Software to install on your computer before the REU program begins

- *Python*: Install Anaconda Python version 3.7
    - Please verify that you can run python version 3, and that you can open a jupyter notebook with python 3. One way to do this is to use the Navigator that is installed with Anaconda (the icon looks like a green ring), and then click on the jupyter notebook box within the navigator. If you already have python 3 installed and working, with jupyter notebooks available, you can probably skip this step. (Though I strongly recommend anaconda python over whatever default comes installed on your machine; see below for one important reason.)
- *Bash* : Be sure that you have access to bash command line. For Mac users, this is through your terminal application, which should already be installed. For Windows users, you may need to install your own application — though I understand that Windows now has bash built in. For Windows users, I recommend installing git bash . (For linux users, you also have a terminal available without any extra steps.)
- *Git* : Mac and Linux users should already have this installed. To check, open a terminal and type "which git". You should see the path to the executable. If you don't, then you need to install this. For Windows users, git will be installed with the "git bash" link I included above.
- *Powerpoint* (or similar) : Optional, though you will probably want to use this to create your posters.
- *Browser* : I'm sure you all have a web browser installed on your computer. We will be using many browser-based applications (and creating our own websites), so you will need one. I recommend Google Chrome or Firefox.

Setting up a new python "environment" in Anaconda

One of the major advantages to using Anaconda python is that it allows you to create multiple python "environments" on your computer. For instance, if you want to install some python package but are worried it might corrupt your python install, or if you usually use Python 2.7, but now you need Python 3.7, environments are the solution you've been looking for. Here's some documentation that may be useful, and below I will write the specific commands that you should type in your bash terminal to create your environment for this REU program.

- *To create your REU2020 python environment:*

```
conda create -n REU2020 python=3.7 jupyter numpy scipy matplotlib pandas
astropy astroquery bokeh emcee corner
```

- *To activate this environment (do this before running any python commands):*

```
conda activate REU2020
```

- *To deactivate this environment (and return to your default python):*

```
conda deactivate
```

Getting ready for High Performance Computing on Quest

You will all learn how to use Northwestern's Quest High Performance Computing (HPC) cluster. Some of you will use Quest extensively in your research. We will have a hands-on training session during the REU program. Beforehand, please watch this YouTube video, developed by NUIT to give you an introduction to Quest.

https://www.youtube.com/watch?v=rIFbHt_2g4s&feature=youtu.be