E0 294: Systems for Machine Learning, Jan'25
Indian Institute of Science, Bangalore
Assignment #5

Deadline: 10th April, 11:59 PM

(The numbers in the braces denote the points)

The submitted code should be properly commented and the name of the variables should be intuitive. The code should be implemented by yourself. Marks will be deducted due to codes without comments, with non-intuitive variable names, with high similarity. Tokens should not be shared among individuals.

1. **JupyterLab Access:** Each of you have been provided with access to a unique node in AMD AIPC cluster. Each token (shared in the xl sheet) grants access to a dedicated JupyterLab environment with a unique Conda environment. You can install additional packages using pip by executing commands in a notebook cell (prefix the command with '!', e.g., *!pip install package-name*) since direct terminal access is not available.
2. **Persistent User Data:** Each token has its own persistent storage. You can clone Git repositories into their session, and their work will be saved for the entire duration of access.
3. **Accessing the Assignment:** To access the assignment and accompanying example notebooks, you can open a new notebook and run the following command:
   !git clone https://github.com/npurusho/iisc_eo294_npu_assignment.git
4. There are five cells where you will need to write code. Each cell carries **10 points**. Also, there are three checks which you can use at the end to verify functionality. The code should be added in the cell below the cells titled "ADD CODE IN BELOW CELL"
5. Submit the snapshot of your solution along with a proper discussion of the solution written in latex.

Additional Note:

Your Jupyter session might not have git preinstalled. The git repo can also be downloaded, dragged and dropped in to the Jupyter file browser. Use the below piece of code to do the same.

```
!pip install pygit2
import pygit2

# URL of the Git repository
repo_url = "https://github.com/npurusho/iisc_eo294_npu_assignment.git"

# Path to clone into
local_path = "./iisc_eo294_npu_assignment"
```

```
# Clone the repo
repo = pygit2.clone_repository(repo_url, local_path)

print("Repo cloned at:", repo.workdir)
```