version major":2,"vers
ion minor":0}
Epoch [178/500], loss q: 3.0505, loss d: 0.1291, real score: 0.9145,
fake score: 0.0312
Saving generated-images-0178.png
{"model id":"6c43f4d4b2344cbcbbadb461371fd683","version major":2,"vers
ion minor":0}
Epoch [179/500], loss g: 8.5125, loss d: 0.2062, real score: 0.8498,
```

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fake score: 0.0018
Saving generated-images-0179.png
{"model id":"006a0469fe694ffa8839abc5d641f70a","version major":2,"vers
ion minor":0}
Epoch [180/500], loss q: 4.1635, loss d: 0.1785, real score: 0.9399,
fake score: 0.1022
Saving generated-images-0180.png
{"model id": "a5f36ecb52474c8b8e97e5687c5f930c", "version major": 2, "vers
ion minor":0}
Epoch [181/500], loss q: 0.7440, loss d: 0.3708, real score: 0.7643,
fake score: 0.0470
Saving generated-images-0181.png
{"model id":"080c584daf5141a99b8b0ae050794fc5","version major":2,"vers
ion minor":0}
Epoch [182/500], loss q: 4.4994, loss d: 0.2030, real score: 0.9492,
fake score: 0.1346
Saving generated-images-0182.png
{"model id":"112d43054053496589bf326faed649b4","version major":2,"vers
ion minor":0}
Epoch [183/500], loss g: 3.0490, loss d: 0.3004, real score: 0.8461,
fake score: 0.1013
Saving generated-images-0183.png
{"model id":"d343989f55594514bb72e0f2f9a4b973","version major":2,"vers
ion minor":0}
Epoch [184/500], loss g: 3.8749, loss d: 0.1695, real score: 0.8691,
fake score: 0.0154
Saving generated-images-0184.png
{"model id":"1d47b90a40564c75b63c369bf9fcae94","version major":2,"vers
ion minor":0}
Epoch [185/500], loss q: 4.7452, loss d: 0.1338, real score: 0.9441,
fake score: 0.0685
Saving generated-images-0185.png
{"model id": "c02908129f1e48e9a95058ed81d3ef67", "version major": 2, "vers
ion minor":0}
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Epoch [186/500], loss q: 4.8536, loss d: 0.0416, real score: 0.9875,
fake score: 0.0283
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{"model id": "029a792495bc437083d1e66a3080b1b1", "version major": 2, "vers
ion minor":0}
Epoch [187/500], loss q: 4.3045, loss d: 0.0847, real score: 0.9404,
fake score: 0.0181
Saving generated-images-0187.png
{"model id": "b22aeb4364fd422b9fceed3f244b5253", "version major": 2, "vers
ion minor":0}
Epoch [188/500], loss q: 5.6236, loss d: 0.0535, real score: 0.9643,
fake score: 0.0157
Saving generated-images-0188.png
{"model id": "5393f1f9be2642e1807e1055ebb985de", "version major": 2, "vers
ion minor":0}
Epoch [189/500], loss q: 2.8773, loss d: 0.0363, real score: 0.9921,
fake score: 0.0266
Saving generated-images-0189.png
{"model id":"f6dec0a93b0441a48b31ed89ba4d9639","version major":2,"vers
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Epoch [190/500], loss g: 2.7002, loss d: 0.2987, real score: 0.8443,
fake score: 0.0762
Saving generated-images-0190.png
{"model id": "31c72d935f1040b1a3708b2951b986db", "version major": 2, "vers
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Epoch [191/500], loss q: 4.2035, loss d: 0.1997, real score: 0.9256,
fake score: 0.1013
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{"model id": "a2b5a0dc6d7d4a079a92daa3c921bfe6", "version major": 2, "vers
ion minor":0}
Epoch [192/500], loss q: 3.4515, loss d: 0.1401, real score: 0.9336,
fake score: 0.0637
Saving generated-images-0192.png
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{"model id": "95634d6865864ac99ea0b89e9878ea19", "version major": 2, "vers
ion minor":0}
Epoch [193/500], loss q: 1.8537, loss d: 0.7815, real score: 0.5261,
fake score: 0.0034
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{"model id": "663bc9551a0049dd901af43651dbf5df", "version major": 2, "vers
ion minor":0}
Epoch [194/500], loss q: 3.2009, loss d: 0.1960, real score: 0.8738,
fake score: 0.0356
Saving generated-images-0194.png
{"model_id": "5dc2b5ae5ba74ccc98306567b576c952", "version_major": 2, "vers
ion minor":0}
Epoch [195/500], loss q: 4.6928, loss d: 0.0842, real score: 0.9594,
fake score: 0.0402
Saving generated-images-0195.png
{"model id":"9229dfde3e5e4ea793b1d44c57e02d40","version major":2,"vers
ion minor":0}
Epoch [196/500], loss g: 0.9427, loss d: 0.3369, real score: 0.7737,
fake score: 0.0332
Saving generated-images-0196.png
{"model id":"10806239219a4b059b5aa7aa75d27a01","version major":2,"vers
ion minor":0}
Epoch [197/500], loss g: 3.1760, loss d: 0.3636, real score: 0.8134,
fake score: 0.1146
Saving generated-images-0197.png
{"model id":"324bd3d123044be1a6c73b34ab56dce4","version major":2,"vers
ion minor":0}
Epoch [198/500], loss q: 3.6665, loss d: 0.1383, real score: 0.9353,
fake score: 0.0641
Saving generated-images-0198.png
{"model id":"922f5d36e8b943279040f2406b49dc76","version major":2,"vers
ion minor":0}
Epoch [199/500], loss g: 4.1400, loss d: 0.1292, real score: 0.9341,
```

```
fake score: 0.0551
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{"model id": "8428ffdc95ce450dbcc6f06d21d6b4b5", "version_major": 2, "vers
ion minor":0}
Epoch [200/500], loss q: 3.3331, loss d: 0.1614, real score: 0.9094,
fake score: 0.0232
Saving generated-images-0200.png
{"model id": "848aa504cde947a4bee2c91d68b5de7d", "version major": 2, "vers
ion minor":0}
Epoch [201/500], loss q: 4.8145, loss d: 0.0617, real score: 0.9692,
fake score: 0.0286
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{"model id":"dcbb1232f4ff45b192c3777e4c91ad68","version major":2,"vers
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Epoch [202/500], loss q: 7.4504, loss d: 0.1281, real score: 0.9930,
fake score: 0.1082
Saving generated-images-0202.png
{"model id": "5fb427617b90482fa698c2cc99ae9769", "version major": 2, "vers
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Epoch [203/500], loss g: 4.5040, loss d: 0.0849, real score: 0.9655,
fake score: 0.0462
Saving generated-images-0203.png
{"model id": "bfbd76b128bb4b7481c71e5a38801394", "version major": 2, "vers
ion minor":0}
Epoch [204/500], loss g: 4.7654, loss d: 0.1140, real score: 0.9547,
fake score: 0.0619
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{"model id": "acb681e4cb46476496b9e40dbbb102b4", "version major": 2, "vers
ion minor":0}
Epoch [205/500], loss q: 4.3945, loss d: 0.0572, real score: 0.9693,
fake score: 0.0237
Saving generated-images-0205.png
{"model id":"7cf938dd9fc54f6c95a2f8f7d4207d31","version major":2,"vers
ion minor":0}
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Epoch [206/500], loss q: 4.7908, loss d: 0.1916, real score: 0.9620,
fake score: 0.1297
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{"model id": "b4b742ba0e03421da9480b583b81c0a8", "version major": 2, "vers
ion minor":0}
Epoch [207/500], loss g: 4.7655, loss d: 0.1089, real score: 0.9388,
fake score: 0.0392
Saving generated-images-0207.png
{"model id": "7346d8749a2e4eebb0235b619455222e", "version major": 2, "vers
ion minor":0}
Epoch [208/500], loss q: 4.8261, loss d: 0.3357, real score: 0.9890,
fake score: 0.2475
Saving generated-images-0208.png
{"model id":"bd17acf5fb81474cae75d486a70ab539","version major":2,"vers
ion minor":0}
Epoch [209/500], loss q: 3.3609, loss d: 0.2398, real score: 0.8847,
fake score: 0.0927
Saving generated-images-0209.png
{"model id":"219c2cc49d40440a9791751ad95551e0","version major":2,"vers
ion minor":0}
Epoch [210/500], loss g: 2.5725, loss d: 0.2729, real score: 0.8413,
fake score: 0.0443
Saving generated-images-0210.png
{"model id":"e4f5bde9469c49e0926363c6b08a7c51","version major":2,"vers
ion minor":0}
Epoch [211/500], loss q: 4.2454, loss d: 0.0957, real score: 0.9323,
fake score: 0.0219
Saving generated-images-0211.png
{"model id":"f727d578e56743a09170dd9755122ded","version major":2,"vers
ion minor":0}
Epoch [212/500], loss q: 5.0335, loss d: 0.1305, real score: 0.9856,
fake score: 0.1057
Saving generated-images-0212.png
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{"model id": "48ace900072547228b34a4c6417e3be5", "version major": 2, "vers
ion minor":0}
Epoch [213/500], loss g: 3.9501, loss d: 0.1276, real score: 0.9388,
fake score: 0.0504
Saving generated-images-0213.png
{"model id": "4c30aa9279c5464aa2ec57611e4da894", "version major": 2, "vers
ion minor":0}
Epoch [214/500], loss q: 5.6622, loss d: 0.1679, real score: 0.9646,
fake score: 0.1161
Saving generated-images-0214.png
{"model_id":"44eb1efdc09140bd9d3ab41577102417","version_major":2,"vers
ion minor":0}
Epoch [215/500], loss q: 3.9687, loss d: 0.1210, real score: 0.9204,
fake score: 0.0262
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{"model id":"2242550a443c4b7b9d81a8ab54feef8a","version major":2,"vers
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Epoch [216/500], loss g: 3.2800, loss d: 0.1612, real score: 0.9122,
fake score: 0.0541
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{"model id":"07976807d13d426eb3597254340f3fda","version major":2,"vers
ion minor":0}
Epoch [217/500], loss g: 6.3790, loss d: 0.4529, real score: 0.9654,
fake score: 0.3038
Saving generated-images-0217.png
{"model id":"a54bda69ad674142b8d2f3cfe1f0eb75","version major":2,"vers
ion minor":0}
Epoch [218/500], loss q: 3.8345, loss d: 0.1317, real score: 0.9550,
fake score: 0.0772
Saving generated-images-0218.png
{"model id":"c047d3a2922448dcb9ed99cd5465cc38","version major":2,"vers
ion minor":0}
Epoch [219/500], loss g: 3.5035, loss d: 0.1122, real score: 0.9485,
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```
fake score: 0.0534
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{"model id": "cb43005d698746fd9b576bde52fd1a6b", "version major": 2, "vers
ion minor":0}
Epoch [220/500], loss q: 4.2769, loss d: 0.0907, real score: 0.9464,
fake score: 0.0283
Saving generated-images-0220.png
{"model id": "cd04c7136e764eeb827863b4e9085439", "version major": 2, "vers
ion minor":0}
Epoch [221/500], loss q: 3.5914, loss d: 0.2333, real score: 0.9111,
fake score: 0.1154
Saving generated-images-0221.png
{"model id": "alfe17756af241b59d1c08051cc86e15", "version major": 2, "vers
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fake score: 0.0756
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{"model id": "ace80a40bf5041e09a381b121525096a", "version major": 2, "vers
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fake score: 0.0335
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fake score: 0.3907
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{"model id":"391f49c999a44835bb384464878d5eec","version major":2,"vers
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fake score: 0.1120
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fake score: 0.0377
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fake score: 0.0235
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fake score: 0.0366
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{"model id":"bc8713e6e7f442df99432b4e79ad4139","version major":2,"vers
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fake score: 0.0615
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fake score: 0.1197
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{"model id": "8ddec6096af14b70857b677c140d57d3", "version major": 2, "vers
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fake score: 0.0393
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fake score: 0.0466
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{"model id": "7342955fea064145b90f52492cdb2c15", "version major": 2, "vers
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fake score: 0.0328
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{"model id": "0090890102d94fbb9bef0fdeb1833a13", "version major": 2, "vers
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fake score: 0.1351
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fake score: 0.0428
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fake score: 0.0417
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fake score: 0.0236
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{"model id":"22cfa95dac004daf95c3b6f69be30147","version major":2,"vers
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fake score: 0.0153
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{"model id":"b205e2c774f147ff838279fbeb02039d","version major":2,"vers
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Epoch [239/500], loss g: 2.2299, loss d: 0.1749, real score: 0.8804,
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fake score: 0.0371
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{"model id":"eac1437288d24b67bf377020f3ca9b85","version major":2,"vers
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fake score: 0.2124
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{"model id": "a9137126fcf0464d8882b9dc3e950e9e", "version major": 2, "vers
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Epoch [241/500], loss q: 4.2752, loss d: 0.1494, real score: 0.9881,
fake score: 0.1217
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{"model id": "5111c9215fbc45289dda50bac921c712", "version major": 2, "vers
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Epoch [242/500], loss q: 3.8830, loss d: 0.1231, real score: 0.9230,
fake score: 0.0382
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fake score: 0.0745
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Epoch [244/500], loss g: 2.7694, loss d: 0.2172, real score: 0.8968,
fake score: 0.0889
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{"model id":"48af9ac873ae4cf0bb30605edaa2c2ae","version major":2,"vers
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fake score: 0.1296
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Epoch [246/500], loss q: 3.9427, loss d: 0.1285, real score: 0.9112,
fake score: 0.0309
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{"model id": "85673fa46e244202bdce1e90bbb1de86", "version major": 2, "vers
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Epoch [247/500], loss q: 2.8081, loss d: 0.2573, real score: 0.8612,
fake score: 0.0856
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{"model id":"be758e48b0504dc9988b5f72594553c0","version major":2,"vers
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Epoch [248/500], loss q: 4.6021, loss d: 0.1588, real score: 0.9366,
fake score: 0.0778
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{"model id":"8e5b55ceb6624b7582ee95cbcbbd68fe","version major":2,"vers
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Epoch [249/500], loss q: 5.0467, loss d: 0.1478, real_score: 0.9630,
fake score: 0.0952
Saving generated-images-0249.png
{"model id":"06a13096b0f04ba5820e62ba43c8b5e1","version major":2,"vers
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Epoch [250/500], loss g: 13.2396, loss d: 0.6963, real score: 0.9881,
fake score: 0.4516
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{"model id":"f3f9fc8bec234193b58e725ac458ec42","version major":2,"vers
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Epoch [251/500], loss q: 5.5045, loss d: 0.2634, real score: 0.9677,
fake score: 0.1951
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{"model id": "419e1f8a50e54d8e8219aad5ab2540bf", "version major": 2, "vers
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Epoch [252/500], loss q: 2.8029, loss d: 0.3127, real score: 0.7689,
fake score: 0.0144
Saving generated-images-0252.png
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{"model id": "3ec3a86d700d4e98af66a3a61dd1fa34", "version major": 2, "vers
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Epoch [253/500], loss q: 4.4287, loss d: 0.1812, real score: 0.9532,
fake score: 0.1165
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{"model id": "98536249854e44b68bff1966dd43a342", "version major": 2, "vers
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Epoch [254/500], loss q: 4.3086, loss d: 0.1647, real score: 0.9229,
fake score: 0.0657
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{"model_id": "c6883c91d9cb44018c1a488dc0f07d5c", "version_major": 2, "vers
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Epoch [255/500], loss q: 1.3335, loss d: 0.2952, real score: 0.7738,
fake score: 0.0254
Saving generated-images-0255.png
{"model id":"2e30a0e91bc746e88ea9c9adcd35029a","version major":2,"vers
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Epoch [256/500], loss g: 4.1091, loss d: 0.1246, real score: 0.9602,
fake score: 0.0770
Saving generated-images-0256.png
{"model id":"1e91ac7eea914d8f99d192fb4249729b","version major":2,"vers
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Epoch [257/500], loss g: 2.8703, loss d: 0.2214, real score: 0.8795,
fake score: 0.0697
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{"model id":"0c4c517ff9f34ab1b8d1d0b098d72e6c","version major":2,"vers
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Epoch [258/500], loss q: 3.7056, loss d: 0.1609, real score: 0.9030,
fake score: 0.0484
Saving generated-images-0258.png
{"model id":"f347cd4258af4199b5d16a3c2fc02688","version major":2,"vers
ion minor":0}
Epoch [259/500], loss g: 2.6443, loss d: 0.1738, real score: 0.8875,
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fake score: 0.0417
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{"model id":"25b72107d5a244db96d661e66189a68c","version major":2,"vers
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Epoch [260/500], loss q: 2.3933, loss d: 0.2536, real score: 0.8597,
fake score: 0.0721
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{"model id": "25ae001f326b4e498e8f6ea4dea9fb76", "version major": 2, "vers
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Epoch [261/500], loss q: 2.3899, loss d: 0.2353, real score: 0.8172,
fake score: 0.0139
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{"model id":"4ebe7d4419394135ad303293e528ec71","version major":2,"vers
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Epoch [262/500], loss q: 4.3706, loss d: 0.1293, real score: 0.9405,
fake score: 0.0616
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{"model id": "ee40baf8dba94e41a98df2c0bc047326", "version major": 2, "vers
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Epoch [263/500], loss g: 3.7608, loss d: 0.1118, real score: 0.9574,
fake score: 0.0589
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{"model id": "92b59273866b40b9a9199adf6bb865ef", "version major": 2, "vers
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Epoch [264/500], loss g: 3.8858, loss d: 0.2078, real score: 0.9663,
fake score: 0.1470
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{"model id":"c67cb9ff5d08469e949d62d013baf85a","version major":2,"vers
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Epoch [265/500], loss g: 2.8205, loss d: 0.2238, real score: 0.8846,
fake score: 0.0815
Saving generated-images-0265.png
{"model id":"f4540b1d16e64e60bad43b545becbf97","version major":2,"vers
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Epoch [266/500], loss q: 1.2863, loss d: 0.5402, real score: 0.6877,
fake score: 0.0703
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{"model id": "71ec728dd8344217ac1e41f50dffc507", "version major": 2, "vers
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Epoch [267/500], loss q: 1.8533, loss d: 0.4589, real score: 0.7720,
fake score: 0.1331
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{"model id": "bbce235e111b46079fdf72c884c47285", "version major": 2, "vers
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Epoch [268/500], loss q: 3.5214, loss d: 0.1914, real score: 0.9157,
fake score: 0.0860
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{"model id":"32a2e63f61a44e8e9fc999e99007b52f","version major":2,"vers
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Epoch [269/500], loss q: 3.0805, loss d: 0.1670, real_score: 0.8881,
fake score: 0.0406
Saving generated-images-0269.png
{"model id":"9e77ce6121114283a061a9759d5f14f8","version major":2,"vers
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Epoch [270/500], loss g: 3.8645, loss d: 0.1500, real score: 0.9534,
fake score: 0.0932
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{"model id":"21f59b4b9c2f4293a68eb11c4a7aea0e","version major":2,"vers
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Epoch [271/500], loss q: 2.3758, loss d: 0.2367, real score: 0.8586,
fake score: 0.0397
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{"model id": "6385a76a558b4f49ace1970f2395fe13", "version major": 2, "vers
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Epoch [272/500], loss q: 4.7253, loss d: 0.2774, real score: 0.9790,
fake score: 0.2100
Saving generated-images-0272.png
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Epoch [273/500], loss q: 4.7932, loss d: 0.1089, real score: 0.9697,
fake score: 0.0705
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{"model id":"c47e7a5aebd544f0ade21e5c81e1ee5f","version major":2,"vers
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Epoch [274/500], loss q: 1.0897, loss d: 0.3119, real score: 0.7798,
fake score: 0.0247
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{"model_id":"280db282bd0e44f5814d703332e5c857","version major":2,"vers
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Epoch [275/500], loss q: 2.6255, loss d: 0.2561, real score: 0.8701,
fake score: 0.1009
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{"model id": "83c8365ef7bb4f84bc48099f2c176327", "version major": 2, "vers
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Epoch [276/500], loss g: 3.6813, loss d: 0.1346, real score: 0.9549,
fake score: 0.0775
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{"model id":"37c1a4f3fc264b11a7e3af5542429c0f","version major":2,"vers
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Epoch [277/500], loss g: 3.1872, loss d: 0.1332, real score: 0.9285,
fake score: 0.0536
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{"model id": "803e63ffc590463e87c89c3ae773dde0", "version major": 2, "vers
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Epoch [278/500], loss q: 5.6132, loss d: 0.2490, real score: 0.9820,
fake score: 0.1958
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{"model id":"afa49c9e14764347b495b43fa062ebd9","version major":2,"vers
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Epoch [279/500], loss g: 3.7827, loss d: 0.1663, real score: 0.8965,
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```
fake score: 0.0398
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{"model id":"6c296d3d45fc4c0e9734ffc475f1185a","version major":2,"vers
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Epoch [280/500], loss q: 2.1871, loss d: 0.1869, real score: 0.8738,
fake score: 0.0406
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{"model id": "433ef5d695484da8af3a209ad424bc7f", "version major": 2, "vers
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Epoch [281/500], loss q: 3.9540, loss d: 0.0760, real score: 0.9629,
fake score: 0.0349
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{"model id":"fc73edcf6c3d4c84a018a657ca9d946f","version major":2,"vers
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Epoch [282/500], loss q: 3.8503, loss d: 0.0728, real score: 0.9529,
fake score: 0.0184
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{"model id":"7320535d05e540ee9ef428653d6d4328","version major":2,"vers
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Epoch [283/500], loss g: 1.4859, loss d: 0.7027, real score: 0.6324,
fake score: 0.0647
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{"model id":"c3776a068e0b4de1b33c89684d9f2e10","version major":2,"vers
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Epoch [284/500], loss g: 3.7252, loss d: 0.1534, real score: 0.9476,
fake score: 0.0893
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{"model id":"a5eddb6edeff456c871e68de4284e3d3","version major":2,"vers
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Epoch [285/500], loss g: 1.1128, loss d: 0.3476, real score: 0.7879,
fake score: 0.0879
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Epoch [286/500], loss q: 4.7516, loss d: 0.3308, real score: 0.9685,
fake score: 0.2300
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{"model id": "cd08038e6e2a407bac68a00822c6f8dd", "version major": 2, "vers
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Epoch [287/500], loss q: 3.4991, loss d: 0.1924, real score: 0.8822,
fake score: 0.0524
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Epoch [288/500], loss q: 3.0880, loss d: 0.1503, real score: 0.9118,
fake score: 0.0504
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{"model id":"e864bdcb573c4705b97505e1e1ce8180","version major":2,"vers
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Epoch [289/500], loss g: 3.3537, loss d: 0.1146, real score: 0.9616,
fake score: 0.0701
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{"model id":"241cdfb2a4e94b92a9469860a7e2bf6d","version major":2,"vers
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Epoch [290/500], loss g: 3.8744, loss d: 0.0753, real score: 0.9836,
fake score: 0.0550
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{"model id":"01863c2844534f94a08acddb95c18a3e","version major":2,"vers
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Epoch [291/500], loss q: 4.1169, loss d: 0.0667, real score: 0.9900,
fake score: 0.0541
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{"model id": "b2dcfcc1954f4d6dbc4b835762f9a989", "version major": 2, "vers
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Epoch [292/500], loss g: 4.8422, loss d: 0.2047, real score: 0.9783,
fake score: 0.1594
Saving generated-images-0292.png
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{"model id": "dalaead4ab5f48f59e497fa98ee5b714", "version major": 2, "vers
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Epoch [293/500], loss g: 4.0415, loss d: 0.0908, real score: 0.9440,
fake score: 0.0304
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{"model id": "ada969a28ccb4223ac370bc1db6f9c61", "version major": 2, "vers
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Epoch [294/500], loss q: 3.7823, loss d: 0.1177, real score: 0.9460,
fake score: 0.0564
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{"model_id":"d27531d03d7d439798722d965e2824b5","version_major":2,"vers
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Epoch [295/500], loss q: 3.1108, loss d: 0.1141, real score: 0.9171,
fake score: 0.0241
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{"model id":"a2ac182603ee44c4ac96667f24dab1b2","version major":2,"vers
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Epoch [296/500], loss g: 4.7996, loss d: 0.1174, real score: 0.9718,
fake score: 0.0814
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{"model id":"77ae3714408c4e0d886933b2235eb936","version major":2,"vers
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Epoch [297/500], loss g: 1.7715, loss d: 0.2587, real score: 0.8018,
fake score: 0.0066
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{"model id":"4150a809e55e461db17f37faf9c6be18","version major":2,"vers
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Epoch [298/500], loss q: 2.1897, loss d: 0.4087, real score: 0.7484,
fake score: 0.0627
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{"model id":"204e216dcb4a4dbd8b65f3b517155c53","version major":2,"vers
ion minor":0}
Epoch [299/500], loss g: 4.4986, loss d: 0.1519, real score: 0.9421,
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fake score: 0.0821
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{"model id":"3798d7931f84410fa7fcfbe3b1f4c690","version major":2,"vers
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Epoch [300/500], loss q: 0.9834, loss d: 2.1097, real score: 0.1852,
fake score: 0.0004
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{"model id": "b9aebf5e805d4a9aa9d157d159935864", "version major": 2, "vers
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Epoch [301/500], loss q: 4.1390, loss d: 0.1861, real score: 0.9542,
fake score: 0.1245
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{"model id": "5edb441dbb1c436e86fe455ff886e139", "version major": 2, "vers
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Epoch [302/500], loss q: 1.9425, loss d: 0.2234, real score: 0.8742,
fake score: 0.0537
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{"model id": "955affe9058e40e2849b73d5f71a20a9", "version major": 2, "vers
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Epoch [303/500], loss g: 3.6873, loss d: 0.1059, real score: 0.9681,
fake score: 0.0676
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Epoch [304/500], loss g: 2.5285, loss d: 0.1783, real score: 0.8849,
fake score: 0.0395
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Epoch [305/500], loss q: 0.1537, loss d: 0.9250, real score: 0.4721,
fake score: 0.0113
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{"model id":"f1ceb801775b4354b3eb6d1d79ca5b20","version major":2,"vers
ion minor":0}
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Epoch [306/500], loss q: 2.8625, loss d: 0.3655, real score: 0.8121,
fake score: 0.1169
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{"model id": "72f7aa1b4ec94d3494291f506374be4b", "version major": 2, "vers
ion minor":0}
Epoch [307/500], loss q: 1.4757, loss d: 0.3571, real score: 0.7727,
fake score: 0.0540
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{"model id": "3406dledb5eb468f8bded05e493bed7d", "version major": 2, "vers
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fake score: 0.1261
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{"model id":"64608902b3fa4ac692f202514fd7b6d7","version major":2,"vers
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Epoch [309/500], loss q: 4.1659, loss d: 0.1425, real_score: 0.9242,
fake score: 0.0520
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{"model id":"ad040e742b7a4eaa94a00692e3f1993f","version major":2,"vers
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Epoch [310/500], loss g: 3.4222, loss d: 0.0995, real score: 0.9340,
fake score: 0.0287
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{"model id":"0cc38de8a4d341c0b8c6cd3f6f1309a1","version major":2,"vers
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Epoch [311/500], loss q: 2.3093, loss d: 0.1691, real score: 0.9143,
fake score: 0.0711
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{"model id": "e4ba0d23577d459787743122b5a924df", "version major": 2, "vers
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Epoch [312/500], loss q: 2.9093, loss d: 0.1881, real score: 0.8972,
fake score: 0.0667
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{"model id": "e6a2575aa66b450abaad2584ce6a06c8", "version major": 2, "vers
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Epoch [313/500], loss q: 3.6928, loss d: 0.1208, real score: 0.9353,
fake score: 0.0479
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{"model id":"f3af448379974f8ca90af394d53f30c9","version major":2,"vers
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Epoch [314/500], loss q: 5.2526, loss d: 0.1488, real score: 0.9904,
fake score: 0.1238
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{"model_id": "bce72c1f74d54c179c135ce9a286e16f", "version_major": 2, "vers
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Epoch [315/500], loss q: 4.1620, loss d: 0.0512, real score: 0.9733,
fake score: 0.0233
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{"model id":"64b986fb29394a2b80f04e20dba1268c","version major":2,"vers
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Epoch [316/500], loss g: 3.9368, loss d: 0.0762, real score: 0.9746,
fake score: 0.0479
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{"model id":"68fe82591abf45dba83fad0dbd85696d","version major":2,"vers
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Epoch [317/500], loss g: 3.5691, loss d: 0.1660, real score: 0.9398,
fake score: 0.0919
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{"model id": "aba83d008d2249d081a8e3b9db740545", "version major": 2, "vers
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Epoch [318/500], loss q: 4.3245, loss d: 0.0867, real score: 0.9521,
fake score: 0.0346
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{"model id":"62e653bc01e14736a6731eed0a7e80ba","version major":2,"vers
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Epoch [319/500], loss q: 10.4066, loss d: 0.7362, real score: 0.9969,
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```
fake score: 0.4490
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{"model id":"d2ac659b082d4bd7bf9e99c71bc6cb0d","version major":2,"vers
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Epoch [320/500], loss q: 2.5415, loss d: 0.2745, real score: 0.8476,
fake score: 0.0842
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{"model id": "8c1cdcf854b84460ad364819ce0c68fa", "version major": 2, "vers
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Epoch [321/500], loss q: 3.2263, loss d: 0.2248, real score: 0.9019,
fake score: 0.0911
Saving generated-images-0321.png
{"model id":"2ae8c25c284d468987d3a9d56f1e5709","version major":2,"vers
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Epoch [322/500], loss g: 4.6676, loss d: 0.2951, real score: 0.9767,
fake score: 0.2225
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{"model id":"469cac37c7154c70b0f689066caf35d5","version major":2,"vers
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fake score: 0.1954
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Epoch [324/500], loss g: 4.4473, loss d: 0.1766, real score: 0.9583,
fake score: 0.1187
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{"model id":"2c2b2c82f134401498b9afe61bd0b343","version major":2,"vers
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Epoch [325/500], loss q: 2.9052, loss d: 0.1637, real score: 0.9206,
fake score: 0.0713
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Epoch [326/500], loss q: 4.3472, loss d: 0.1622, real score: 0.9874,
fake score: 0.1328
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Epoch [327/500], loss q: 4.0201, loss d: 0.1185, real score: 0.9568,
fake score: 0.0669
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Epoch [328/500], loss q: 10.0987, loss d: 0.7029, real score: 0.9894,
fake score: 0.4467
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{"model id": "0b2d93e349504a93b4fee5898075800f", "version major": 2, "vers
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Epoch [329/500], loss q: 3.1478, loss d: 0.1662, real score: 0.8771,
fake score: 0.0252
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{"model id":"131b492651194734b8df6439ccc2bedf","version major":2,"vers
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Epoch [330/500], loss g: 2.6551, loss d: 0.1536, real score: 0.9044,
fake score: 0.0483
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{"model id": "730de72cea144163b304c440bc6b5646", "version major": 2, "vers
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Epoch [331/500], loss q: 3.7010, loss d: 0.1233, real score: 0.9343,
fake score: 0.0494
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{"model id": "e205297b0e2b4272942a06a2b8efa5a1", "version major": 2, "vers
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Epoch [332/500], loss q: 3.1616, loss d: 0.3929, real score: 0.7863,
fake score: 0.0644
Saving generated-images-0332.png
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{"model id":"f032afee721845019b468041592f4977","version major":2,"vers
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Epoch [333/500], loss q: 3.4959, loss d: 0.1481, real score: 0.9387,
fake score: 0.0743
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{"model id":"67edfff936c34005b369bca22166709d","version major":2,"vers
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Epoch [334/500], loss q: 1.0957, loss d: 0.3346, real score: 0.8044,
fake score: 0.0757
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{"model_id": "ac5231c347e9499491f9e068cbaf85d8", "version_major": 2, "vers
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Epoch [335/500], loss g: 4.2091, loss d: 0.1598, real score: 0.8964,
fake score: 0.0420
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{"model id":"4bcfc0c562a84d13b9ca3481b9f5d8ae","version major":2,"vers
ion minor":0}
Epoch [336/500], loss g: 3.7694, loss d: 0.2246, real score: 0.9770,
fake score: 0.1709
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{"model id":"be7e786a58e84e74b490eba47247f714","version major":2,"vers
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Epoch [337/500], loss g: 3.3372, loss d: 0.0872, real score: 0.9637,
fake score: 0.0471
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{"model id":"ef443a4e1363486db2faccab07355ff0","version major":2,"vers
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Epoch [338/500], loss q: 4.1511, loss d: 0.1078, real score: 0.9375,
fake score: 0.0407
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{"model id":"8eb7ca03ef774c64a9b110aab554497f","version major":2,"vers
ion minor":0}
Epoch [339/500], loss g: 1.6123, loss d: 0.5245, real score: 0.6266,
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fake score: 0.0066
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{"model id": "6dbf7a9637924e188ee3f0987dd6e84f", "version major": 2, "vers
ion minor":0}
Epoch [340/500], loss q: 3.2819, loss d: 0.1405, real score: 0.9319,
fake score: 0.0633
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{"model id": "6645f2eef296468582b055c6d7c12476", "version major": 2, "vers
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Epoch [341/500], loss q: 3.0285, loss d: 0.1338, real score: 0.9151,
fake score: 0.0394
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{"model id": "a9e18d1bc94a49fe88459a3185bf906b", "version major": 2, "vers
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Epoch [342/500], loss g: 3.3293, loss d: 0.1671, real score: 0.8985,
fake score: 0.0509
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{"model_id":"b51143a8e44d414fac654b40d86702f7","version_major":2,"vers
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Epoch [343/500], loss g: 4.2133, loss d: 0.2094, real score: 0.9822,
fake score: 0.1646
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{"model id": "e6bebf056bd845f1a43e123c729d311c", "version major": 2, "vers
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Epoch [344/500], loss g: 4.1025, loss d: 0.0837, real score: 0.9341,
fake score: 0.0136
Saving generated-images-0344.png
{"model id":"d17e822e25244b37ae00c9bf4b55e872","version major":2,"vers
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Epoch [345/500], loss q: 2.6642, loss d: 0.2393, real score: 0.8782,
fake score: 0.0876
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{"model id": "dad62ac7fbae42af98a7fa7730a599bc", "version major": 2, "vers
ion minor":0}
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Epoch [346/500], loss q: 4.4654, loss d: 0.1404, real score: 0.9380,
fake score: 0.0691
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{"model id": "541e72576a8f4931be84c58463c52cec", "version major": 2, "vers
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fake score: 0.0465
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Epoch [348/500], loss q: 3.1518, loss d: 0.1005, real score: 0.9379,
fake score: 0.0336
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{"model id":"fa432d9afe1a44eeaa7146e6ba76cc32","version major":2,"vers
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Epoch [349/500], loss q: 4.0308, loss d: 0.1133, real_score: 0.9223,
fake score: 0.0289
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{"model id":"466cd1ba83c94531a4bd5856349519d7","version major":2,"vers
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Epoch [350/500], loss g: 0.1142, loss d: 1.7684, real score: 0.2705,
fake score: 0.0009
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{"model id":"14a3827e411344ff810a206cd3ddb810","version major":2,"vers
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Epoch [351/500], loss q: 4.5990, loss d: 0.1723, real score: 0.9774,
fake score: 0.1309
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{"model id": "c992e12f93a84eaebed522164473912f", "version major": 2, "vers
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Epoch [352/500], loss g: 2.9676, loss d: 0.1724, real score: 0.9241,
fake score: 0.0788
Saving generated-images-0352.png
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{"model id":"f2221e5009f9457bac54675aef6954e3","version major":2,"vers
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Epoch [353/500], loss q: 3.1429, loss d: 0.1223, real score: 0.9145,
fake score: 0.0296
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{"model id": "bb56c457812f400cbc14bbf3b14fb9ef", "version major": 2, "vers
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Epoch [354/500], loss q: 2.5041, loss d: 0.3012, real score: 0.8306,
fake score: 0.0844
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{"model_id": "b3fb63d70e34454c83ac9c5692f1c604", "version_major": 2, "vers
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Epoch [355/500], loss q: 3.3998, loss d: 0.1431, real score: 0.9108,
fake score: 0.0451
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{"model id":"2dd3876da61848648022f7ef02f52f78","version major":2,"vers
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Epoch [356/500], loss g: 3.9576, loss d: 0.1029, real score: 0.9821,
fake score: 0.0777
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{"model id":"3287590a7375431a8f01098d9abccc93","version major":2,"vers
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Epoch [357/500], loss_g: 4.5720, loss_d: 0.1122, real score: 0.9855,
fake score: 0.0896
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{"model id":"0732197aab9d413cb8c96ae079084056","version major":2,"vers
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Epoch [358/500], loss q: 3.2920, loss d: 0.1239, real score: 0.9181,
fake score: 0.0338
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{"model id":"6c6ccc47d3b94edbac167ce79d70f2b4","version major":2,"vers
ion minor":0}
Epoch [359/500], loss g: 2.6216, loss d: 0.1369, real score: 0.8961,
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```
fake score: 0.0212
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{"model id":"ee2c4ed2a7bf48409498c6b3e597b580","version major":2,"vers
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Epoch [360/500], loss q: 3.3361, loss d: 0.1637, real score: 0.9016,
fake score: 0.0471
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{"model id": "434c502b23434d1795ccb9bbdfa44d52", "version major": 2, "vers
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Epoch [361/500], loss q: 4.5220, loss d: 0.1445, real score: 0.9648,
fake score: 0.0964
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{"model id": "548a6145078641719f7272a83dd5289e", "version major": 2, "vers
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Epoch [362/500], loss g: 3.7223, loss d: 0.1471, real score: 0.9410,
fake score: 0.0708
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{"model id": "b50a088bc3984fa7864b0e6fb5108d5a", "version major": 2, "vers
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Epoch [363/500], loss g: 4.5764, loss d: 0.1192, real score: 0.9536,
fake score: 0.0588
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{"model id": "a3ea7c64d1404eec8dc19385570a80cc", "version major": 2, "vers
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Epoch [364/500], loss g: 4.3835, loss d: 0.3937, real score: 0.7273,
fake score: 0.0064
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{"model id":"2979307f24544d2c87957a814564c993","version major":2,"vers
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Epoch [365/500], loss g: 3.4498, loss d: 0.1802, real score: 0.8777,
fake score: 0.0379
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Epoch [366/500], loss q: 5.0194, loss d: 0.1010, real score: 0.9809,
fake score: 0.0752
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{"model id": "9f06346deaac47cbb678ca8dfdd14727", "version major": 2, "vers
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Epoch [367/500], loss q: 3.6897, loss d: 0.0842, real score: 0.9565,
fake score: 0.0360
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{"model id": "3111fe96e6314c01b955ea6f001d6d08", "version major": 2, "vers
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Epoch [368/500], loss q: 3.8363, loss d: 0.1064, real score: 0.9455,
fake score: 0.0471
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{"model id": "55fe32dd2d50404396d503e7a3f0b164", "version major": 2, "vers
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Epoch [369/500], loss g: 3.0415, loss d: 0.1104, real score: 0.9341,
fake score: 0.0382
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{"model id":"a2a316318d944afe90c8a50e7dd598e4","version major":2,"vers
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Epoch [370/500], loss g: 5.1012, loss d: 0.1207, real score: 0.9605,
fake score: 0.0731
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{"model id": "3d4157a03af24e51ba318fe69bc2da60", "version major": 2, "vers
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Epoch [371/500], loss q: 0.4629, loss d: 0.2829, real score: 0.7743,
fake score: 0.0152
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{"model id": "375af45ca9a7494e99a05c4cb41d984f", "version major": 2, "vers
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Epoch [372/500], loss q: 2.7585, loss d: 0.2662, real score: 0.8390,
fake score: 0.0673
Saving generated-images-0372.png
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{"model id": "009e93f1de1f47a8acda199d85e0a873", "version major": 2, "vers
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Epoch [373/500], loss q: 4.3208, loss d: 0.1443, real score: 0.9581,
fake score: 0.0899
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{"model id": "8027d997e5c14f0cb0bd9dac3343d916", "version major": 2, "vers
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Epoch [374/500], loss q: 4.0027, loss d: 0.0967, real score: 0.9377,
fake score: 0.0300
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{"model_id": "8fbc473d0b2644dca65e9c0dee7ed588", "version_major": 2, "vers
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Epoch [375/500], loss q: 2.2274, loss d: 0.2317, real score: 0.8283,
fake score: 0.0287
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{"model id":"d869802eb83f4036987dbd26dc28a6ae","version major":2,"vers
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Epoch [376/500], loss g: 4.3477, loss d: 0.1218, real score: 0.9408,
fake score: 0.0531
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{"model id": "52c9650308e9426590b115f831f11514", "version major": 2, "vers
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Epoch [377/500], loss g: 2.6333, loss d: 0.2021, real score: 0.8754,
fake score: 0.0532
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{"model id":"34a19593aedb456994d4b38b070c334f","version major":2,"vers
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Epoch [378/500], loss q: 3.0761, loss d: 0.1793, real score: 0.8611,
fake score: 0.0214
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{"model id":"420698ad192547088a006606c612a8ff","version major":2,"vers
ion minor":0}
Epoch [379/500], loss g: 0.5988, loss d: 0.4230, real score: 0.7064,
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fake score: 0.0352
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{"model id":"04713392cfe048b09bfee4b7371e77c1","version_major":2,"vers
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Epoch [380/500], loss q: 2.5674, loss d: 0.2443, real score: 0.8372,
fake score: 0.0474
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{"model id": "9300192267b04870b13bffc86046859d", "version major": 2, "vers
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Epoch [381/500], loss q: 4.2874, loss d: 0.1223, real score: 0.9734,
fake score: 0.0869
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{"model id":"418b440d58cd4cc68934472d24bb225f","version major":2,"vers
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Epoch [382/500], loss q: 2.9230, loss d: 0.0772, real score: 0.9438,
fake score: 0.0181
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{"model id":"a94f8effb45f45bc92ed71004c7a3e43","version major":2,"vers
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Epoch [383/500], loss g: 3.8423, loss d: 0.1214, real score: 0.9728,
fake score: 0.0868
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{"model id":"0ebcf5b2530e4f24b933b66485cd8738","version major":2,"vers
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Epoch [384/500], loss g: 1.7283, loss d: 3.8155, real score: 0.0460,
fake score: 0.0001
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{"model id":"cb26394e3e544d9584bcf6cff914cc5a","version major":2,"vers
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Epoch [385/500], loss g: 3.4844, loss d: 0.2187, real score: 0.8995,
fake score: 0.0977
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Epoch [386/500], loss q: 1.6523, loss d: 0.4277, real score: 0.7462,
fake score: 0.0696
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{"model id":"f08de8ca65e7416ead71a13986109c63","version major":2,"vers
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Epoch [387/500], loss q: 3.2629, loss d: 0.2982, real score: 0.8506,
fake score: 0.1084
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{"model id": "5881d68f5fdd438e8ee518f0d65f362d", "version major": 2, "vers
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Epoch [388/500], loss q: 3.6567, loss d: 0.1013, real score: 0.9344,
fake score: 0.0301
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{"model id":"1ef49f6322f74fdfb19bcd82e082f0b9","version major":2,"vers
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Epoch [389/500], loss q: 2.8178, loss d: 0.1959, real_score: 0.8939,
fake score: 0.0695
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{"model id":"083b538e2bba44828ac9cc14d434a31e","version major":2,"vers
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Epoch [390/500], loss g: 2.7284, loss d: 0.1708, real score: 0.8892,
fake score: 0.0450
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{"model id":"2198465beb4e4e3ab9bdc2c986f010f1","version major":2,"vers
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Epoch [391/500], loss q: 4.1535, loss d: 0.1107, real score: 0.9219,
fake score: 0.0257
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{"model id": "c2c5629986eb4dab93aa7be287a62062", "version major": 2, "vers
ion minor":0}
Epoch [392/500], loss q: 2.2755, loss d: 0.2052, real score: 0.8742,
fake score: 0.0612
Saving generated-images-0392.png
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{"model id": "d44f44bcc8a8457c9231bf61c2103bd1", "version major": 2, "vers
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fake score: 0.1139
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{"model id": "032f6112b2af493590952b82cb279fac", "version major": 2, "vers
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Epoch [394/500], loss q: 2.8635, loss d: 0.1375, real score: 0.9076,
fake score: 0.0362
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{"model_id":"21ffbd00e5264dc3a4cc85aace2338be","version_major":2,"vers
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Epoch [395/500], loss q: 3.9794, loss d: 0.1056, real score: 0.9197,
fake score: 0.0181
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{"model id": "bc4393f0a62c465c86f76e6a0052d115", "version major": 2, "vers
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Epoch [396/500], loss g: 3.1294, loss d: 0.1332, real score: 0.9308,
fake score: 0.0562
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{"model id": "5ac20bec80a941d2bd5d9a3a16499420", "version major": 2, "vers
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Epoch [397/500], loss g: 4.4100, loss d: 0.1061, real score: 0.9810,
fake score: 0.0805
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{"model id": "740a22fa43db4db7b73ee31cc39530cc", "version major": 2, "vers
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Epoch [398/500], loss q: 4.1565, loss d: 0.0840, real score: 0.9757,
fake score: 0.0554
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{"model id":"a28178a1a58e4dc1b2dbb384064df616","version major":2,"vers
ion minor":0}
Epoch [399/500], loss g: 3.1966, loss d: 0.1082, real score: 0.9232,
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fake score: 0.0245
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{"model id": "771a2e19e26745dfaeabf5675dc63264", "version major": 2, "vers
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Epoch [400/500], loss q: 2.2328, loss d: 0.1993, real score: 0.8490,
fake score: 0.0229
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{"model id": "eaf52febe4d641fd92ca8c769d71eb5c", "version major": 2, "vers
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Epoch [401/500], loss q: 2.2826, loss d: 0.3082, real score: 0.7901,
fake score: 0.0442
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{"model id": "5d0e7a48703247409203b6aca22c11f7", "version major": 2, "vers
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Epoch [402/500], loss g: 4.1987, loss d: 0.1200, real score: 0.9279,
fake score: 0.0413
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{"model id": "1b94cb554c0946578b8cdab720c60e37", "version major": 2, "vers
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Epoch [403/500], loss g: 3.9364, loss d: 0.1042, real score: 0.9349,
fake score: 0.0331
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{"model id": "b4ff9e63862f4a81b9664472a838132d", "version major": 2, "vers
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Epoch [404/500], loss g: 3.4927, loss d: 0.0936, real score: 0.9581,
fake score: 0.0481
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{"model id":"a42d1c5d6d304897b7c6222994ea6fdb","version major":2,"vers
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Epoch [405/500], loss g: 3.1589, loss d: 0.1330, real score: 0.9140,
fake score: 0.0372
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ion minor":0}
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Epoch [406/500], loss q: 3.3030, loss d: 0.2116, real score: 0.8265,
fake score: 0.0070
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{"model id": "2a34c2b00fbe4f40a337641db3bc8691", "version major": 2, "vers
ion minor":0}
Epoch [407/500], loss g: 2.1765, loss d: 0.1480, real score: 0.8894,
fake score: 0.0230
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{"model id": "6a1ba0c50f4646d2807cd1f5d2c12528", "version major": 2, "vers
ion minor":0}
Epoch [408/500], loss q: 1.3196, loss d: 0.3053, real score: 0.8021,
fake score: 0.0258
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{"model id":"a4ddf193a5ab41e982f2ef10c019c635","version major":2,"vers
ion minor":0}
Epoch [409/500], loss q: 4.5411, loss d: 0.0798, real_score: 0.9553,
fake score: 0.0317
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{"model id":"03f2f883de754f869c6fe21d29b9e845","version major":2,"vers
ion minor":0}
Epoch [410/500], loss g: 3.6725, loss d: 0.1172, real score: 0.9313,
fake score: 0.0422
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{"model id":"f91db5250a364b83918836fc9f98cbb2","version major":2,"vers
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Epoch [411/500], loss q: 3.7281, loss d: 0.1509, real score: 0.9321,
fake score: 0.0734
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{"model id": "00d960a91175471ebd6ee0a5be7cfcb2", "version major": 2, "vers
ion minor":0}
Epoch [412/500], loss g: 4.7062, loss d: 0.0777, real score: 0.9657,
fake score: 0.0406
Saving generated-images-0412.png
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{"model id": "e5e3ba5477a04206a3cefe63eca7fe36", "version major": 2, "vers
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Epoch [413/500], loss q: 3.2199, loss d: 0.2694, real score: 0.7821,
fake score: 0.0026
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{"model id": "9ce2cd286e1b470faf431263c1732352", "version major": 2, "vers
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Epoch [414/500], loss q: 4.0791, loss d: 0.0970, real score: 0.9786,
fake score: 0.0697
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{"model_id": "38e2f068a519417aadfabf878392f374", "version_major": 2, "vers
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Epoch [415/500], loss g: 3.6441, loss d: 0.1092, real score: 0.9432,
fake_score: 0.0474
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{"model id": "8a2d48eaa8ef4f16b4574b92605af5e3", "version major": 2, "vers
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Epoch [416/500], loss g: 2.5900, loss d: 0.1563, real score: 0.8738,
fake score: 0.0139
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{"model id":"0381a92220a243e5930f2002bd793c5d","version major":2,"vers
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Epoch [417/500], loss g: 3.9319, loss d: 0.1018, real score: 0.9243,
fake score: 0.0189
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{"model id": "528d6dc37d2b4762afe2a5ff69aace30", "version major": 2, "vers
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Epoch [418/500], loss q: 4.9143, loss d: 0.0942, real score: 0.9339,
fake score: 0.0231
Saving generated-images-0418.png
{"model id":"7ae3d8be2f654e469c3f3497e97797e8","version major":2,"vers
ion minor":0}
Epoch [419/500], loss g: 4.5788, loss d: 0.0796, real score: 0.9535,
```

```
fake score: 0.0299
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{"model id":"7c3572f948fe4648aec44280314aee88","version major":2,"vers
ion minor":0}
Epoch [420/500], loss q: 2.9661, loss d: 0.1334, real score: 0.9094,
fake score: 0.0339
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{"model id":"77bd63decc894e11b90091e1f4f760bb","version major":2,"vers
ion minor":0}
Epoch [421/500], loss q: 4.2356, loss d: 0.1140, real score: 0.9302,
fake score: 0.0363
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{"model id": "afcb5f2dcca649d9bef22f3ac4817131", "version major": 2, "vers
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Epoch [422/500], loss q: 2.8225, loss d: 0.1081, real score: 0.9252,
fake score: 0.0256
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{"model id":"a089fb75f82848a69be88eb3da2357c0","version major":2,"vers
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Epoch [423/500], loss g: 3.9800, loss d: 0.1719, real score: 0.9498,
fake score: 0.1065
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{"model id": "100775c54c694f948405f794cbccf18c", "version major": 2, "vers
ion minor":0}
Epoch [424/500], loss g: 0.0286, loss d: 0.7189, real score: 0.5385,
fake score: 0.0135
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{"model id":"a787fab5c5104db0aa79dfe41dec2455","version major":2,"vers
ion minor":0}
Epoch [425/500], loss q: 4.3475, loss d: 0.2356, real score: 0.9268,
fake score: 0.1395
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{"model id": "alcfa4dc0eed4d70b8972cf98c7dbd86", "version major": 2, "vers
ion minor":0}
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Epoch [426/500], loss q: 3.3697, loss d: 0.2288, real score: 0.8877,
fake score: 0.0977
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{"model id": "9288cc16718f418d82db18180a54584b", "version major": 2, "vers
ion minor":0}
Epoch [427/500], loss q: 2.2833, loss d: 0.3028, real score: 0.7554,
fake score: 0.0066
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{"model id": "aldec7231fcd41d9b89b6730a69f5374", "version major": 2, "vers
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Epoch [428/500], loss q: 2.5480, loss d: 0.2346, real score: 0.8443,
fake score: 0.0503
Saving generated-images-0428.png
{"model id":"a02634d1b4ac4d67b28b2d1d7960d0ac","version major":2,"vers
ion minor":0}
Epoch [429/500], loss q: 2.1615, loss d: 0.1749, real_score: 0.8847,
fake score: 0.0451
Saving generated-images-0429.png
{"model id":"ed56c0b89f8d49368bea96ff0459a049","version major":2,"vers
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Epoch [430/500], loss g: 3.3977, loss d: 0.1739, real score: 0.8877,
fake score: 0.0498
Saving generated-images-0430.png
{"model id":"fc608fde3eb44003be6f83d6974ed2a3","version major":2,"vers
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Epoch [431/500], loss q: 2.7288, loss d: 0.1313, real score: 0.9391,
fake score: 0.0624
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{"model id": "ae6898a55e3b4b3e9228a6e0e5eb6adf", "version major": 2, "vers
ion minor":0}
Epoch [432/500], loss q: 3.8645, loss d: 0.0768, real score: 0.9692,
fake score: 0.0424
Saving generated-images-0432.png
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{"model id": "d48d01a7a7024f03ae4e3b0abaca9f57", "version major": 2, "vers
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Epoch [433/500], loss q: 2.3166, loss d: 0.1523, real score: 0.8812,
fake score: 0.0220
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{"model id": "40ced8aa351b433da22e937e43a4f3af", "version major": 2, "vers
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Epoch [434/500], loss q: 3.5413, loss d: 0.2537, real score: 0.8618,
fake score: 0.0894
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{"model_id":"2b1ff46dbd2a4404bffcf3c991e16c2e","version major":2,"vers
ion minor":0}
Epoch [435/500], loss q: 2.6493, loss d: 0.2210, real score: 0.8845,
fake score: 0.0868
Saving generated-images-0435.png
{"model id":"a0a82623da9844a9b4a2c3843655cc01","version major":2,"vers
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Epoch [436/500], loss g: 3.4786, loss d: 0.1530, real score: 0.9011,
fake score: 0.0429
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{"model id":"fcafba0412f14bd39f68acfd9b19710f","version major":2,"vers
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Epoch [437/500], loss g: 2.9116, loss d: 0.1063, real score: 0.9196,
fake score: 0.0180
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{"model id": "06f8add9d9914d40b37ffb836e498ead", "version major": 2, "vers
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Epoch [438/500], loss q: 3.1737, loss d: 0.1036, real score: 0.9229,
fake score: 0.0181
Saving generated-images-0438.png
{"model id":"ee414c9ead35460497a3f914214599f8","version major":2,"vers
ion minor":0}
Epoch [439/500], loss g: 1.6773, loss d: 0.3352, real score: 0.8017,
```

```
fake score: 0.0447
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{"model id":"18973298a9504637bb090f45c3869ec5","version_major":2,"vers
ion minor":0}
Epoch [440/500], loss q: 3.1424, loss d: 0.2322, real score: 0.8719,
fake score: 0.0758
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{"model id": "e409e63e8a29414baecbed83c9e748b2", "version major": 2, "vers
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Epoch [441/500], loss q: 3.6678, loss d: 0.0949, real score: 0.9596,
fake score: 0.0503
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{"model id": "9b351d5f38734dc3af49b3726a04f658", "version major": 2, "vers
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Epoch [442/500], loss g: 5.0261, loss d: 0.1466, real score: 0.9945,
fake score: 0.1209
Saving generated-images-0442.png
{"model id":"be8a0e57db234a30b9f92243f4a9275a","version major":2,"vers
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Epoch [443/500], loss g: 4.1709, loss d: 0.0783, real score: 0.9625,
fake score: 0.0369
Saving generated-images-0443.png
{"model id": "a223530ce3bf4d3a9e1a145712cb62b7", "version major": 2, "vers
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Epoch [444/500], loss g: 4.3933, loss d: 0.0790, real score: 0.9861,
fake score: 0.0597
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{"model id":"79807c8b79bf4a0aac1e678b5d94d099","version major":2,"vers
ion minor":0}
Epoch [445/500], loss q: 3.3027, loss d: 0.1201, real score: 0.9376,
fake score: 0.0518
Saving generated-images-0445.png
{"model id": "d5619cce51dc42cdae3be7115770fa65", "version major": 2, "vers
ion minor":0}
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Epoch [446/500], loss q: 4.5165, loss d: 0.1071, real score: 0.9619,
fake score: 0.0638
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{"model id": "9ecdee98d2484efc949fb3f7e2e3e34a", "version major": 2, "vers
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Epoch [447/500], loss q: 4.9565, loss d: 0.0688, real score: 0.9720,
fake score: 0.0384
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{"model id": "0b82a384e3894597805903efe7bde728", "version major": 2, "vers
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Epoch [448/500], loss q: 3.8307, loss d: 0.1120, real score: 0.9627,
fake score: 0.0680
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{"model id": "5a760b5e640c43709c23cc09c7d2d4a4", "version major": 2, "vers
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Epoch [449/500], loss q: 3.3772, loss d: 0.1147, real score: 0.9058,
fake score: 0.0110
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{"model id":"66c7e2f2f17f4750bead2bfaa8e1c338","version major":2,"vers
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Epoch [450/500], loss g: 4.1039, loss d: 0.0743, real score: 0.9697,
fake score: 0.0412
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{"model id": "83bed3dc354c4653992a3a43b1626ee5", "version major": 2, "vers
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Epoch [451/500], loss q: 4.7400, loss d: 0.0573, real score: 0.9883,
fake score: 0.0435
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{"model id": "0c6ca73f87e84671adf9827ea90b8cf2", "version major": 2, "vers
ion minor":0}
Epoch [452/500], loss g: 4.9971, loss d: 0.0579, real score: 0.9682,
fake score: 0.0242
Saving generated-images-0452.png
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{"model id": "05022f898ad8453cb42b681b7bd74323", "version major": 2, "vers
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Epoch [453/500], loss q: 2.2847, loss d: 0.1420, real score: 0.8989,
fake score: 0.0293
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{"model id":"44cf2ab98ac9438d90ea41acb22f9fe7","version major":2,"vers
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Epoch [454/500], loss q: 4.1275, loss d: 0.0651, real score: 0.9688,
fake score: 0.0307
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{"model_id": "a850717b780d4b5d8b2094f526ec690a", "version major": 2, "vers
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Epoch [455/500], loss q: 1.8174, loss d: 0.1795, real score: 0.8593,
fake score: 0.0205
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{"model id":"d7b25527e3bc428f9cb9f0c51d0ec870","version major":2,"vers
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Epoch [456/500], loss g: 2.3409, loss d: 0.3204, real score: 0.7892,
fake score: 0.0567
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{"model id":"77f32266a7a8448cbe342777ff1aa600","version major":2,"vers
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Epoch [457/500], loss g: 3.1662, loss d: 0.1954, real score: 0.8908,
fake score: 0.0682
Saving generated-images-0457.png
{"model id":"0ed3e4a14cbf4281aac1abd7ca6f3eef","version major":2,"vers
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Epoch [458/500], loss q: 2.9682, loss d: 0.1470, real score: 0.9168,
fake score: 0.0535
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{"model id":"7bd07aa18873474187dd4f7f6ceda489","version major":2,"vers
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Epoch [459/500], loss g: 3.3466, loss d: 0.1504, real score: 0.8950,
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fake score: 0.0338
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{"model id": "56c50002b9024dd7bd378228be985197", "version_major": 2, "vers
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Epoch [460/500], loss q: 4.8831, loss d: 0.0758, real score: 0.9744,
fake score: 0.0477
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{"model id": "cbb62ebdab294444b48fdbb41ba923b5", "version major": 2, "vers
ion minor":0}
Epoch [461/500], loss q: 5.7008, loss d: 0.2132, real score: 0.9915,
fake score: 0.1696
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{"model id":"16c392d8e1ac4b9c8a97c3b173167d98","version major":2,"vers
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Epoch [462/500], loss q: 4.2681, loss d: 0.0912, real score: 0.9699,
fake score: 0.0569
Saving generated-images-0462.png
{"model id":"1f9604503bf84452aeb3ebc031265b19","version major":2,"vers
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Epoch [463/500], loss g: 4.1132, loss d: 0.0707, real score: 0.9530,
fake score: 0.0215
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{"model id": "89cc4f6752044218ae79ef37993b54e4", "version major": 2, "vers
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Epoch [464/500], loss g: 2.3052, loss d: 0.1237, real score: 0.9206,
fake score: 0.0383
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{"model id":"e224948c923f4a87825af9787d4d4726","version major":2,"vers
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Epoch [465/500], loss g: 4.0931, loss d: 0.1979, real score: 0.8518,
fake score: 0.0246
Saving generated-images-0465.png
{"model id": "22326686b2724e63b0c6454de778b43f", "version major": 2, "vers
ion minor":0}
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Epoch [466/500], loss q: 4.2642, loss d: 0.0777, real score: 0.9623,
fake score: 0.0375
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{"model id":"1338471342f949db8e94b5d9cfbe6113","version major":2,"vers
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Epoch [467/500], loss q: 5.4710, loss d: 0.1818, real score: 0.9839,
fake score: 0.1423
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{"model id":"f98f4151747a411abc39c209fb2f6c54","version major":2,"vers
ion minor":0}
Epoch [468/500], loss q: 7.5778, loss d: 0.2437, real score: 0.9931,
fake score: 0.1991
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{"model id":"c818128c88c54bac9cb49c443402b056","version major":2,"vers
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Epoch [469/500], loss g: 3.5279, loss d: 0.0667, real score: 0.9720,
fake score: 0.0367
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{"model id":"09c730829cc043fd8d6d4371d9bfbac6","version major":2,"vers
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Epoch [470/500], loss g: 3.6227, loss d: 0.0782, real score: 0.9594,
fake_score: 0.0347
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{"model id": "dlaae5e1c2a2458f82e130e18ec11e52", "version major": 2, "vers
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Epoch [471/500], loss q: 2.3880, loss d: 0.1540, real score: 0.8929,
fake score: 0.0329
Saving generated-images-0471.png
{"model id": "94e1b415ab2f49939d50933231c93d5c", "version major": 2, "vers
ion minor":0}
Epoch [472/500], loss g: 4.1272, loss d: 0.1412, real score: 0.9245,
fake score: 0.0564
Saving generated-images-0472.png
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{"model id": "37db44dc04a548138e47e3abf15a9985", "version major": 2, "vers
ion minor":0}
Epoch [473/500], loss q: 3.1369, loss d: 0.1295, real score: 0.9256,
fake score: 0.0421
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{"model id": "052fd762e843483fbbedee3ed74bf9a2", "version major": 2, "vers
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Epoch [474/500], loss q: 3.5691, loss d: 0.1067, real score: 0.9317,
fake score: 0.0326
Saving generated-images-0474.png
{"model_id": "e3e5c51f2eb64699bc2da89b80c1be86", "version_major": 2, "vers
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Epoch [475/500], loss g: 4.8055, loss d: 0.0687, real score: 0.9698,
fake score: 0.0357
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{"model id": "6b994f18a29c46c38658cbdeb3ec259c", "version major": 2, "vers
ion minor":0}
Epoch [476/500], loss g: 3.2083, loss d: 0.1200, real score: 0.9175,
fake score: 0.0281
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{"model id": "9ee10092eee24b768fab85de4082930c", "version major": 2, "vers
ion minor":0}
Epoch [477/500], loss g: 4.0551, loss d: 0.1073, real score: 0.9117,
fake score: 0.0132
Saving generated-images-0477.png
{"model id":"6877344947ab426083281c0b8b0a7d3d","version major":2,"vers
ion minor":0}
Epoch [478/500], loss q: 4.9874, loss d: 0.0671, real score: 0.9896,
fake score: 0.0538
Saving generated-images-0478.png
{"model id":"ale8ee159cfa488095b5d5a7c476608a","version major":2,"vers
ion minor":0}
Epoch [479/500], loss g: 3.6231, loss d: 0.1008, real score: 0.9239,
```

```
fake score: 0.0183
Saving generated-images-0479.png
{"model id":"6efe4b7a2f564f5788bc0ae190164451","version major":2,"vers
ion minor":0}
Epoch [480/500], loss q: 3.0326, loss d: 0.1265, real score: 0.8996,
fake score: 0.0156
Saving generated-images-0480.png
{"model id":"1fe71d3df36a4400ba54a6f539caf25c","version major":2,"vers
ion minor":0}
Epoch [481/500], loss q: 2.8633, loss d: 0.1488, real score: 0.8840,
fake score: 0.0169
Saving generated-images-0481.png
{"model id":"31fb080a92724dc298e4974ae4a51851","version major":2,"vers
ion minor":0}
Epoch [482/500], loss g: 2.8535, loss d: 0.2691, real score: 0.8659,
fake score: 0.1058
Saving generated-images-0482.png
{"model id": "98affd82fefd48639d8e5ed82e6912dc", "version major": 2, "vers
ion minor":0}
Epoch [483/500], loss g: 3.5753, loss d: 0.1437, real score: 0.9026,
fake score: 0.0347
Saving generated-images-0483.png
{"model id":"1af269573736492eacbd22cc58a09cd0","version major":2,"vers
ion minor":0}
Epoch [484/500], loss g: 3.8627, loss d: 0.1233, real score: 0.9232,
fake score: 0.0348
Saving generated-images-0484.png
{"model id":"a824e987164848bf95c9aaf9377f83f6","version major":2,"vers
ion minor":0}
Epoch [485/500], loss q: 4.3515, loss d: 0.1278, real score: 0.9684,
fake score: 0.0866
Saving generated-images-0485.png
{"model id": "97462805431f443e863d398f40728a86", "version major": 2, "vers
ion minor":0}
```

```
Epoch [486/500], loss q: 0.4189, loss d: 0.4396, real score: 0.6865,
fake score: 0.0131
Saving generated-images-0486.png
{"model id": "37f8d01036d548fda97905d71c72f166", "version major": 2, "vers
ion minor":0}
Epoch [487/500], loss q: 3.5321, loss d: 0.1341, real score: 0.9275,
fake score: 0.0511
Saving generated-images-0487.png
{"model id": "562d4a8747fc433792cc0e0ec3964b11", "version major": 2, "vers
ion minor":0}
Epoch [488/500], loss q: 5.6200, loss d: 0.1117, real score: 0.9160,
fake score: 0.0189
Saving generated-images-0488.png
{"model id":"1e56da6f02fd43a4b954f83253763bb1","version major":2,"vers
ion minor":0}
Epoch [489/500], loss q: 4.4285, loss d: 0.1406, real_score: 0.9358,
fake score: 0.0556
Saving generated-images-0489.png
{"model id":"420b294d8eb44f64b866ec737c61e4b9","version major":2,"vers
ion minor":0}
Epoch [490/500], loss_g: 3.1849, loss_d: 0.1422, real score: 0.8883,
fake_score: 0.0195
Saving generated-images-0490.png
{"model id": "23d8416e57514d10ac3abe1edc2c8ad2", "version major": 2, "vers
ion minor":0}
Epoch [491/500], loss q: 4.3958, loss d: 0.0793, real score: 0.9727,
fake score: 0.0487
Saving generated-images-0491.png
{"model id":"1cdb48d587084cabad557399b0207334","version major":2,"vers
ion minor":0}
Epoch [492/500], loss g: 3.7642, loss d: 0.0809, real score: 0.9453,
fake score: 0.0225
Saving generated-images-0492.png
```

```
{"model id": "a3de302188544789b97f125411b219ef", "version major": 2, "vers
ion minor":0}
Epoch [493/500], loss q: 3.4973, loss d: 0.0611, real score: 0.9710,
fake score: 0.0304
Saving generated-images-0493.png
{"model id": "c0a32d0a88564016a1846fe7a3c9a81a", "version major": 2, "vers
ion minor":0}
Epoch [494/500], loss q: 4.3228, loss d: 0.0797, real score: 0.9625,
fake score: 0.0386
Saving generated-images-0494.png
{"model_id": "8908c75686d14d3b8522dcc3e3fb2b70", "version_major": 2, "vers
ion minor":0}
Epoch [495/500], loss q: 3.0139, loss d: 0.1441, real score: 0.9041,
fake score: 0.0337
Saving generated-images-0495.png
{"model id": "bdd3e84c9d164780b0d3490c286bdf52", "version major": 2, "vers
ion minor":0}
Epoch [496/500], loss g: 3.7364, loss d: 0.0455, real score: 0.9767,
fake score: 0.0213
Saving generated-images-0496.png
{"model id":"c9987035a7944e7e8f3ab1e7b7e829b3","version major":2,"vers
ion minor":0}
Epoch [497/500], loss g: 5.9260, loss d: 0.1779, real score: 0.9930,
fake score: 0.1475
Saving generated-images-0497.png
{"model id":"cf80910606e946b49452838355ae569c","version major":2,"vers
ion minor":0}
Epoch [498/500], loss q: 4.2561, loss d: 0.1207, real score: 0.9258,
fake score: 0.0370
Saving generated-images-0498.png
{"model id":"07bdde3757bf41a7961566b8aa857558","version major":2,"vers
ion minor":0}
Epoch [499/500], loss g: 3.7688, loss d: 0.0546, real score: 0.9689,
```

```
fake_score: 0.0223
Saving generated-images-0499.png

{"model_id":"de151c331f044589849e36ed90cd44be","version_major":2,"version_minor":0}

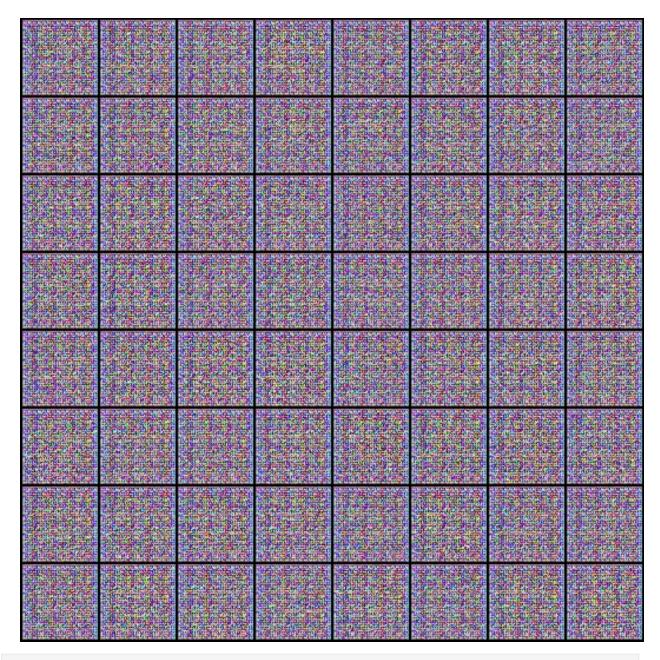
Epoch [500/500], loss_g: 5.0251, loss_d: 0.0602, real_score: 0.9632, fake_score: 0.0213
Saving generated-images-0500.png

losses_g, losses_d, real_scores, fake_scores = history

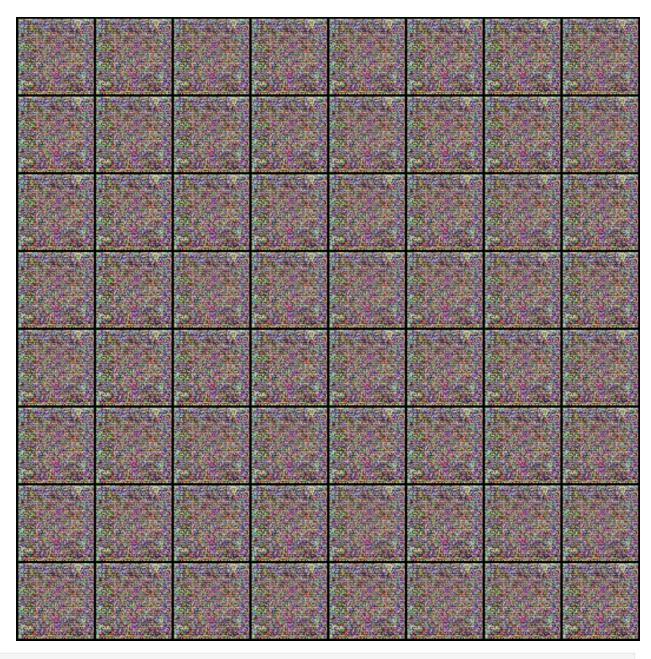
# Save the model checkpoints
torch.save(generator.state_dict(), 'G.pth')
torch.save(discriminator.state_dict(), 'D.pth')

from IPython.display import Image

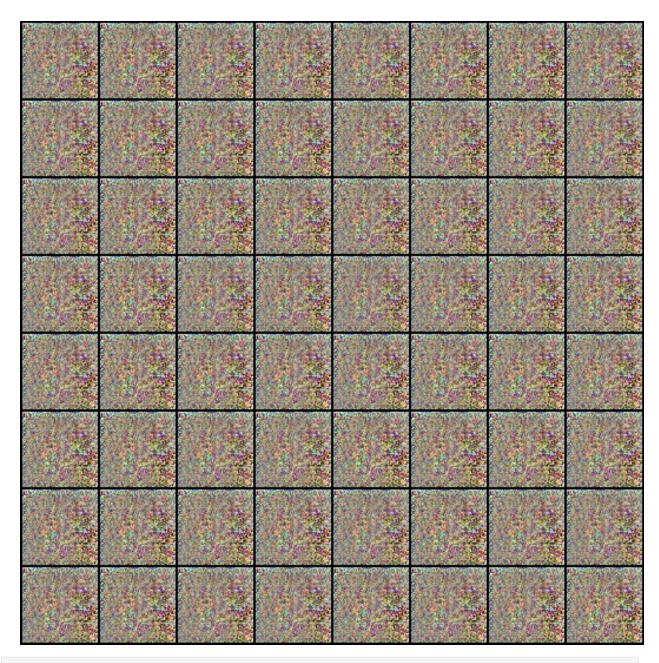
Image('./Photo2Cartoon_generated/generated-images-0001.png')
```



Image('./Photo2Cartoon_generated/generated-images-0050.png')



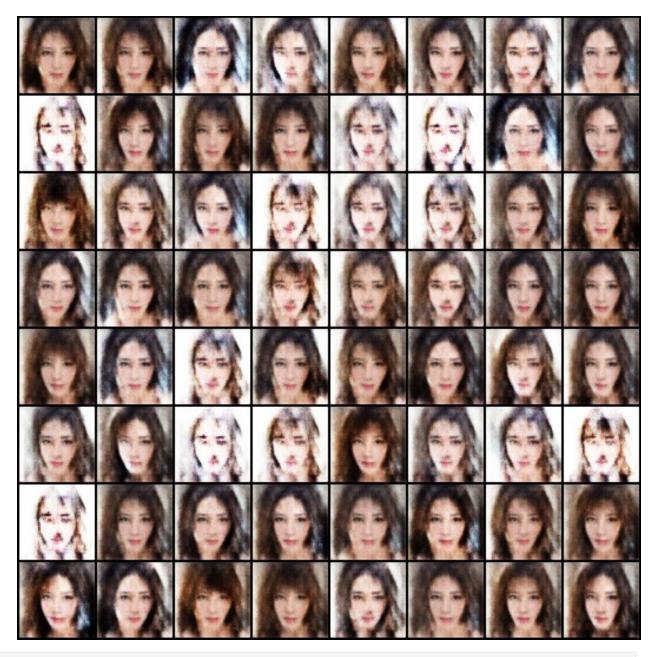
Image('./Photo2Cartoon_generated/generated-images-0100.png')



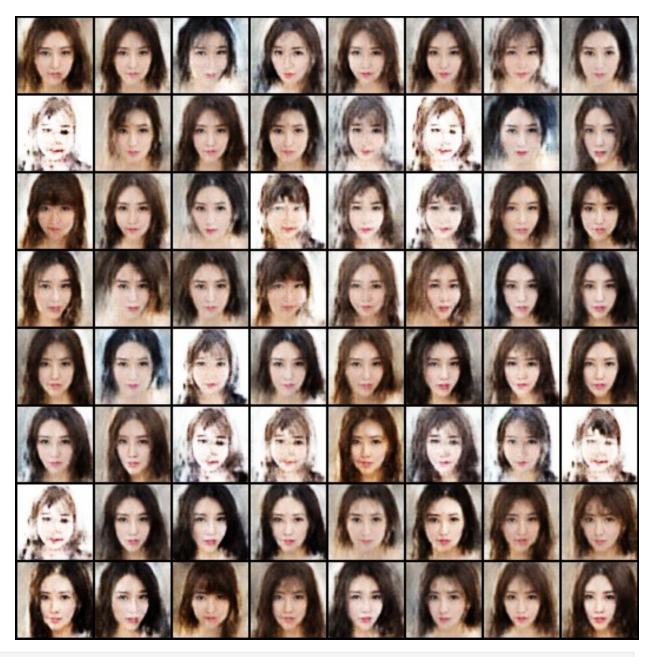
Image('./Photo2Cartoon_generated/generated-images-0150.png')



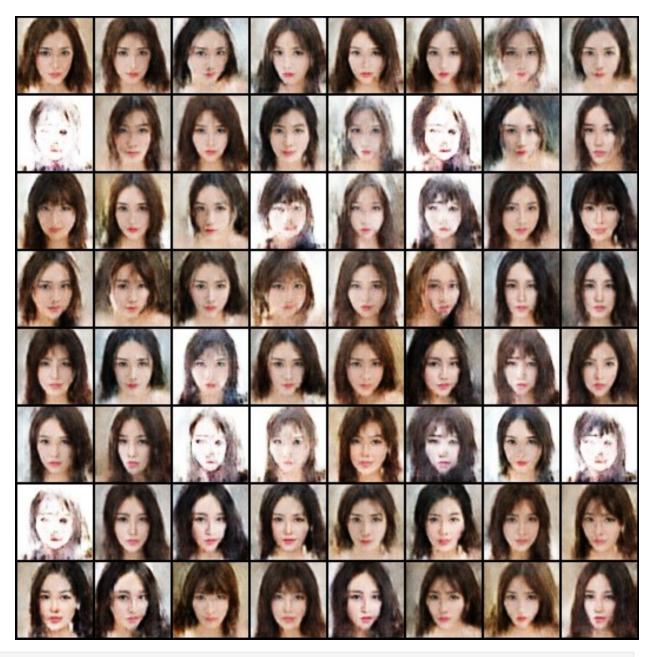
Image('./Photo2Cartoon_generated/generated-images-0200.png')



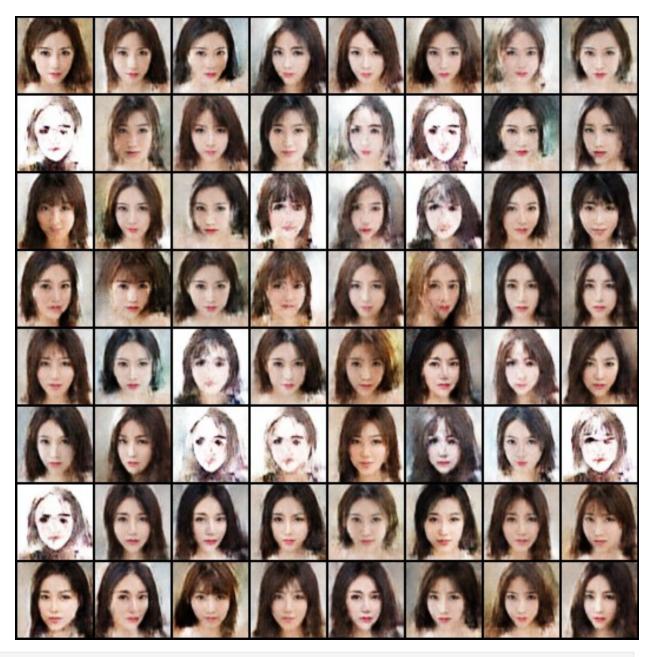
Image('./Photo2Cartoon_generated/generated-images-0250.png')



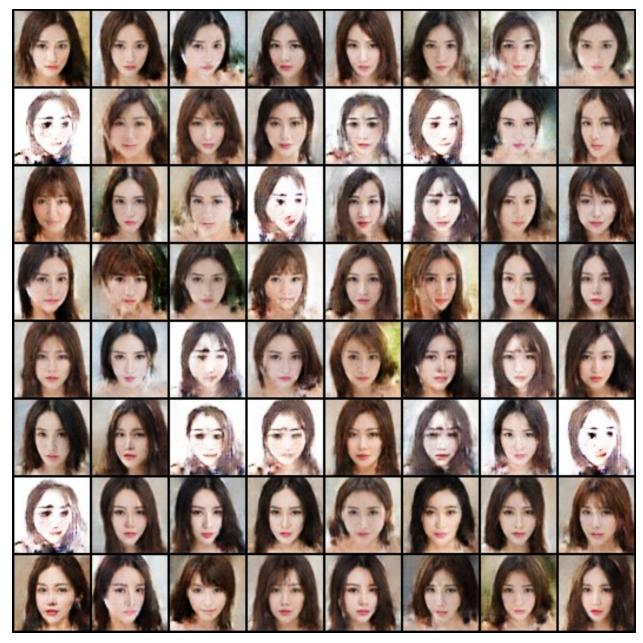
Image('./Photo2Cartoon_generated/generated-images-0300.png')



Image('./Photo2Cartoon_generated/generated-images-0350.png')



Image('./Photo2Cartoon_generated/generated-images-0500.png')



```
import cv2
import os

vid_fname = 'gans_training.avi'

files = [os.path.join(sample_dir, f) for f in os.listdir(sample_dir)
if 'Photo2Cartoon_generated' in f]
files.sort()

out = cv2.VideoWriter(vid_fname,cv2.VideoWriter_fourcc(*'MP4V'), 1,
(530,530))
```

```
[out.write(cv2.imread(fname)) for fname in files]
out.release()

plt.plot(losses_d, '-')
plt.plot(losses_g, '-')
plt.xlabel('epoch')
plt.ylabel('loss')
plt.legend(['Discriminator', 'Generator'])
plt.title('Losses');
```

Losses Discriminator 17.5 Generator 15.0 12.5 10.0 7.5 5.0 2.5 0.0 100 200 0 400 500 300 epoch

```
plt.plot(real_scores, '-')
plt.plot(fake_scores, '-')
plt.xlabel('epoch')
plt.ylabel('score')
plt.legend(['Real', 'Fake'])
plt.title('Scores');
```

