

Software to install on your computer before the REU program begins

- Python: [Install the latest version of Anaconda Python version 3.x](#) . 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.) If you are installing Anaconda on Windows, I recommend checking the option to add Anaconda to your Windows PATH – this will allow you to easily run Python through your Bash terminal just like on Mac or Linux.
- Bash : Be sure that you have access to bash command line. For Mac and Linux users, this is through your terminal application, which should already be installed. For Windows users, you may need to install your own application, I recommend installing [git bash](#) . This is a simple light-weight terminal. If you want a more robust environment, you may prefer installing Windows Subsystem for Linux ([WSL](#)). I personally use git bash.
- Git : Mac and Linux users should already have this installed. Windows users, git will be installed with the “git bash” link I included above. To check, open a bash terminal and type `git --version`. You should see the version number. If you don’t, then you need to install git. For Mac users, if you do not have git installed or it is before version 2.17, please follow [these instructions](#) to install git via Homebrew, which is a program to manage software installations like this on a Mac. You may need to install homebrew first (instructions for that are provided). If you’re using Linux and need to install git follow [these instructions](#) for your Linux distribution. After you’ve installed git, try `git --version` in the Terminal again to make sure it is installed.
- GitHub: Please create an account for yourself on [GitHub](#) (if you don’t have one already).
- 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.
- Text editor: You will need a text editor that is NOT Microsoft Word. I recommend using [Sublime Text](#) (for free), but you may have your own preferences.

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 3.10, 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. (If you can’t get these to work before the summer, that’s OK. I will help during our first Python workshop.)

- To create your REU2022 Python environment (command should be all one line):

```
conda create -n REU2022 -c conda-forge python=3.10 jupyter numpy scipy  
matplotlib pandas astropy astroquery bokeh emcee corner
```
- To activate this environment (do this before running any Python commands):

```
conda activate REU2022
```
- To deactivate this environment (and return to your default Python):

```
conda deactivate
```