Installing Anaconda

A Scientific Python Environment

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Why use Anaconda?

- Anaconda is a complete set of python tools (195+ of them) that are useful in one simple and straight forward install (available for Linux, OS X, and Windows).

- This collection of packages are geared towards scientific computing.

- Anaconda is also a powerful and simple package manager - which helps in managing the python ecosystem.

What does Anaconda include?

The packages contained in Anaconda are geared towards scientific computing (data analysis, math, science ...)

All of the essentials (+ a lot more)

- python
- ipython
- matplotlib
- numpy
- pandas

A full list of packages is available at
http://docs.continuum.io/anaconda/pkg-docs.html

Where to get Anaconda from?

Available free from http://continuum.io/downloads

Note: Continuum will by offer you the option of Python 2.7 or Python 3.5. Given that much of the scientific stack has now been migrated to Python 3 - it is now the best option to go for.

Python 2.7 or 3.5?

Python 2.7

- Pro
    - More packages are available in Python 2.7
    - A lot of examples are written in Python 2.7 syntax.

- Con
    - In maintenance mode - not getting new features as the language
      develops over time.

Python 3.5 (Best **default** selection)

- Pro
    - Newest version which is the long term future of Python
    - Most of the scientific stack has been ported to Python 3

- Con
    - Sometimes want to use a library which has not been migrated to
      Python 3 yet. (but can make use of conda environments if needed)

Installation Guides

The following installation guides are available for:

1. Linux[1]

2. OS X

3. Windows
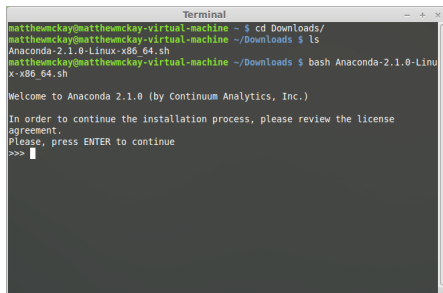
Note: The version number for Anaconda has been updated since this guide was put togther. The current version is **4.4.0**

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[1]Ubuntu and its derivatives are largely used by the development team

Linux

Open a terminal and run:

```
bash Anaconda3-2.4.1-Linux-x86_64.sh
```
[2]
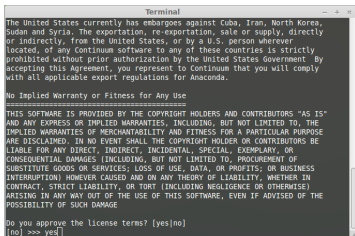
Press **ENTER** to continue the installation

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[2]This example is run using Linux Mint and images may contain an older version number for Anaconda

Linux

Scroll through the licence terms and conditions. When asked if you approve type **yes**

Keep the default install location by hitting **ENTER**. This will setup an **anaconda** directory in your user account.

Linux

Ensure to type **yes** to prepend the anaconda installation to your **PATH**. This ensures anaconda is the default python library on your system.

Done!

OS X

Click on the downloaded OS package:
`Anaconda3-2.4.1-MacOSX-x86_64.pkg`.[3]

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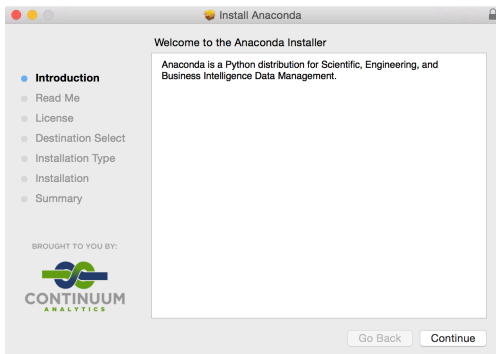
[3]There is also a non-graphical alternative using
`Anaconda3-2.4.1-MacOSX-x86_64.sh` which is also available on the website. This
method of installation is very similar to the Linux instructions

OS X

The **README** screen tells you what this installer is about to do. Click on **Continue**
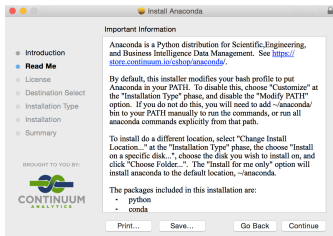
The **LICENSE** provides details of the end user agreement. Once satisified click on **Continue**
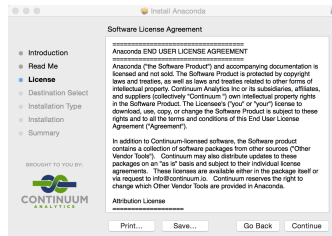
You will need to accept the terms and conditions to continue. Click on **Agree** in the pop up window.

OS X

Install for me only should be selected. Sometimes a bug in the anaconda installer suggests Anaconda cannot be installed to this location. If this occurs **reclick on the Install for Me Only area** and this will dissapear.

Now it should look more like this - indicating how much space will be used. Click on **Continue**
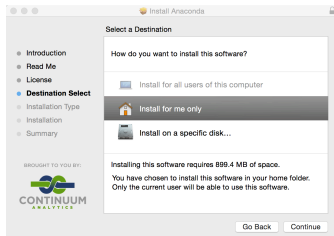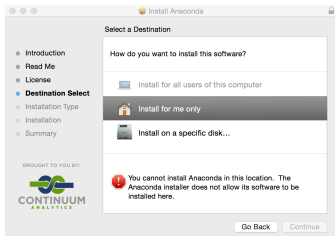
OS X

Click on **Install**

Done!

Windows

Click on the downloaded installer:
`Anaconda3-2.4.1-Windows-x86_64.exe`
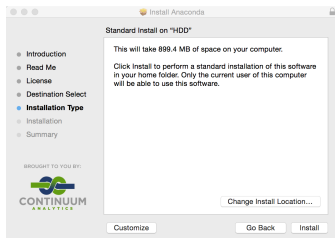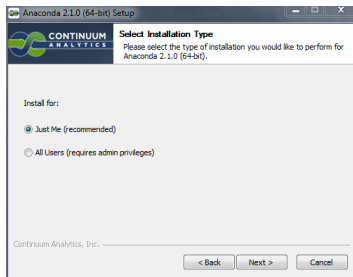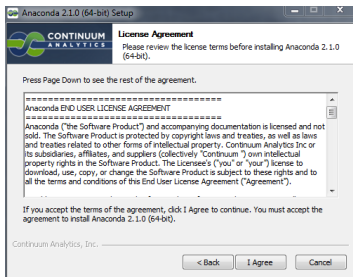
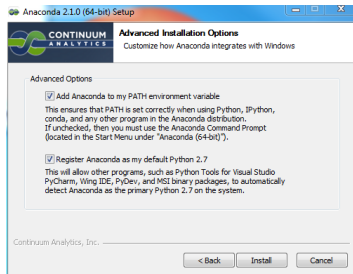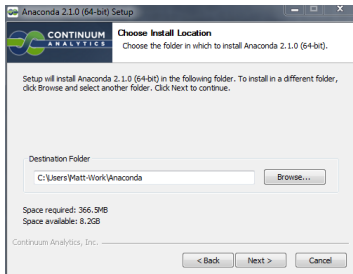# Windows

Agree to licence terms and conditions.

Keep the default selection **Just Me (Recommended)** and click **next**
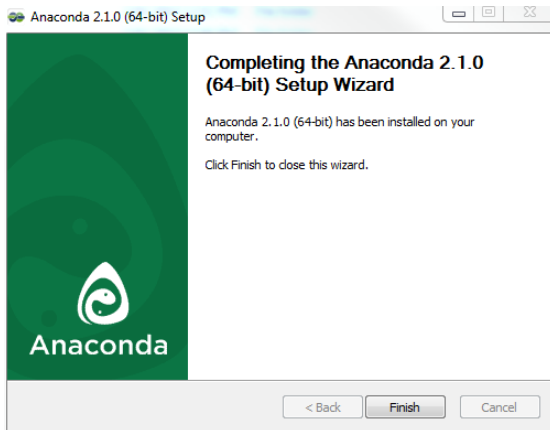
Windows

Keep the default location which should be an **Anaconda** folder in your user directory.

Be sure to leave both boxes ticked.

Windows

Done!

Some simple tests

Run these commands in a terminal.

Note: For Windows systems these should be run in a cmd or powershell terminal.

1. Try updating conda by typing: `conda update conda`

2. Try updating the anaconda library by typing:
   `conda update anaconda`

3. Open IPython Notebook by typing: `jupyter notebook`. Open a new notebook and try out a few python examples

4. Install QuantEcon library by typing: `pip install quantecon`. Next open an Jupyter notebook and try importing the library using: `import quantecon as qe`

I'm curious - What would be the alternatives?

The alternatives include

- Install python and then all of the packages you wish to use with 'pip' (a python package installer). This requires a lot of setup time and configuration.

- Install another package collection such as Enthought Canopy. (But Anaconda is simpler and is quickly becoming the package manager of choice)