

Python for Scientific Computing

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Why Python?

- High level general purpose language, easy to use and learn.
- A large standard library
- A large community of users and developers
- Lots of libraries spanning many disciplines:
 - Bioinformatics: [Biopython](#)
 - Numerical and Scientific computing: [Numpy](#), [Scipy](#), [Dask](#)
 - Statistics: Scipy, [Statmodels](#)
 - Visualization: [Matplotlib](#), [Seaborn](#), [Bokeh](#)
 - Data analysis: [Pandas](#)
 - Machine learning: [Scikit-learn](#)
 - Image processing: [OpenCV](#), [Skimage](#)
 - Deep learning: [Tensorflow](#), [Theano](#), [Pytorch](#),.....

Examples in this seminar:

We will go through the Python notebooks in this seminar.

Clone the repository:

```
git clone https://github.com/bhimmetoglu/CSC-Computing-2017
```

Make sure numpy, scipy, scikit-learn, jupyter are installed
(better: install Anaconda 3)

Go to the relevant directory, and launch Jupyter Notebook

```
$ jupyter notebook
```

Further Resources for learning Python

- Data Camp: <https://www.datacamp.com/courses/intro-to-python-for-data-science>
- Udacity: [Programming Foundations with Python](#)
- Google: [Python class](#)
- And many others...