

Software Installation Tutorials

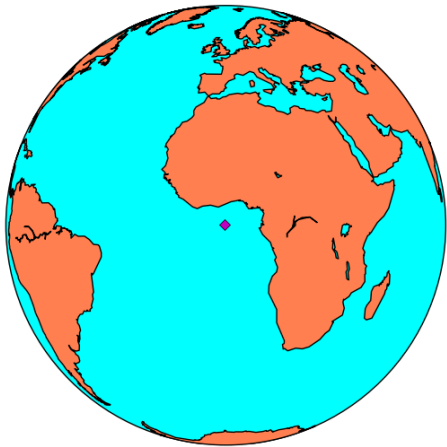
PYTHON MATPLOTLIB BASEMAP INSTALLATION

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Python

<https://basemaptutorial.readthedocs.io/en/latest/>



- **Basemap** is a great tool for creating maps using python in a simple way.
- It's a matplotlib extension, so it has got all its features to create data visualizations, and adds the geographical projections and some datasets to be able to plot coast lines, countries, and so on directly from the library.



Basemap Basic Topics

- Installation
 - Downloading the tutorial
- Drawing the first map
- Managing projections
 - Projection
 - Extension
- Basic functions
 - Drawing a point in a map
 - Plotting raster data
 - Calculating the position of a point on the map
- Working with shapefiles
 - Basic usage
 - Reading point data
 - Polygon information
 - Filling polygons



Installation of Basemap

Dependencies

Required:

matplotlib 1.0.0 (or later, download)

Python 2.4 (or later, including Python 3)

- matplotlib requires python 2.4 or later (download)

numpy 1.2.1 (or later)

- array support for python (download)

PROJ4 Cartographic Projections Library.



Required library that ships with basemap

Required:

GEOS (Geometry Engine - Open Source) library 3.1.1 or later.

- Source code is included in the geos-3.3.3 directory. When building from source, must be built and installed separately from basemap (see build instructions below). Included in Windows binary installers.

Optional libraries:

pillow:

- Python Imaging Library (download), only needed for `bluemarble()`, `etopo()`, `shadedrelief()` and `warpimage()` instance methods.



Basemap Installation

Go Installation!