

# Install Sklearn

CISC7202

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# Introduction to Sklearn

# Sklearn Library

- Sklearn is short for scikit-learn and is a third-party module based on Python.
- Sklearn library integrates many common machine learning methods.
- When performing machine learning tasks, you don't need to implement algorithms by yourself.
- You only need to call the modules provided in the sklearn library to complete most machine learning tasks.
- Sklearn library is based on Numpy, Scipy, and matplotlib, so you need to install these dependencies before you can install sklearn.

# Numpy Library

- **Numpy** (short for Numerical Python) is an open source Python scientific computing library. Although the list container and the array module are provided in Python, these structures are not suitable for numerical calculation.
  - It is necessary to create common data structures (such as multidimensional arrays, matrices, etc.) and perform common scientific calculations by the Numpy library ( Such as: matrix operation).
- **Scipy** is the basis of the sklearn library, a Python module based on Numpy that integrates multiple mathematical algorithms and functions. Its different submodules have different applications such as integration, interpolation, optimization and signal processing.
- **Matplotlib** is a Numpy-based Python toolkit that provides a number of data drawing tools for drawing statistical graphs and converting large amounts of data into more acceptable charts.

# Install Sklearn

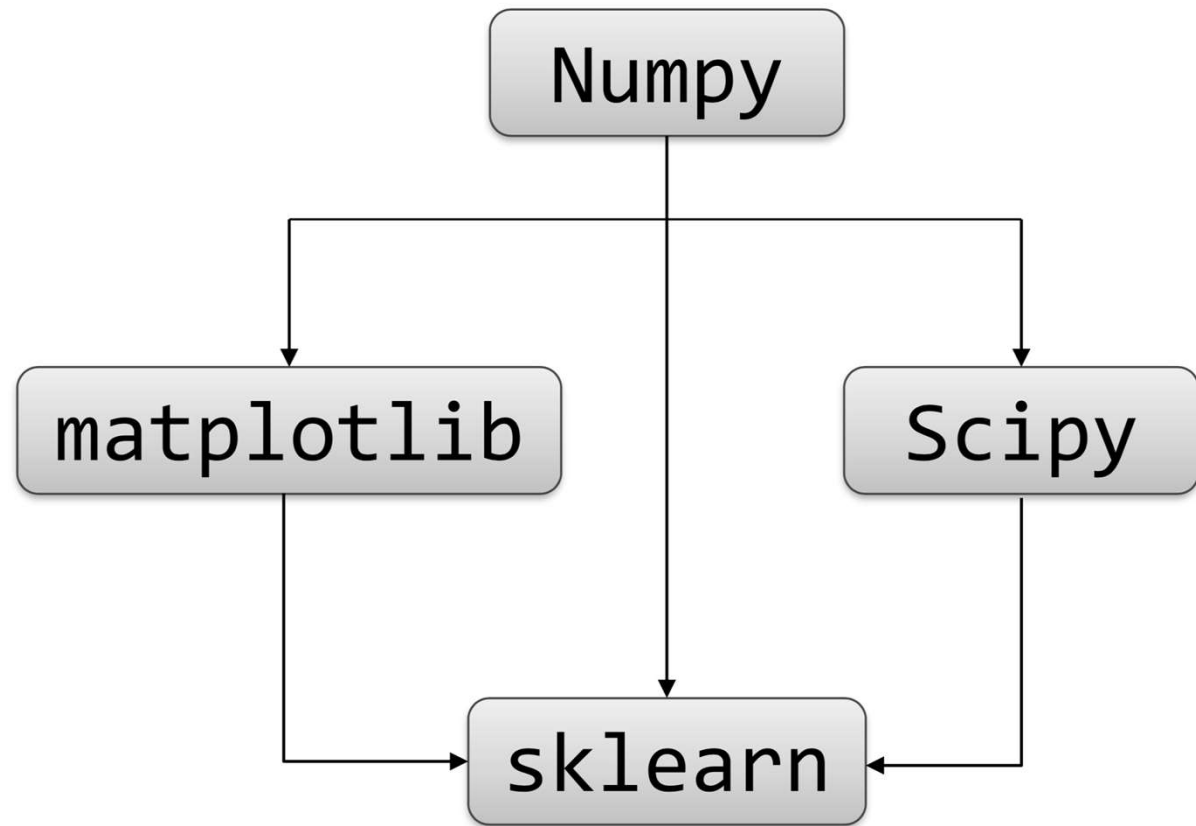
# Download Package

Download webpage: <http://www.lfd.uci.edu/~gohlke/pythonlibs/>

# Installation Order













Installation order:

- Numpy Library
- Scipy Library
- Matplotlib Library
- Sklearn Library



# Install Numpy

- Visit Numpy's download link:  
<https://pypi.org/project/numpy/#files>
- Download the corresponding file according to the specific version of Python.
- For example, if this course uses the 64-bit version of Python 3.7, download the win\_amd64.whl file.

<a href="#">numpy-1.15.1-cp35-none-win_amd64.whl</a> (13.5 MB)  SHA256	Wheel	cp35	Aug 21, 2018
<a href="#">numpy-1.15.1-cp36-cp36m-macosx_10_6_intel.macosx_10_9_intel.macosx_10_9_x86_64.macosx_10_10_intel.macosx_10_10_x86_64.whl</a> (24.5 MB)  SHA256	Wheel	cp36	Aug 21, 2018
<a href="#">numpy-1.15.1-cp36-cp36m-manylinux1_i686.whl</a> (10.2 MB)  SHA256	Wheel	cp36	Aug 21, 2018
<a href="#">numpy-1.15.1-cp36-cp36m-manylinux1_x86_64.whl</a> (13.9 MB)  SHA256	Wheel	cp36	Aug 21, 2018
<a href="#">numpy-1.15.1-cp36-none-win32.whl</a> (9.9 MB)  SHA256	Wheel	cp36	Aug 21, 2018
<a href="#">numpy-1.15.1-cp36-none-win_amd64.whl</a> (13.5 MB)  SHA256	Wheel	cp36	Aug 21, 2018
<a href="#">numpy-1.15.1-cp37-cp37m-macosx_10_6_intel.macosx_10_9_intel.macosx_10_9_x86_64.macosx_10_10_intel.macosx_10_10_x86_64.whl</a> (24.5 MB)  SHA256	Wheel	cp37	Aug 21, 2018
<a href="#">numpy-1.15.1-cp37-cp37m-manylinux1_i686.whl</a> (10.2 MB)  SHA256	Wheel	cp37	Aug 21, 2018
<a href="#">numpy-1.15.1-cp37-cp37m-manylinux1_x86_64.whl</a> (13.8 MB)  SHA256	Wheel	cp37	Aug 21, 2018
<a href="#">numpy-1.15.1-cp37-none-win32.whl</a> (9.9 MB)  SHA256	Wheel	cp37	Aug 21, 2018
<a href="#">numpy-1.15.1-cp37-none-win_amd64.whl</a> (13.5 MB)  SHA256	Wheel	cp37	Aug 21, 2018
<a href="#">numpy-1.15.1.zip</a> (4.5 MB)  SHA256	Source	None	Aug 21, 2018

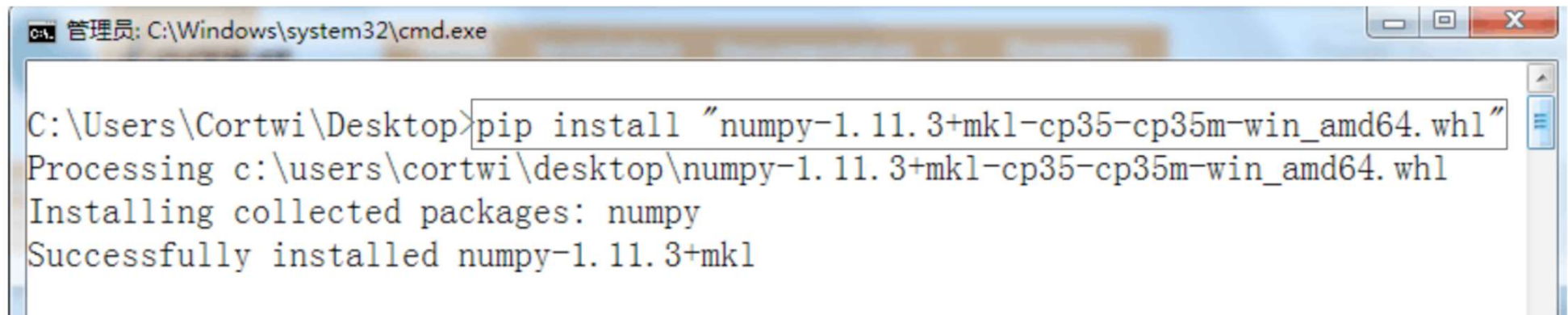


# Installing Numpy

- Find the path to the downloaded file, open DOS command line window at Windows, and execute the following command:

*pip install numpy-1.15.1-cp37-none-win\_amd64.whl*

# Installing Numpy







```
C:\Users\Cortwi\Desktop>pip install "numpy-1.11.3+mkl-cp35-cp35m-win_amd64.whl"
Processing c:\users\cortwi\desktop\numpy-1.11.3+mkl-cp35-cp35m-win_amd64.whl
Installing collected packages: numpy
Successfully installed numpy-1.11.3+mkl
```

If no installation errors are prompted, the installation is successful.

# Install Scipy

- Visit Scipy's download link: <https://pypi.org/project/scipy/>
- Download the corresponding file according to the specific version of Python. Also here you need to download the \*win\_amd64.whl file in the red box.

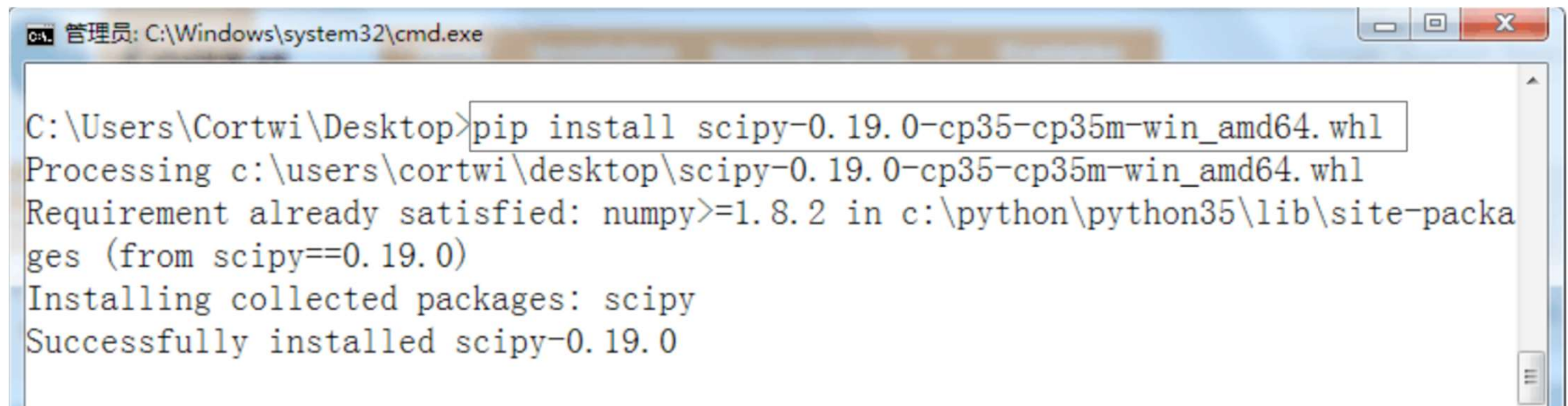
<a href="#">scipy-1.1.0-cp37-cp37m-manylinux1_x86_64.whl</a> (31.2 MB)  SHA256	Wheel	cp37	Jul 2, 2018
<a href="#">scipy-1.1.0-cp37-none-win32.whl</a> (26.1 MB)  SHA256	Wheel	cp37	Jul 2, 2018
<a href="#">scipy-1.1.0-cp37-none-win_amd64.whl</a> (30.9 MB)  SHA256	Wheel	cp37	Jul 2, 2018
<a href="#">scipy-1.1.0.tar.gz</a> (15.6 MB)  SHA256	Source	None	May 5, 2018

# Installing Scipy

- Find the path to the downloaded file, open the DOS command line window for Windows, and use the following command:

*pip install scipy-1.1.0-cp37-none-win\_amd64.whl*

# Installing Scipy







```
管理员: C:\Windows\system32\cmd.exe  
C:\Users\Cortwi\Desktop>pip install scipy-0.19.0-cp35-cp35m-win_amd64.whl  
Processing c:\users\cortwi\desktop\scipy-0.19.0-cp35-cp35m-win_amd64.whl  
Requirement already satisfied: numpy>=1.8.2 in c:\python\python35\lib\site-packa  
ges (from scipy==0.19.0)  
Installing collected packages: scipy  
Successfully installed scipy-0.19.0
```

If no installation errors are prompted, the installation is successful.

# Install Matplotlib

- Visit Matplotlib's download link:  
<https://pypi.org/project/matplotlib/#files>
- Download the corresponding file according to the specific version of Python. Also here you need to download *\*win\_amd64.whl* file in the red box.

<a href="#">matplotlib-3.0.0-cp37-cp37m-manylinux1_x86_64.whl</a> (12.8 MB)  SHA256	Wheel	cp37	Sep 19, 2018
<a href="#">matplotlib-3.0.0-cp37-cp37m-win32.whl</a> (8.7 MB)  SHA256	Wheel	cp37	Sep 19, 2018
<a href="#">matplotlib-3.0.0-cp37-cp37m-win_amd64.whl</a> (8.9 MB)  SHA256	Wheel	cp37	Sep 19, 2018
<a href="#">matplotlib-3.0.0.tar.gz</a> (36.3 MB)  SHA256	Source	None	Sep 18, 2018

# Install Matplotlib

- Find the path to the downloaded file, open the DOS command line window for Windows, and use the following command:

*pip install matplotlib-3.0.0-cp37-cp37m-win\_amd64.whl*






# Installing Matplotlib

```
C:\Users\Cortwi\Desktop>pip install matplotlib-2.0.0-cp35-cp35m-win_amd64.whl
Processing c:\users\cortwi\desktop\matplotlib-2.0.0-cp35-cp35m-win_amd64.whl
Collecting cyclor<=0.10 (from matplotlib==2.0.0)
  Downloading cyclor-0.10.0-py2.py3-none-any.whl
Requirement already satisfied: numpy>=1.7.1 in c:\python\python35\lib\site-packa
ges (from matplotlib==2.0.0)
Collecting python-dateutil (from matplotlib==2.0.0)
  Downloading python_dateutil-2.6.0-py2.py3-none-any.whl (194kB)
    42% |#####| 81kB 92kB/s eta 0:00:02
    47% |#####| 92kB 103kB/s eta 0:00
    52% |#####| 102kB 113kB/s eta 0:
    57% |#####| 112kB 115kB/s eta
    63% |#####| 122kB 164kB/s et
    68% |#####| 133kB 113kB/s e
    73% |#####| 143kB 168kB/s
    79% |#####| 153kB 168kB
    84% |#####| 163kB 168k
    89% |#####| 174kB 29
    94% |#####| 184kB
   100% |#####| 194kB
```



# Installing Sklearn

- Visit Sklearn's download link: <https://pypi.org/project/scikit-learn/>
- Download the corresponding file according to the specific version of Python. Also here you need to download *\*win\_amd64.whl* file in the red box on the right.

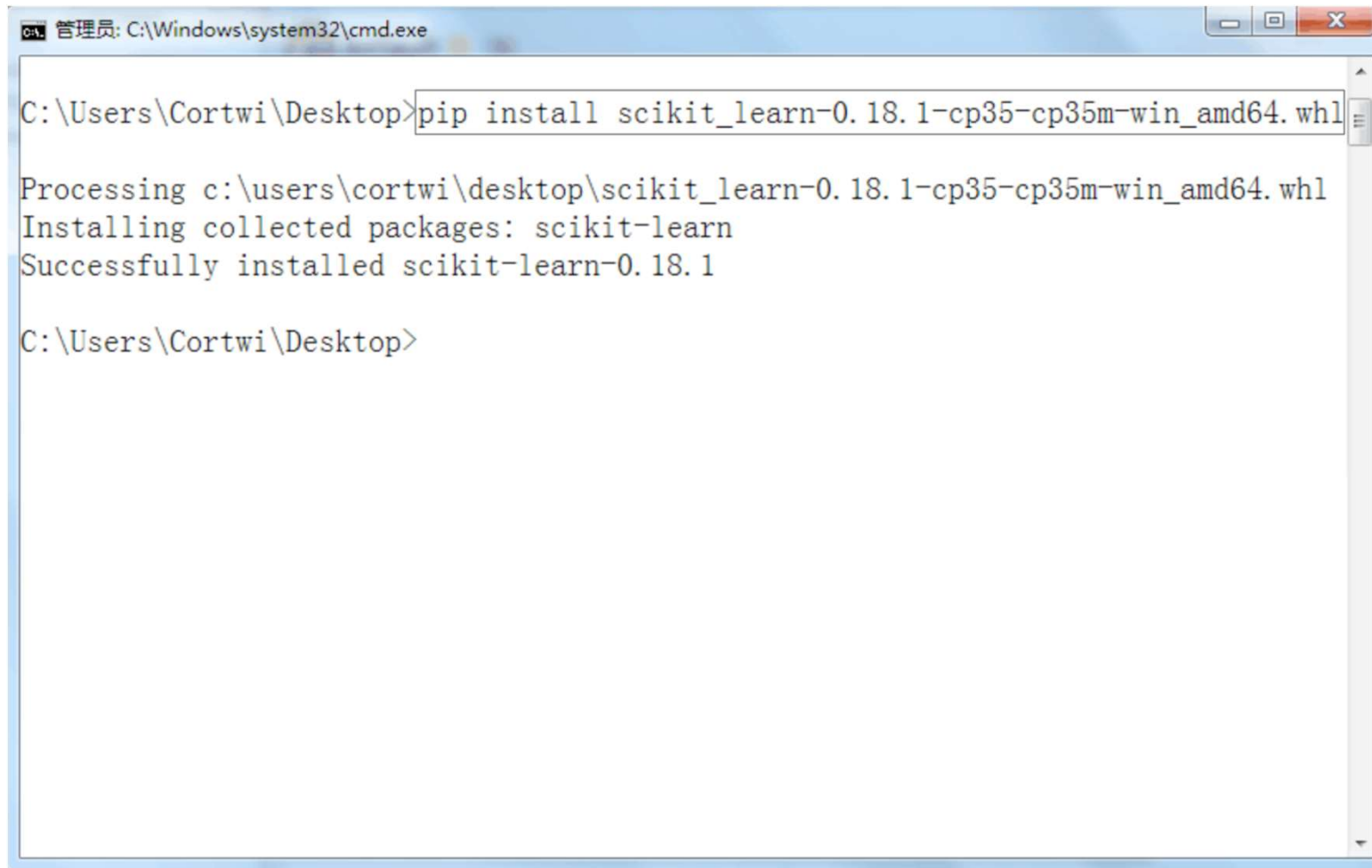
<a href="#">scikit_learn-0.19.2-cp37-cp37m-manylinux1_i686.whl</a> (4.4 MB)  SHA256	Wheel	cp37	Jul 15, 2018
<a href="#">scikit_learn-0.19.2-cp37-cp37m-manylinux1_x86_64.whl</a> (4.9 MB)  SHA256	Wheel	cp37	Jul 15, 2018
<a href="#">scikit_learn-0.19.2-cp37-cp37m-win32.whl</a> (3.9 MB)  SHA256	Wheel	cp37	Jul 15, 2018
<a href="#">scikit_learn-0.19.2-cp37-cp37m-win_amd64.whl</a> (4.4 MB)  SHA256	Wheel	cp37	Jul 15, 2018
<a href="#">scikit-learn-0.19.2.tar.gz</a> (9.7 MB)  SHA256	Source	None	Jul 15, 2018

# Installing Sklearn

- Find the path to the downloaded file, open DOS command line window for Windows, and use the following command:

*pip install scikit\_learn-0.19.2-cp37-cp37m-win\_amd64.whl*

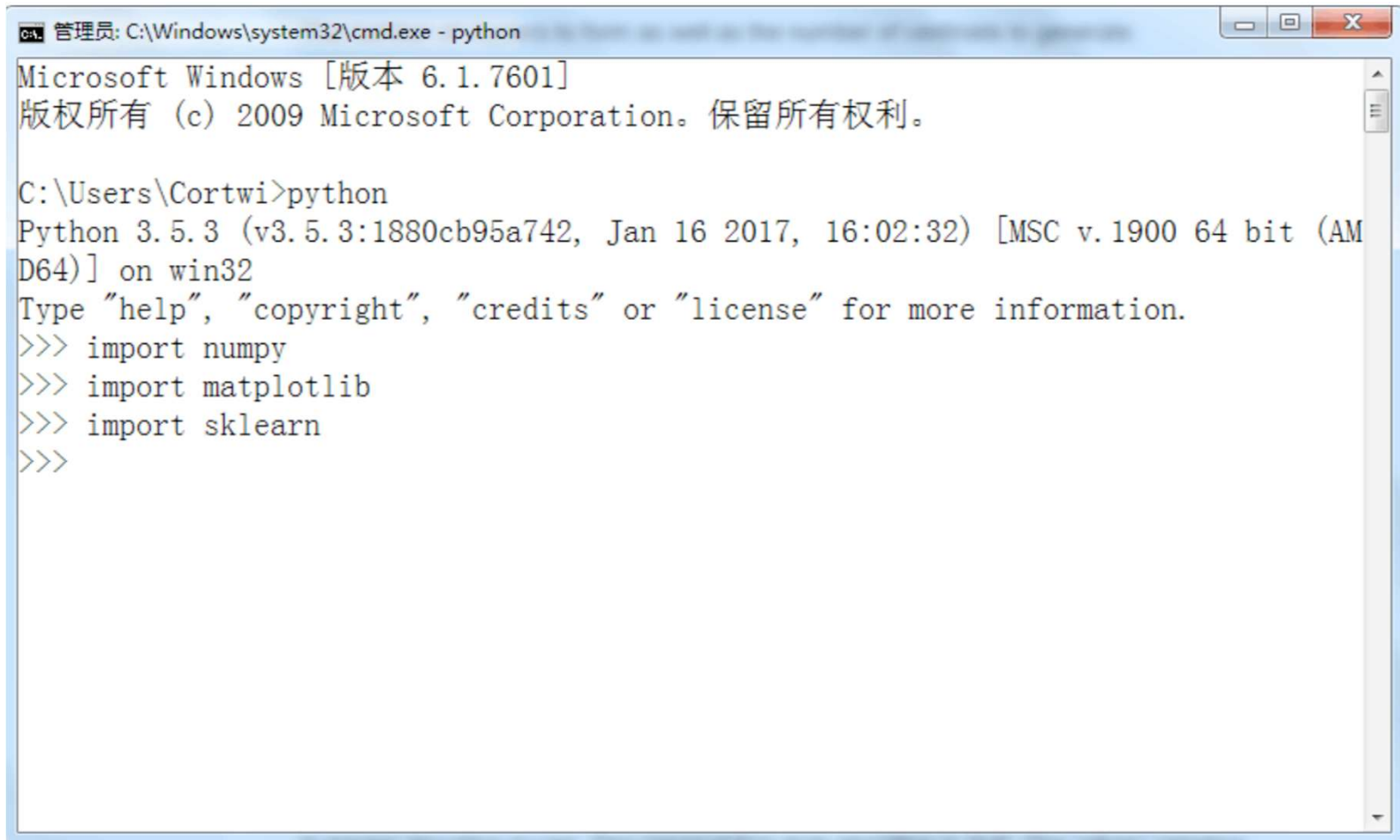
# Installing Sklearn



A screenshot of a Windows command prompt window titled "管理员: C:\Windows\system32\cmd.exe". The window shows the following text:

```
C:\Users\Cortwi\Desktop>pip install scikit_learn-0.18.1-cp35-cp35m-win_amd64.whl  
  
Processing c:\users\cortwi\desktop\scikit_learn-0.18.1-cp35-cp35m-win_amd64.whl  
Installing collected packages: scikit-learn  
Successfully installed scikit-learn-0.18.1  
  
C:\Users\Cortwi\Desktop>
```

# Test



```
管理员: C:\Windows\system32\cmd.exe - python
Microsoft Windows [版本 6.1.7601]
版权所有 (c) 2009 Microsoft Corporation。保留所有权利。

C:\Users\Cortwi>python
Python 3.5.3 (v3.5.3:1880cb95a742, Jan 16 2017, 16:02:32) [MSC v.1900 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> import numpy
>>> import matplotlib
>>> import sklearn
>>>
```