Homework 3 Instructions

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The homework assignment is to be done in groups of up to 3 students.

We recommend using a GPU for this assignment. Otherwise experiments may be very long. For GPU, we recommend using Google Colab. If you have a personal GPU, you are free to use it as well.

1 Setup

1.1 Running on Local Machine

Like in previous assignments. Install the conda environment:

```
conda env create -n hw3_env -f environment_cpu.yml  # for CPU
conda env create -n hw3_env -f environment_gpu.yml  # for GPU
```

From the project folder, activate the environment and run Jupyter Lab:

```
conda activte hw3_env
jupyter lab
```

Click on the link to open Jupyter Lab in the browser.

1.2 Running on Google Colab

To do the assignment on Google Colab, you need to make the entire content of the assignment folder is located in your Google Drive. To start working on a notebook, go to the Google Drive folder and select the notebook you wish to work on. You should then select "Open With -¿ Google Colaboratory".

Now, inside Google Colab, you need to do 2 things: 1. Mount google drive 2. Change working directory to the assignment folder. Both of these steps are done by running a cell with the following code (already added for all notebooks):

```
from google.colab import drive
drive.mount('/content/drive')
import os
os.chdir("/content/drive/MyDrive/MyDLCourse/hw3")  # full path to
    your folder
import hw3  # check correctness
```

This homework assignment is an adaptation of the one from the cs236605 course: https://vistalab-technion.github.io/cs236605/

Now you are good to go with the rest of the assignment. Your edits should be automatically backed up in your Google Drive folder when you save in Colab.

Note 1: There is a small difference between the package versions in the conda environment.yml file and those installed in Google Colab, but the assignment should work in cases.

Note 2: To submit the assignment, you will still need to run main.py locally. Install the envrinment without GPU and run main.py with the "–skip-run" flag to use the results from Google Colab.

2 Assignment

2.1 Working with the Assignment

The folder structure is the same as previous assignments. Follow the notebooks instructions starting from notebook 0. You are only required to change the code in the folder hw3. As in assignment 1:

1. The notebooks contain material you need to know, instructions about what to do and also code blocks that will test and visualize your implementations.
2. Within the notebooks, anything you need to do is marked with a TODO beside it. It will explain what to implement and in which file.
3. Within the assignment code package, all locations where you need to write code are marked with a special marker (YOUR CODE). Additionally, implementation guidelines, technical details and hints are in some cases provided in a comment above.
4. Sometimes there are open questions to answer. Your answers should also be written within the assignment package, not within the notebook itself. The notebook will specify where to write each answer.

2.2 Submitting your work

Note: It will take a long time to submit this assignment without "–skip-run", even when using a local GPU. We recommend to use "–skip-run" while also making sure all notebook cells results are saved. Also, if you used Google Colab, definitely use "–skip-run" here.

```
python main.py prepare-submission --skip-run --id ID1 --id ID2 --id
    ID3
```

If you are unable to solve the entire assignment, provide comments by adding text cells below the parts you skipped.

Finally, the script will create a zip file for submission. Submit it to Moodle.

Good luck!