**Hands-on Assignment 8**

**Due Date: See web**

In the GAN Tutorial, you have seen how it works on the MNIST dataset. In this hands-on assignment, we are asked to do some experiments on the Fashion-MNIST (<https://github.com/zalandoresearch/fashion-mnist>) dataset and report the results.

In your experiments, start with the baseline model from the tutorial and consider different ways to alter the model such as

* Vary the dimensions of the latent variable z (at least two options),
* Vary the architecture (at least two options, e.g., different activation functions),
* Vary the number of steps and learning rate to train the discriminator (at least two options),
* Vary the loss function for the generator (two options discussed in class).

In total, you will need to run at least 8 experiments. Write a simple report to summarize the results. Your report should not only discuss the changes made in the model architecture and the corresponding results, but also analyze the results. Consider using the Inception Scores and the Fréchet Inception Distance (FID) Score to measure the quality of the generated images. The report should be well organized and must be in docx or pdf format.

GAN assumes that real data follow the unit Gaussian distribution in the latent space. Consequently, the quality of the generated images should be poor if we start from a latent vector far away from the origin. Demonstrate this using the best model that you have trained.

Please submit the report on Canvas. There is no need to submit your code. Similarity scores will be computed for this assignment.

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