

Generative Models in Torch

This repository is a collection of generative models for scenes in PyTorch. The following models have been implemented-

- Variational Autoencoders (VAEs) [vae.py](#)
- Generative Adversarial Networks (GANs) [gan.py](#)
- Energy-based Model (EBM) [ebm.py](#)
- Variational Energy-based Model (VAEBM) [vaebm.py](#)
- Energy-based Autoencoder (EAE) [ebmvae_1.py](#)
- Score-based Model/Noise Contrastive Score Network (NCSN) [ncsn.py](#)

Usage

Download the manipulation scenes dataset from [this link](#) and place it in the [data](#) directory.

Train a model by running its respective file. For instance, train the VAEBM using the following-

```
python train_vaebm.py
```

Citation

If you find this repository helpful then please cite the following-

```
@misc{ebmrl,  
  author = {Suri, Karush},  
  title = {{Generative Models in Torch}},  
  url = {https://github.com/karush17/ebm-r1},  
  year = {2021}  
}
```