Scientific Computing Course

Final Project - Proposal

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Link (https://github.com/saharmilis/Scientific-Computing/blob/master/Project%20Proposal.ipynb) to a proposal with animation.

Step 1

Train a NN to fit a Gaussian/Normal distribution using GAN architecture (discriminator & generator).

Step 2

Train a NN to fit the MNIST dataset using GAN architecture.

Step 3

Train a NN to fit the Predator-Prey cycle using GAN architecture.

Step 4

Compare estimations with other methods learned in class.

Step 5

Create a NN to convert image to another image while mentaining specific features, CycleGAN architecture.

Reference:

Keras-GAN (https://github.com/eriklindernoren/Keras-GAN)
Adversarial Likelihood-Free Inference on Black-Box Generator (https://arxiv.org/abs/2004.05803)
Unpaired Image-to-Image Translation using Cycle-Consistent Adversarial Networks (https://junyanz.github.io/CycleGAN/)