Homework: Project Report 1

Due on 9 September 2020

Requirements: As professor has already discussed in the first course lecture (the welcome video in file section), you have to submit a project by the end of the semester which carries 25 percent of the total weightage for this course (including the reports and intermediate evaluations if any). In a broad sense the objective of the project is to do a comparative analysis of the performance of Generative Adversarial Network (GAN) vs Variational Autoencoder (VAE). The idea behind this homework is to get you started on that track and should be considered as the first checkpoint toward the end goal. Here you are required to submit an approximately one page report describing your plan for the project. This report should shed light on the following areas:

- How do you intend to procure the data?

  You are required to use the MNIST handwriting data set; any other dataset you choose to use will be *in addition to* this. Results have to be shown for the handwriting dataset at the minimum. Some of you might find the project enticing enough that you explore other datasets. Note however that you have to satisfy the minimum requirement first, i.e., the handwriting dataset.

- What programming language/platform/library/packages do you intend to use for the project?

- What computational resources will you use (your own laptop/dept machine/something in the cloud)?

  Hint: For computational resources, you may want to check and see if you can use cloud resources offered by Google/Amazon/Microsoft etc. Be careful, we do **NOT** require you to use cloud resources, and if you do please make sure that you stay below the limits so that you are **NOT** charged money.