Introduction to Numpy & Scipy

Wim R.M. Cardoen, PhD
University of Utah
Center for High Performance Computing
155 S. 1452 E., Rm 420
Salt Lake City
UT, 84112
USA
wim.cardoen@utah.edu

Aug. 7, 2018

Introduction

In this document we will describe the installation of the tutorial/lecture notes and/or verification of the required software.

I Installation of the tutorial

The tutorial/lecture notes can be retrieved as follows:

- using Git:
  git clone https://github.com/wcardoen/numpy-lecture.git
- by downloading the following zip file:
  https://github.com/wcardoen/numpy-lecture/archive/master.zip

After cloning the repository using Git or downloading and unzipping the master.zip file, the local directory `numpy-lecture` will be created.

II Required software

- Python3
  We will be using Python3 during the workshop. We also require the following Python packages to be installed:

  - ⋆ numpy >= 1.12.0
  - ⋆ scipy >= 0.19.0
  - ⋆ matplotlib >= 1.5.0
  - ⋆ notebook >= 4.2.0

- Jupyter
  The lectures will be presented using Jupyter notebooks.

III Check your Python installation

The packages that are required for this tutorial are frequently available on most OSs. Therefore, it is quite likely that you don't have to install any additional packages.

After installing the tutorial, you can immediately check whether the required packages are present on your system.

```
$ cd numpy_lectures[1]
$ python3 check_env.py
```

You can verify the presence of Jupyter like this:

```
$ jupyter --version
4.4.0[2]
```

If some of the above packages are missing you can proceed with the installation step (section IV). Otherwise you are completely ready for the tutorial.

IV Installation of the required software

If you don't have Python3 installed or you have an incomplete installation (see section III), installing the Anaconda distribution is the easiest option.

The Anaconda distribution is available for the Mac, Windows & Linux OSs. It also contains all the aforementioned requirements/packages.

Return to section III to verify that your installation is properly working.

[1] The lines starting with a $ sign are commands to be executed in a Shell.

[2] This line is the output generated by the command (line) above. Its output will depend on the Jupyter version installed on your machine.