

Meeting 2 Lesson Plan

Prerequisites: From here on out, we will attempt to use github as a way of centralizing any code produced at PyCon meetings. As such, you should make an account on [github](#). If you're feeling adventurous, feel free to also download and install github for your computer ([github for Windows](#), [github for Macs](#)). The actual program you install on your computer is analogous to google drive or dropbox you may have installed and it allows you to interact with github repositories online. Aside from being useful for PyCon, having knowledge of github is useful for collaborating in any programming project (such as in your research groups!), sharing your projects with others (such as potential employers so they can see your work first hand!), and its a good experience to put on your resume.

The second prerequisite is that you read the Collaborative Program section below and follow directions therein.

Topics Covered:

- Python Tips and Tricks *Leader: [Brandon](#)*
- Functions Part 2 *Leader: [Brandon](#)*
 - args and kwargs
 - Assigning defaults
 - Nested functions
 - Decorators
- I/O *Leader: [Chris](#)*
 - Reading/Writing for Text Files
 - Reading/Writing for Fits Files
- Plotting with matplotlib Part 2 *Leader: [Brandon](#)*
 - Advanced Plotting Techniques
 - Animations

Collaborative Program: For the collaborative effort this time, we're going to try and take part in the "SciPy John Hunter Excellence in Plotting" contest. This contest is an open competition where participants attempt to create amazing plots that help visualize data in an interesting way. To help in this effort, we ask that you try to come to the meeting with some data that you think could be visualized in a unique or interesting way. This data can be fake, i.e., completely generated from equations or from your personal research. We can then all work together to try and develop an awesome plot for it. If we do indeed succeed in creating an awesome plot which we think has a good chance of winning the contest, then we will submit it. There are cash prizes for first, second, and third place! For more information about the contest, see [this page](#).