Homework 0

08/21/2018

Due 08/23/2018 at 12am

This assignment will **NOT be graded**, so you do not have to turn anything in. However, it is highly recommended that you turn at least something in to get used to the process of submitting on Canvas. It is also highly recommended that you at least attempt the assignment so that you can come prepared to the hands-on session on 8/24 at 10am in Whitaker 1103.

- Install Python
  Python is a widely-used language for research computing, and great for general-purpose programming as well. However, managing the packages and environments could be difficult especially for new users, thus we recommend the all-in-one installer Anaconda, if you are not familiar with python

  a. Follow the instruction and install the latest version of anaconda and Python 3.6:
  Windows:
     i. Go to https://www.anaconda.com/download/#windows and download the Python 3 installer for Windows
     ii. Install using the default options, make sure to check "Make Anaconda the default python"

  MacOS:
     i. Go to https://www.anaconda.com/download/#macos and download the Python 3 installer for OS X
     ii. Install using the default options

  Linux:
     i. Go to https://www.anaconda.com/download/#linux and download the Python 3 installer for Linux
     ii. Open a terminal, go to the directory of the installer and type "`bash Anaconda-latest-Linux-x86_64.sh`" (or whatever the filename is)
     iii. Press enter. You will follow the text-only prompts. To move through the text, press the space key. Type "yes" and press enter to approve the license. Press enter to approve the default location for the files. Type "yes" and press enter to prepend Anaconda to your "PATH" (this makes the Anaconda distribution the default Python).

  b. Install/update the following packages using anaconda as the package manager:
     i. Jupyter notebook
     ii. Numpy
     iii. Pandas
     iv. Matplotlib
  The tutorial for anaconda package installation can be found here: https://conda.io/docs/user-guide/tasks/manage-pkgs.html.

  The documentation and tutorial of each of the packages can be found at:
  Jupyter: https://jupyter.readthedocs.io/en/latest/index.html
  Numpy: http://www.numpy.org/
  Pandas: https://pandas.pydata.org/
  Matplotlib: https://matplotlib.org/

- Install OpenRefine
    a. Check that you have Chrome or Firefox installed and set as the default we browser.
    b. Download OpenRefine at http://openrefine.org/
    c. Create a new directory called “OpenRefine” and extract the downloaded zip file into this directory
    d. Launch OpenRefine by:
        i. Windows: Clicking “google-refine.exe”
        ii. MacOS: dragging the icon into the Applications folder and use “Ctrl-click/Open …” to Launch it
        iii. Linux: typing “./refine” in a terminal within the directory
    e. If wou would like to use a different browser other than the default, point the browser at http://127.0.0.1:3333 or http://localhost:3333 to use OpenRefine

- Python Exercises
  The notebook “HW0” contains **optional** exercises to get familiar with python. You don’t have to submit them, but you should be familiar with them. If you are new to Python this is highly recommended. You should also make a note of how long these exercises take you.