Fall 2016 Python Training

Brent Smith and Jules Kouatchou

edmond.b.smith@nasa.gov, Jules.Kouatchou@nasa.gov

Goddard Space Flight Center

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Who Are We?

- Jules Kouatchou (Computational Scientist, Occasional Python User)
- E. Brent Smith

Training Objectives

We want to:

1. Introduce the basic concepts of Python programming
2. Create functions and modules
3. Manipulate Python objects (list, tuple, arrays, etc.)
4. Handle files
5. Do plotting

What we will Cover

1. Core principles of Python: Day 1
2. Data manipulation with Python: Day 2

Target Audience

Python User	Day 1	Day 2
Beginner	X	X
Intermediate		X

What We Expect from You

- Have your own laptop.
- Install on your system a Python distribution (such as Anaconda) that should at least have iPython, Numpy, Matplotlib.
- Install the package Git
- Be able to create/edit files on your platform
- Do the examples yourself as we move along
- Ask questions

Obtaining the Materials

You can obtain all the materials by issuing the command:

```
git clone https://github.com/JulesKouatchou/LRC_Fall16
```

You will then get on your platform the directory `LRC_Fall16`.

Beyond the Agenda

There are few topics that will not be covered but are worth looking at. Presentations were prepared on:

1. Datetime Module
2. F2Py

Informal Self-Assessment

At the end of Day 1, you might consider taking a 25-question test at:

http://www.afterhoursprogramming.com/tests/practice/Python/

Useful Pointers I

- Python Programming - Introduction
  http://www.youtube.com/watch?v=72RKMMyLxS8
- A Hands-On Introduction to Python for Beginning Programmers
  https://www.youtube.com/watch?v=rkx5_MRAV3A
- A Beginner's Python Tutorial
  http://www.sthurlow.com/python/
- Invent with Python
  http://inventwithpython.com/chapters/
- Think Python: How to Think Like a Computer Scientist
  http://greenteapress.com/thinkpython/html/index.html

Useful Pointers II


Hans Petter Langtangen.
A Primer on Scientific Programming with Python.
Springer, 2009.


Johnny Wei-Bing Lin.
A Hands-On Introduction to Using Python in the Atmospheric and Oceanic Sciences.
http://www.johnny-lin.com/pyintro, 2012.


Drew McCormack.
Scientific Scripting with Python.
2009.