

Introductory Scientific Computing with Python

Some preliminaries

FOSSEE

Department of Aerospace Engineering
IIT Bombay

Mumbai, India

What is Python?

- Python: the programming language
- **python**: the interpreter

The interpreter

```
$ python
Python 2.7.9 (default, Feb 10 2015, 03:29:10)
Type "help", "copyright", "credits" or "license"
>>>
```

The interpreter

```
$ python hello.py  
hello world  
$
```


Python standard library

- Built-in
- “Batteries included”
- Lot of important functionality

Python packages

- Many other packages available
- `ipython`
- `numpy`
- `scipy`
- `matplotlib`
- `PyQt`
- `django`
- `mayavi`
- About 1 lakh packages!

Python PSF Docs PyPI Jobs Community



About Downloads Documentation Community Success Stories News Events


Download the latest version for Mac OS X

[Download Python 3.5.2](#) [Download Python 2.7.13](#)

Wondering which version to use? [Here's more about the difference between Python 2 and 3.](#)

Looking for Python with a different OS? Python for [Windows](#), [Linux/UNIX](#), [Mac OS X](#), [Other](#)

Want to help test development versions of Python? [Pre-releases](#)



Looking for a specific release?

Python releases by version number:

Release version	Release date		Click for more
Python 2.7.13	2016-12-17	Download	Release Notes
Python 3.4.5	2016-06-27	Download	Release Notes
Python 3.5.2	2016-06-27	Download	Release Notes

Python distributions

- GNU/Linux: easy to install
- Usually many packages are easy to install
- Example: **apt-get**, **yum** etc.
- Not so easy on OS X and Windows

Python distribution: Canopy

- `www.enthought.com/products/canopy`
- Easy to use
- Simple IDE
- Cross platform: Linux, OSX, Windows
- Free installer
- Many packages

Python distribution: Anaconda

- `www.continuum.io/downloads`
- Cross platform: Linux, OSX, Windows
- Free installer
- Many packages

For this course

- Using Canopy
- Simple UI
- Easy for beginners

- Advanced users can use anything they want!

Setup

- Download for your platform
- Install it
- Start Canopy

Summary

- Python: the programming language
- **python**: the interpreter
- Python standard library
- Other Python packages
- Python distributions