

Description of the session

The goals of this lab will be the following:

1. Learning how to implement/train basic Variational Autoencoders and GANs in PyTorch.
2. Apply the models to image generator and Implement different visualization strategies to assess the quality of generated samples.

Lab preparation:

- 1) Create a folder P4 in DeepLearning_2024 and upload all the material included in P4.zip that you can find in Moodle.
- 2) Read and run some examples in the P4.Examples.ipynb file to familiarize with the different topics that we will see in the session.

Material:

1. P4-Examples.ipynb: Examples that will be explained at the beginning of the session
2. P4-Questions.ipynb: Description of the exercises that you will need to do and deliver (see below)
3. Data folder: Different files used in the examples and exercises.
4. Results folder:

Delivery :

Solve the exercises in P4-Questions.ipynb, and write a report showing and discussing the relevant results in each question and how have you solved it. Save the results in the "Results" folder when necessary.

Submit a zip file to moodle on the corresponding Seminar/Practice Slot as:

P4_LABSGROUP_NIA1_NIA2_NIA3_LASTNAME1_LASTNAME2_LASTNAME3.zip

Include the following files in the zip:

- **P4-Questions_Answers.pynb**: Your code to solve each of the questions,
- **P4-Report.pdf**: A pdf with the report for the lab as described before
- **Results folder**: Including all the data that you have generated solving the results

Check in moodle the delivery date to upload the zip file in moodle. Any delay will be considered as a non-delivered lab and **no extensions will be given**.