Tutorial for the usage of NEF cluster

(Please finish the first step before 01/03/2022, finish the rest of the steps before 08/03/2022).

1. Create a private account for the Inria NEF cluster here.
   [Please do it as soon as possible before 01/03/2022, as it may take time to create the account]:
   - For company: choose "other"
   - For email address: [xxxx@etu.univ-cotedazur.fr] (please use your UCA email, no personal)
   - Expiration date: 24/03/2022
   - SSH public key:
     - Generate the SSH keys in OpenSSH format (Tutorial: Linux, MacOS, Windows)
     - Attach the public key (extension .pub)
   - Usecase description: "Optimization for Machine Learning (Master UCA Data Science and AI)"

   The account creation may require several days. A confirmation email is sent once the account is created.

2. Log in to the cluster once the account is created:
   - ssh `username@nef-frontal.inria.fr`
   - ssh `username@nef-devel.inria.fr`

   You may want to transfer your own local file from computer to the cluster directory by:
   - For Linux and MacOS: `scp localfile username@nef-frontal.inria.fr:~/`
   - For Windows: `pscp localfile username@nef-frontal.inria.fr:~/`

3. Reserve computing resources in the cluster and log into the reserved node:
   - `oarsub -l /nodes=1/core=2, walltime=1 -I` (reserve 2 CPU cores from 1 node for 1 hour)
   - More variants for the commands
   - Hardware details of the cluster

4. Get Pytorch prepared: mutiple ways, recommend Method 3.
   To check if Pytorch is well installed, type from the terminal:
   - `python`
   - `import torch`
   - `print(torch.__version__)`
   - `print(torch.version.cuda)`
   - `print(torch.backends.cudnn.version())`

If you have any question, please contact me: angelo.rodio@inria.fr.