Deep Learning in Medicine

BMSC-GA 4493, BMIN-GA 3007, Spring 2019

Lab 1: PyTorch and Packages Setup

Ren Yi, ren.yi@nyu.edu

In this lab, we will walk through the steps for setting up the Python environment for this course. We will mainly use PyTorch for this class. I will demonstrate steps required to install relevant packages mainly for macOS. If you have questions regarding installations on Windows, please post them on Piazza and direct them to Aakash. Here are some additional resources you may find useful.

1. PyTorch documentations can be found here.
2. Youtube series for installing PyTorch from Dr. Alfredo Canziani can be found here. Note that you do not need to add the soumith channel.

Package Installation

Please follow the steps below to install Python (v3.7), PyTorch (v1.0) and other relevant packages.

1. If you do not have Anaconda, download the Anaconda installer here. Among the files that start with `Anaconda3-5.3.1`, select the one that works for your operating system. You can check your installation by typing `which conda` in your terminal.
2. For macOS and Linux, open Terminal. For Windows, open Anaconda Prompt from Start.
3. I recommend creating a conda environment with Python 3.7. You can find the documentations here.
   ```
   conda create -n dl4med python=3.7
   ```
4. Activate the environment
   ```
   source activate dl4med
   ```
5. Install PyTorch
   CPU: `conda install -c pytorch pytorch torchvision`
   GPU: `conda install -c pytorch pytorch torchvision cuda80`
6. Install additional packages if necessary
   ```
   conda install jupyter pandas scikit-learn scipy matplotlib
   ```

Github and Jupyter Notebook Demo

1. Clone the course github repository
   ```
   git clone https://github.com/nyumc-dl/BMSC-GA-4493-Spring2019.git
   ```
2. Open a Jupyter Notebook from the course directory
   ```
   jupyter notebook
   ```
3. Demo in jupyter notebook