Overview

In this tutorial, we will cover the following steps:

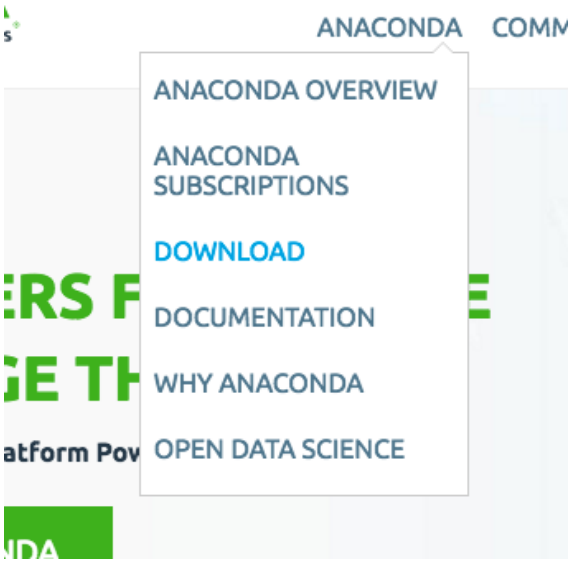
1. Download Anaconda
2. Install Anaconda
3. Start and Update Anaconda
4. Update scikit-learn Library
5. Install Deep Learning Libraries

1. Download Anaconda

In this step, we will download the Anaconda Python package for your platform.

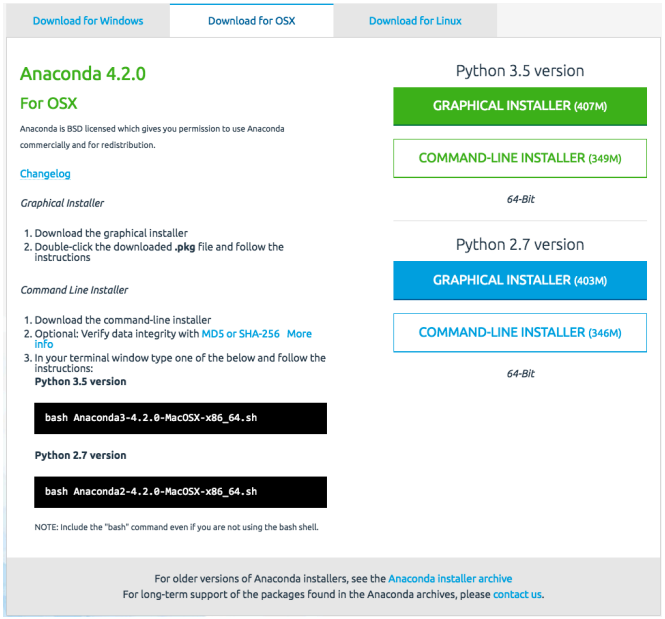
Anaconda is a free and easy-to-use environment for scientific Python.

1. Visit the Anaconda homepage.
2. Click “Anaconda” from the menu and click “Download” to go to the download page.



3. Choose the download suitable for your platform (Windows, OSX, or Linux):

- Choose Python 3.5
- Choose the Graphical Installer



This will download the Anaconda Python package to your workstation.

I'm on OS X, so I chose the OS X version. The file is about 426 MB.

You should have a file with a name like:

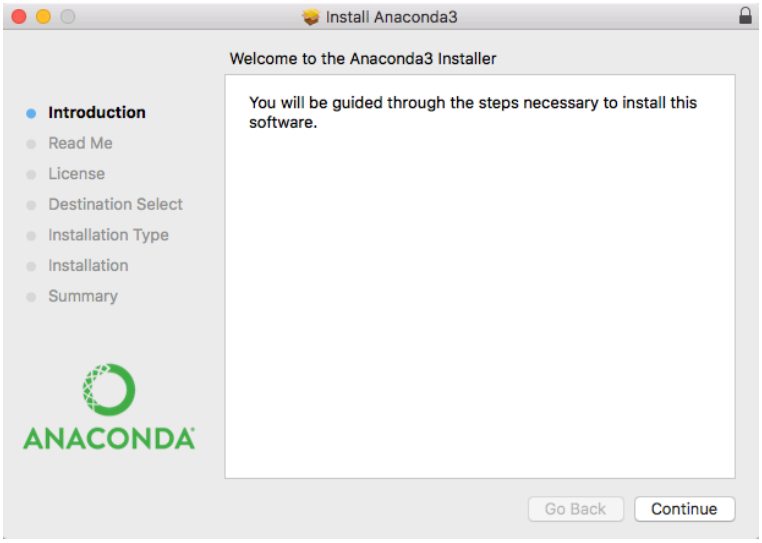
Anaconda3-4.2.0-MacOSX-x86_64.pkg

2. Install Anaconda

In this step, we will install the Anaconda Python software on your system.

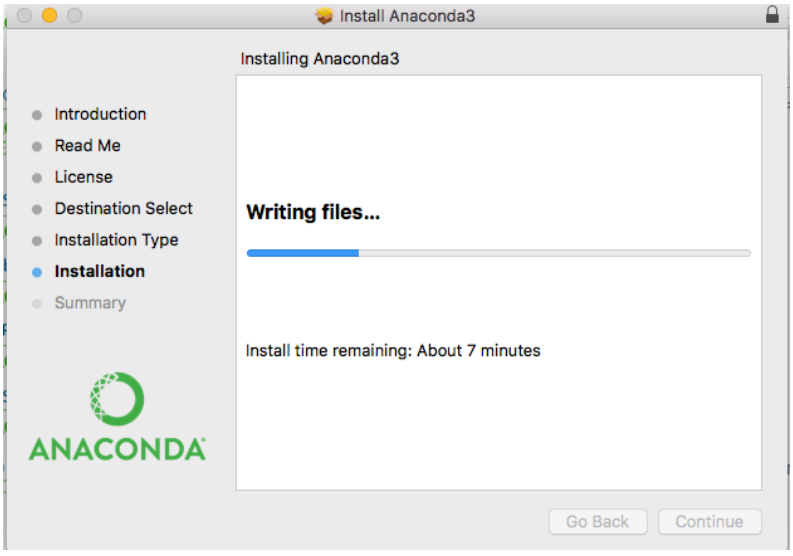
This step assumes you have sufficient administrative privileges to install software on your system.

- 1. Double click the downloaded file.
- 2. Follow the installation wizard.



installation is quick and painless.

There should be no tricky questions or sticking points.

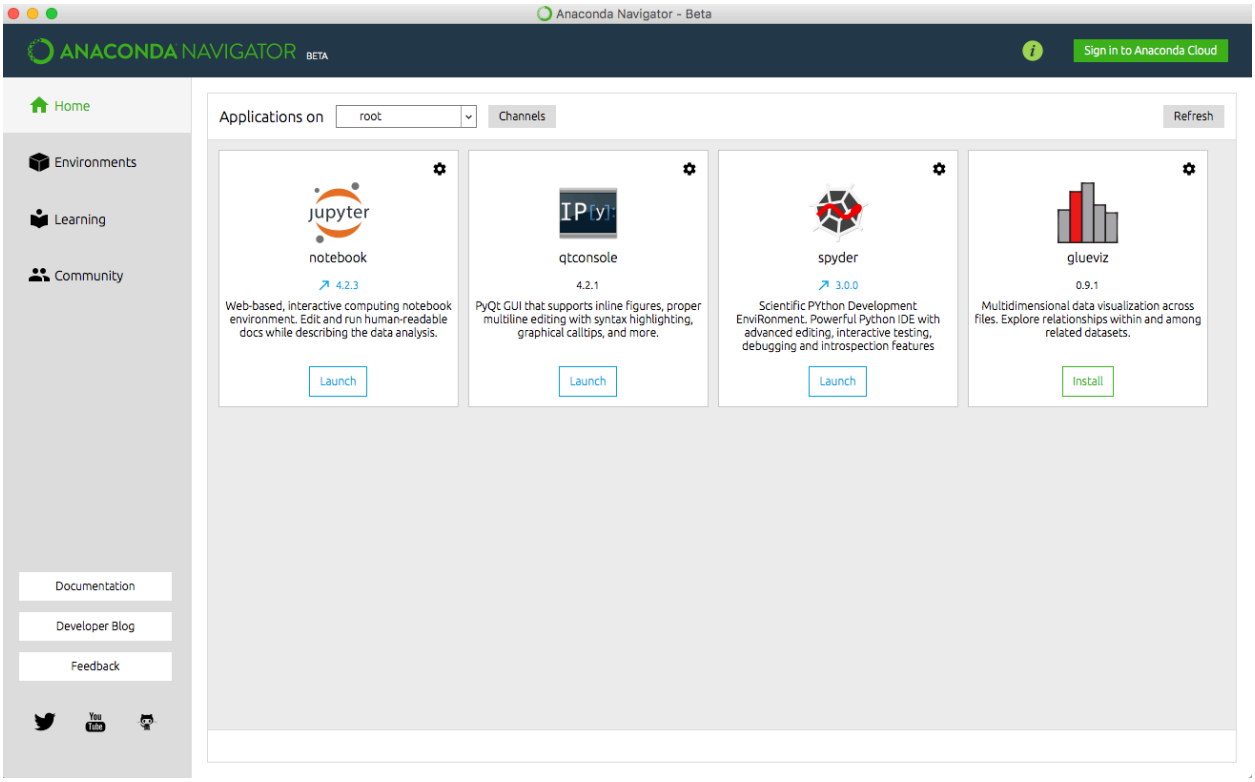


The installation should take less than 10 minutes and take up a little more than 1 GB of space on your hard drive.

3. Start and Update Anaconda

In this step, we will confirm that your Anaconda Python environment is up to date.

Anaconda comes with a suite of graphical tools called Anaconda Navigator. You can start Anaconda Navigator by opening it from your application launcher.



You can learn all about the Anaconda Navigator here.
You can use the Anaconda Navigator and graphical development environments later; for now, I recommend starting with the Anaconda command line environment called conda. Conda is fast, simple, it's hard for error messages to hide, and you can quickly confirm your environment is installed and working correctly.

- 1. Open a terminal (command line window).
- 2. Confirm conda is installed correctly, by typing:

```
conda -V
```

You should see the following (or something similar):
conda 4.2.9

- 3. Confirm Python is installed correctly by typing:
  ```
  python –V
  ```

- 4. Confirm your conda environment is up-to-date, type:
  ```
  conda update conda
  conda update anaconda
  ```
  You may need to install some packages and confirm the updates.

- 5. Confirm your SciPy environment.
  The script below will print the version number of the key SciPy libraries you require for machine learning development, specifically: SciPy, NumPy, Matplotlib, Pandas, Statsmodels, and Scikit-learn.

  You can type “python” and type the commands in directly. Alternatively, I recommend opening a text editor and copy-pasting the script into your editor.

```
# scipy
import scipy
print('scipy: %s' % scipy.__version__)
# numpy
import numpy
print('numpy: %s' % numpy.__version__)
# matplotlib
import matplotlib
print('matplotlib: %s' % matplotlib.__version__)
# pandas
import pandas
print('pandas: %s' % pandas.__version__)
# statsmodels
import statsmodels
print('statsmodels: %s' % statsmodels.__version__)
# scikit-learn
import sklearn
print('sklearn: %s' % sklearn.__version__)
```

4. Update scikit-learn Library

In this step, we will update the main library used for machine learning in Python called scikit-learn.

- 1. Update scikit-learn to the latest version.
  At the time of writing, the version of scikit-learn shipped with Anaconda is out of date (0.17.1 instead of 0.18.1). You can update a specific library using the conda command; below is an example of updating scikit-learn to the latest version.

  At the terminal, type:

```
conda update scikit-learn
```

5. Install Deep Learning Libraries

In this step, we will install Python libraries used for deep learning, specifically: Theano, TensorFlow, and Keras.

NOTE: I decided to use Keras for this class and Keras only requires TensorFlow to be installed.

- Install the TensorFlow deep learning library (all except Windows) by typing:

```
conda install -c conda-forge tensorflow
```

Alternatively, you may choose to install using pip and a specific version of tensorflow for your platform.

See the installation instructions for tensorflow.

- Install Keras by typing:

```
pip install keras
```

Create a script that prints the version numbers of each library, as we did before for the SciPy environment.

```
# tensorflow
import tensorflow
print('tensorflow: %s' % tensorflow.__version__)
# keras
import keras
print('keras: %s' % keras.__version__)
```

Congratulations, you now have a working Python development environment for machine learning and deep learning!