

GAN Class Activity

As part of this activity we will add the gan model to the helper library we developed as part of Module 4.

You will incorporate appropriate code from Module6-GAN notebook into your helper_lib module.

1. Model Module

In `model.py`, define your neural network model:

```
import torch.nn as nn

def get_model(model_name):
    # TODO: define and return the appropriate model_name - one of: FCNN, CNN,
    EnhancedCNN, VAE, GAN
    return model
```

2. Trainer Module

In `trainer.py`, add `train_gan` function:

```
import torch

def train_gan(model, data_loader, criterion, optimizer, device='cpu', epochs=10):
    # TODO: run several iterations of the training loop (based on epochs
    parameter) and return the model
    return model
```

3. Image Generator

In `generator.py`, add `train_gan` function:

```
import torch
```

```
def generate_samples(model, device, num_samples=10):  
    # TODO: generate num_samples points in the latent space, run the generator to  
    construct the image, and plot the samples on a grid  
    plt.show()
```

...