Kapok Mac OS X Installation Guide

GET PYTHON

1) Install Python 3.5 or higher.

Download page: https://www.python.org/downloads/

Download version 3.5 or higher.

Double click on the package file to install.

2) Open your terminal.

Check your .bash\_profile to make sure python is there:

> cd /Users/[your\_user\_name]

> emacs .bash\_profile

You should see a statement like this one:

export PATH=/Library/Frameworks/Python.framework/Versions/3.5/bin:$PATH

3) Close and quit the terminal. This will refresh your paths in .bash\_profile.

4) Make sure you are running Python 3.5.

Open the terminal

> python3

This should open the python console:



INSTALL DEPENDENCIES

1) GDAL

Download page: http://www.kyngchaos.com/software/frameworks

Check your bash\_profile to make sure GDAL is there

> cd /Users/[your\_user\_name]

> emacs .bash\_profile

You should see a statement like this one:

export PATH=/Library/Frameworks/GDAL.framework/Programs:$PATH

2) Check GDAL

Open terminal.

> gdalwarp

This should provide command line usage for gdalwarp. If you get an error "command not found", that means the computer cannot find the gdalwarp routine.



3) Other Dependencies

Open terminal.

> python3 -m pip install --upgrade pip

> pip install --user numpy matplotlib SciPy h5py Cython ipython

4) Double check dependencies

Open terminal.

Check the package files.

> cd /Users/your\_user\_name/Library/Python/3.5/lib/python/site-packages

> ls

Try importing the packages into Python.

> python3

> import numpy

> import matplotlib

> import h5py

> import Cython

5) Add Kapok to the Python Path

Open terminal.

> cd /Users/[your\_user\_name]

> emacs .bash\_profile

Add the statement below. Note there are no spaces around the "=" sign.

export PYTHONPATH=/Users/[your\_user\_name]/Documents/sw/src/kapok:$PYTHONPATH

Close and quit the terminal. This will refresh your paths in .bash\_profile.

6) Ensure that the XCode command line tools are installed.

Open terminal.

> xcode-select --install

Perform the installation if necessary.

7) Check to make sure Kapok is importable from python.

> python3

> import kapok

> import kapok.cohopt

When performing kapok.cohopt, you may receive some compiler warnings. As long as you do not receive an “ImportError” and the module is importable, that is fine. (cohopt is a Kapok module that uses Cython—the Python code is compiled to C code when imported, in order to improve the computation speed.) If the program cannot import the Cython code, a warning message will be displayed, and the program will revert to a native Python implementation of the module. This will work, but will run much more slowly than the Cython version.