Introduction to Python

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Python Introduction

Why Python ?

- ▶ General-purpose programming language (Batteries included)
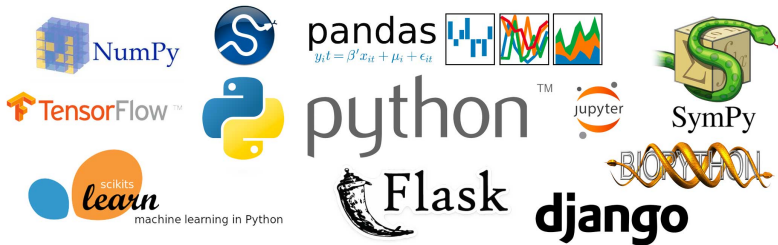
We offer the following Python training

Figure 1: Lots of libraries

Python Introduction

Why Python ?

- General-purpose programming language (Batteries included)
- Emphasizes Readability and on Productivity

```
print "Hello World!"
```

Python Introduction

Why Python ?

- General-purpose programming language (Batteries included)
- Emphasizes Readability and on Productivity

```python
def f(x):
    return x**3

print f(2)
```

Python Introduction

Why Python ?

- ▶ General-purpose programming language (Batteries included)
- ▶ Emphasizes Readability and on Productivity
- ▶ It's free!

Python Introduction

Figure 2: Python 2.7 is the recommended version

Outline

- Hands-on experience
  - Python Fundamentals
  - Data Manipulation and classification
- Future
  - Machine Learning
  - Computer Vision

First steps

Is python (Anaconda) installed ?

- ▶ Type python in command prompt or terminal

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```
wunderkind:~$ python
Python 2.7.11 |Anaconda 4.0.0 (64-bit)| (default, Dec  6 2015, 18:08:32)
[GCC 4.4.7 20120313 (Red Hat 4.4.7-1)] on linux2
Type "help", "copyright", "credits" or "license" for more information.
Anaconda is brought to you by Continuum Analytics.
Please check out: http://continuum.io/thanks and https://anaconda.org
```

First steps

Launch Jupyter

- ▶ Type the following in command prompt or terminal

```
> jupyter notebook
```

Main types

1. Integers

```
a = 3
b = 5

print a + b
```

2. Float

```
a = 3.56
b = 5.23

print a + b
```

Main types

3. String

```
name = "Hello World"

print name
```

Importing libraries

```
import numpy as np

np.log(3)
np.exp(5)
np.array([3,2,1])
```

```
import pylab as plt

plt.scatter([1,2,3,4], [1,2,3,4])
```

I recommend http://codingbat.com/python to learn Python quickly!

- ▶ It contains easy, interesting, interactive Python programming problems