

# Installing Python (The PC Story)

*Lecture 1: Text Analytics for Big Data*  
*Mark Keane, Insight/CSI, UCD*

# Note...

- ◆ Not a course on Python programming
- ◆ Not a course on R programming
- ◆ So, having got that out of the way,  
lets see how to install them....

# Let's Get Set Up...

- ◆ You should have Python 3.4 installed
- ◆ You need to install **nltk** package
- ◆ You need to load in **nltk** data too
- ◆ Then, you can start to use its bits...

# Three things...

- ◆ You can use IDLE IDE; has Python shell interpreter and windows for files, etc (wather pwimitive)...
- ◆ Along with Command Prompt window (command line)
- ◆ Later we will look at PyCharm\*...
- ◆ Use one or the other...

Installing Python

PC Installation

# PC Package Install (PC)

- ◆ We advise using Anaconda for the PC installation as it has a lot of the packages pre-loaded and is good
- ◆ Check out the two sites mentioned:
  - ◆ site 1: <http://www.southampton.ac.uk/~fangohr/blog/installation-of-python-spyder-numpy-sympy-scipy-pytest-matplotlib-via-anaconda.html>
  - ◆ site 2: <https://store.continuum.io/static/img/Anaconda-Quickstart.pdf>

# Site 1: Easy Anaconda Installation

The screenshot shows a web browser window with multiple tabs open at the top. The active tab displays a blog post titled "Installation of Python, Spyder, Numpy, Sympy, Scipy, Pytest, Matplotlib via Anaconda (2014)" from "Computational Modelling Blog" dated Monday, September 8, 2014. The post is about providing notes for students at the University of Southampton to help them install Python and its scientific computing libraries. To the right of the main content, there is a sidebar with "Recent Posts" and "Categories". The sidebar lists several recent posts: "Essential tools for computational science and engineering?", "Driving magnetic skyrmions using microwaves", "Computing the demagnetizing tensor for finite difference micromagnetic simulations via numerical integration", "Numerical integration more accurate than exact result?", and "Driving domain walls with magnons in DMI materials". Below the sidebar, under "Categories", are links for "Misc" and "NGCM". The browser's address bar shows the URL of the blog post.

## Computational Modelling Blog

About | Archive | Tags | Misc | Ngcm | Productivity | Python | Research | Atom

MON 08 SEPTEMBER 2014

# Installation of Python, Spyder, Numpy, Sympy, Scipy, Pytest, Matplotlib via Anaconda (2014)

## Introduction

These notes are provided primarily for students at the [University of Southampton](#) (UK) in undergraduate, postgraduate and [doctoral](#) studies to help them install Python on their own computers should they wish to do so, and to support their learning of programming and computing, and subsequently their studies, in particular in engineering, computer science and

### Recent Posts

- Essential tools for computational science and engineering?
- Driving magnetic skyrmions using microwaves
- Computing the demagnetizing tensor for finite difference micromagnetic simulations via numerical integration
- Numerical integration more accurate than exact result?
- Driving domain walls with magnons in DMI materials

### Categories

- Misc
- NGCM

# Site 2: Quick Start

Conda

Search docs

Get started

- Intro to conda
- Download conda**
- Installation
- Test drive
- Conda cheat sheet
- Using conda
- Building packages
- Help & reference
- Get involved

Docs » Get started » Download conda

Edit on GitHub

## Download conda

Conda can be downloaded with an array of options. This page is to help you decide among the various options. To download conda, you will download Anaconda or Miniconda (both are free), or purchase Anaconda Server. All can be downloaded with legacy Python 2.7 or current Python 3.5. You can choose a version with a GUI or a command line installer.

TIP: If you are unsure, we recommend the most recent version of Anaconda3 - that automatically includes Python 3.5, the most recent version of Python. If you are on Windows or OS X, we recommend you also choose the version with GUI installer.

### Should I download Anaconda or Miniconda?

**Choose Anaconda if you:**

- Are new to conda or Python
- Like the convenience of having Python and over 150 scientific packages automatically installed at once
- Have the time and disk space (a few minutes and 3 GB), and/or
- Don't want to install each of the packages you want to use individually.

Anaconda download: <http://continuum.io/downloads>

# See this for running

- [https://www.youtube.com/watch?v=J5GevIHNctM&feature=iv&src\\_vid=A6\\_gh0vrZ-E&annotation\\_id=annotation\\_1374350233](https://www.youtube.com/watch?v=J5GevIHNctM&feature=iv&src_vid=A6_gh0vrZ-E&annotation_id=annotation_1374350233)

# Failing Anaconda...Use...

- ◆ You can go look at the home site for Python
- ◆ NB You want V 3.4

g Google × Welcome to Python.org Mark

← → ⌂ Python Software Foundation [US] <https://www.python.org> star blue diamond menu

Apps Home Home&Abroad # dope-jokes MarksA Finance Net&Functions Google Scholar Health&Exer Popular >> Other Bookmarks

Python PSF Docs PyPI Jobs Community

# python™

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```
# Python 3: Simple arithmetic
>>> 1 / 2
0.5
>>> 2 ** 3
8
>>> 17 / 3 # classic division returns a float
5.666666666666667
>>> 17 // 3 # floor division
5
```

>\_

**Intuitive Interpretation**

Calculations are simple with Python, and expression syntax is straightforward: the operators `+`, `-`, `*` and `/` work as expected; parentheses `( )` can be used for grouping. [More about simple math functions in Python 3.](#)

1 2 3 4 5

Python is a programming language that lets you work quickly and integrate systems more effectively. [» Learn More](#)

## Get Started

Whether you're new to programming or an experienced developer, it's easy to learn and

## Download

Python source code and installers are available for download for all versions! Not

## Docs

Documentation for Python's standard library, along with tutorials and guides, are

## Jobs

Looking for work or have a Python related position that you're trying to hire for? Our

# Get Python from site...

The screenshot shows a web browser window with three tabs open: "Google News", "Migration – MacPorts", and "Python Releases for Windo...". The active tab is "Python Releases for Windo..." with the URL <https://www.python.org/downloads/windows/>. The browser's toolbar includes "Mark", "Star", and "More" buttons.

The Python Software Foundation website header features the Python logo and the word "python™". It has a navigation bar with links: Python, PSF, Docs, PyPI, Jobs, and Community. A search bar with a magnifying glass icon and a "GO" button is also present.

The main content area shows the breadcrumb trail "Python >> Downloads >> Windows". The title "Python Releases for Windows" is displayed above a list of releases:

- [Latest Python 2 Release - Python 2.7.9](#)
- [Latest Python 3 Release - Python 3.4.2](#)
- [Python 2.7.9 - 2014-12-10](#)
  - Download [Windows x86 MSI installer](#)
  - Download [Windows x86-64 MSI installer](#)
  - Download [Windows help file](#)
  - Download [Windows debug information files for 64-bit binaries](#)
  - Download [Windows debug information files](#)
- [Python 2.7.9rc1 - 2014-11-26](#)
  - Download [Windows x86 MSI installer](#)
  - Download [Windows x86-64 MSI installer](#)

# Get Python Installer from Site...

The screenshot shows a web browser window with three tabs open: "Google News", "Migration – MacPorts", and "Python Releases for Windo". The main content area displays a list of Python releases for Windows, each with download links for MSI installers, help files, and debug information files. A red oval has been drawn around the "Python 3.4.3 - 2015-02-25" section.

Python Software Foundation [US] <https://www.python.org/downloads/windows/>

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- [Python 3.4.3 - 2015-02-25](#)
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- [Python 3.4.2rc1 - 2014-09-22](#)
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  - Download [Windows x86-64 MSI installer](#)
  - Download [Windows help file](#)
  - Download [Windows debug information files for 64-bit binaries](#)
  - Download [Windows debug information files](#)

## Installing Python

You basically want like this...

Spyder

File Edit Search Source Run Interpreters Tools View ?

Editor - D:\Dropbox\Dev\auto post\check - Link Engine Checker\link\_engine\_checker.py Console

.temp.py link\_engine\_checker.py Python 1 00:18:27

```
21 import json
22 import os
23 import re
24 import requests
25 import sys
26
27 from threading import Lock
28
29 from libs.thread_pool import ThreadPool
30
31
32 #-
33
34 Code analysis
35 E501 line too long (81 > 79 characters)
36     checked'
37
38 NR_OF_THREADS = 20
39
40 #-
41
42 HEADERS = { 'User-Agent': 'Mozilla/5.0 (compatible; MSIE 9.0; Trident/6.0)'}
```

Console File explorer

Pylint

D:\Dropbox\Dev\auto post\check - Link Engine Checker\link\_engine\_checker.py Analyze Stop

Global evaluation: 9.81/10 (previous run: 9.00/10) 21 Nov 2012 15:33 Output

Results for D:\Dropbox\Dev\auto post\check - Link Engine Checker\link\_engine\_checker.py

Convention (1 message)

[C0301] 32 : Line too long (81/80)

Refactor (1 message)

[R0912] 60 : check\_link: Too many branches (17/12)

Warning (0 message)

Error (0 message)

PEP8 check

PYLINT check

# What is the system setup...

- ◆ In the Python shell check out do:

```
>>> import sys  
>>> sys.path  
....  
>>> sys.version  
....  
>>> sys.platform  
....
```

Installing Python

Issues

# PC Install (PC)

- Do be determined...

Install  
Resources

g Google × Welcome to Python.org Mark

← → ⌂ Python Software Foundation [US] <https://www.python.org> star blue diamond menu

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## Docs

Documentation for Python's standard library, along with tutorials and guides, are

## Jobs

Looking for work or have a Python related position that you're trying to hire for? Our

g Google Overview — Python 3.4.3 x Mark

Python Software Foundation [US] <https://docs.python.org/3/>

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Python » 3.4.3 Documentation » modules | index

**Download**  
Download these documents

**Docs for other versions**  
Python 2.7 (stable)  
Python 3.3 (stable)  
Python 3.5 (in development)  
Old versions

**Other resources**  
PEP Index  
Beginner's Guide  
Book List  
Audio/Visual Talks

**Quick search**  
 Go  
Enter search terms or a module, class or function name.

# Python 3.4.3 documentation

Welcome! This is the documentation for Python 3.4.3, last updated Aug 06, 2015.

**Parts of the documentation:**

**What's new in Python 3.4?**  
*or all "What's new" documents since 2.0*

**Tutorial**  
*start here*

**Library Reference**  
*keep this under your pillow*

**Language Reference**  
*describes syntax and language elements*

**Python Setup and Usage**  
*how to use Python on different platforms*

**Python HOWTOs**  
*in-depth documents on specific topics*

**Indices and tables:**

**Global Module Index**  
*quick access to all modules*

**Search page**  
*search this documentation*

Installing Python Modules  
*installing from the Python Package Index & other sources*

Distributing Python Modules  
*publishing modules for installation by others*

Extending and Embedding  
*tutorial for C/C++ programmers*

Python/C API  
*reference for C/C++ programmers*

FAQs  
*frequently asked questions (with answers!)*

## Table Of Contents

### Installing Python Modules

- Key terms
- Basic usage
- How do I ...?
  - ... install `pip` in versions of Python prior to Python 3.4?
  - ... install packages just for the current user?
  - ... install scientific Python packages?
  - ... work with multiple versions of Python installed in parallel?
- Common installation issues
  - Installing into the system Python on Linux
  - Installing binary extensions

[Previous topic](#)

Distributing Python Modules

[Next topic](#)

Python HOWTOs

[This Page](#)

[Report a Bug](#)

# Installing Python Modules

Email: [distutils-sig@python.org](mailto:distutils-sig@python.org)

As a popular open source development project, Python has an active supporting community of contributors and users that also make their software available for other Python developers to use under open source license terms.

This allows Python users to share and collaborate effectively, benefiting from the solutions others have already created to common (and sometimes even rare!) problems, as well as potentially contributing their own solutions to the common pool.

This guide covers the installation part of the process. For a guide to creating and sharing your own Python projects, refer to the [\*distribution guide\*](#).

**Note:** For corporate and other institutional users, be aware that many organisations have their own policies around using and contributing to open source software. Please take such policies into account when making use of the distribution and installation tools provided with Python.

## Key terms

- `pip` is the preferred installer program. Starting with Python 3.4, it is included by default with the Python binary installers.
- a virtual environment is a semi-isolated Python environment that allows packages to be installed for use by a particular application, rather than being installed system wide
- `pyvenv` is the standard tool for creating virtual environments, and has been part of Python since Python 3.3. Starting with Python 3.4, it defaults to installing `pip` into all created virtual environments
- `virtualenv` is a third party alternative (and predecessor) to `pyvenv`. It allows virtual environments to be used on versions of Python prior to 3.4, which either don't provide `pyvenv` at all, or aren't able to automatically install `pip` into created environments

Previous topic

Changelog

Next topic

1. Whetting Your Appetite

This Page

Report a Bug  
Show Source

Quick search

Go

Enter search terms or a module,  
class or function name.

# The Python Tutorial

Python is an easy to learn, powerful programming language. It has efficient high-level data structures and a simple but effective approach to object-oriented programming. Python's elegant syntax and dynamic typing, together with its interpreted nature, make it an ideal language for scripting and rapid application development in many areas on most platforms.

The Python interpreter and the extensive standard library are freely available in source or binary form for all major platforms from the Python Web site, <https://www.python.org/>, and may be freely distributed. The same site also contains distributions of and pointers to many free third party Python modules, programs and tools, and additional documentation.

The Python interpreter is easily extended with new functions and data types implemented in C or C++ (or other languages callable from C). Python is also suitable as an extension language for customizable applications.

This tutorial introduces the reader informally to the basic concepts and features of the Python language and system. It helps to have a Python interpreter handy for hands-on experience, but all examples are self-contained, so the tutorial can be read off-line as well.

For a description of standard objects and modules, see [The Python Standard Library](#). [The Python Language Reference](#) gives a more formal definition of the language. To write extensions in C or C++, read [Extending and Embedding the Python Interpreter](#) and [Python/C API Reference Manual](#). There are also several books covering Python in depth.

This tutorial does not attempt to be comprehensive and cover every single feature, or even every commonly used feature. Instead, it introduces many of Python's most noteworthy features, and will give you a good idea of the language's flavor and style. After reading it, you will be able to read and write Python modules and programs, and you will be ready to learn more about the various Python library modules described in [The Python Standard Library](#).

The [Glossary](#) is also worth going through.

g Google 3. An Informal Introduction Mark

Python Software Foundation [US] https://docs.python.org/3/tutorial/introduction.html#strings

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## Table Of Contents

- 3. An Informal Introduction to Python
  - 3.1. Using Python as a Calculator
    - 3.1.1. Numbers
    - 3.1.2. Strings
    - 3.1.3. Lists
  - 3.2. First Steps Towards Programming

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2. Using the Python Interpreter

## Next topic

4. More Control Flow Tools

## This Page

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## Quick search

Enter search terms or a module, class or function name.

Go

# 3. An Informal Introduction to Python

In the following examples, input and output are distinguished by the presence or absence of prompts (`>>>` and `...`): to repeat the example, you must type everything after the prompt, when the prompt appears; lines that do not begin with a prompt are output from the interpreter. Note that a secondary prompt on a line by itself in an example means you must type a blank line; this is used to end a multi-line command.

Many of the examples in this manual, even those entered at the interactive prompt, include comments. Comments in Python start with the hash character, `#`, and extend to the end of the physical line. A comment may appear at the start of a line or following whitespace or code, but not within a string literal. A hash character within a string literal is just a hash character. Since comments are to clarify code and are not interpreted by Python, they may be omitted when typing in examples.

Some examples:

```
# this is the first comment
spam = 1 # and this is the second comment
          # ... and now a third!
text = "# This is not a comment because it's inside quotes."
```

## 3.1. Using Python as a Calculator

Let's try some simple Python commands. Start the interpreter and wait for the primary prompt, `>>>`. (It shouldn't take long.)

### 3.1.1. Numbers

The interpreter acts as a simple calculator: you can type an expression at it and it will write the value. Expression syntax is straightforward: the operators `+`, `-`, `*` and `/` work just like in most other languages (for example, Pascal or C); parentheses `( )` can be used for grouping. For example:

>>> 2 + 2

# Resources III: <https://csimoodle.ucd.ie/moodle/>

RubyLect1.2017new    School of Computer Science -    Mark

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▶ LEVEL 4  
▶ LEVEL 5  
▶ MSc  
▶ PhD  
▶ Sri Lanka  
▶ BDIC

type !

click !

▶ Expand all

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## Search results: 1

click !

COMP47600 Text Analytics to Discover Meaning 2018-19

Lecturer: Mark Keane

Introduction to Text Analytics.

Category: MSc

Search courses

text analytics 19

Go

# Resources III: <https://csimoodle.ucd.ie/moodle/>

pe Workshop on the Philosophy of X Editing File CSMOODLE.UCD.IE: Log in to t x Mark

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# CSMOODLE.UCD.IE

Social networks   

Log in

Your session has timed out. Please log in again.

Username mkeane

Password .....

Remember username

**Log in**

[Forgotten your username or password?](#)

Cookies must be enabled in your browser 

Some courses may allow guest access

**Log in as a guest**

ucd username & connect password!

Enrollment Key: ta2018

# Resources III: That's a Bingo !

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## Text Analytics

- Participants
- Badges
- Competencies
- Grades
- General
  - 10 September - 16 September
  - 17 September - 23 September
  - 24 September - 30 September
  - 1 October - 7 October
  - 8 October - 14 October
  - 15 October - 21 October
  - 22 October - 28 October

# COMP47600 Text Analytics to Discover Meaning 2018-19

Home / My courses / Text Analytics Turn editing on

Announcements  
News forum  
Class Chat (not social)

## 10 September - 16 September

**INTRODUCTION** (Lecture 1). The plan for this first week is really just to introduce the course. Look at some of the software we will use and to get this software installed; get us all on the same page with respect to a basic level environment to use. This is the main goal for the week. Next week I will assume all of this is done.

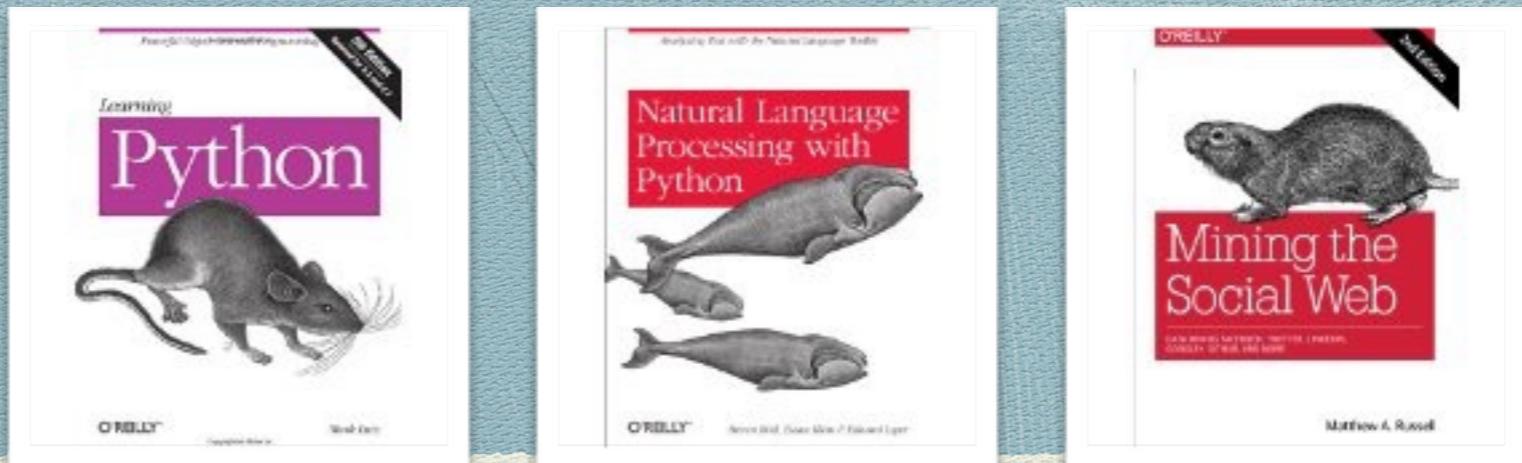
Course Outline (Provisional)  
Lecture1: Introduction  
Lect1: Intro (Print Version)

Search forums Go  
Advanced search ?

Latest announcements  
Add a new topic...  
(No announcements have been posted yet.)

Upcoming events  
There are no upcoming events  
Go to calendar...

# Books



Lutz, M. (2013). Learning python. O'Reilly Media, Inc.

Bird, S., Klein, E., & Loper, E. (2009). Natural language processing with Python. O'Reilly Media, Inc.

Russell, M. A. (2013). Mining the Social Web: Data Mining Facebook, Twitter, LinkedIn, Google+, GitHub, and More. O'Reilly Media, Inc..

**Installation**

**What We Now Have...**

# We have...

- ◆ Installed Python
- ◆ Installed an IDE
- ◆ Installed a package (nltk)
- ◆ Installed a package's data (nltk data)
- ◆ Now...we are ready to go...