Anaconda IDE的基本使用

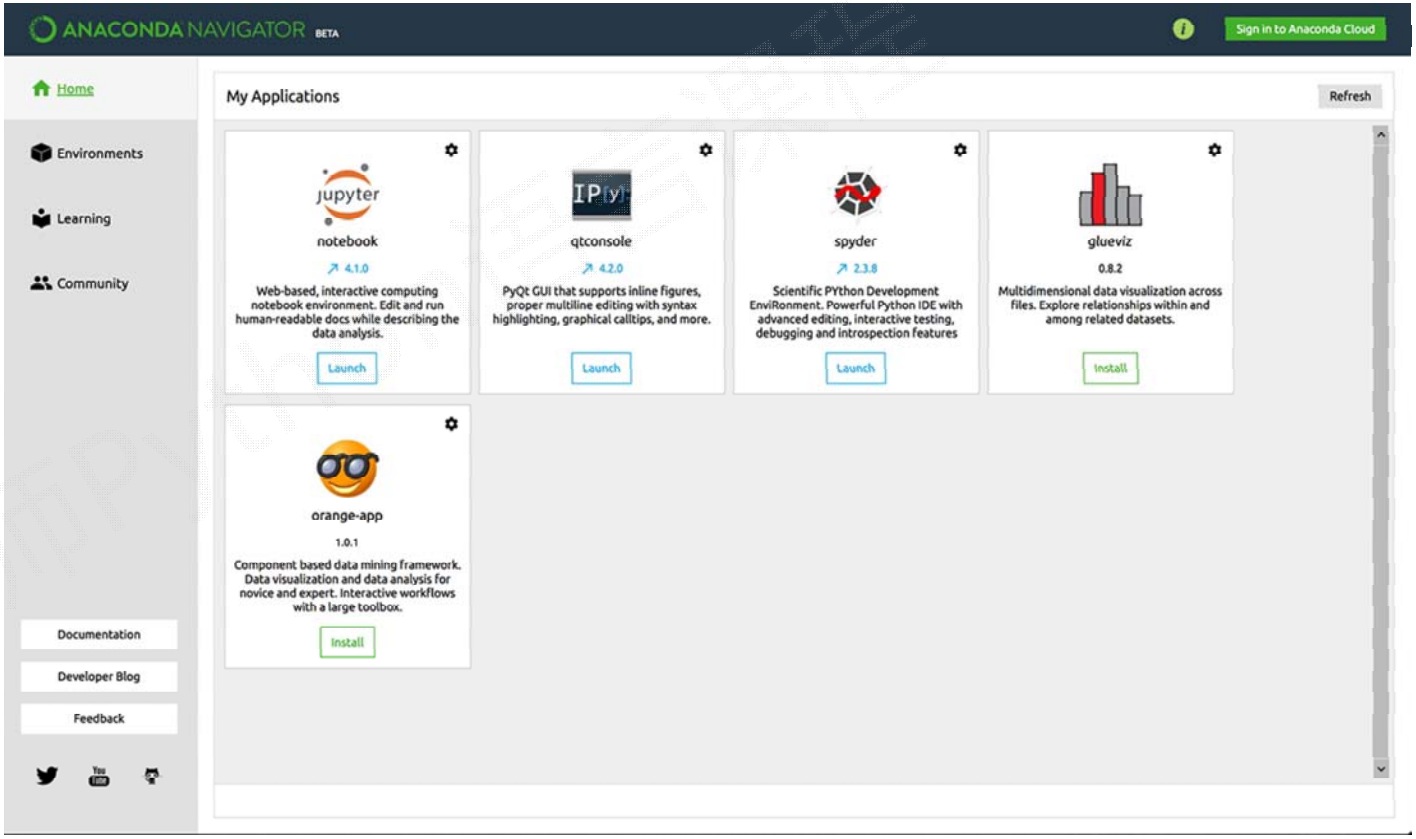
嵩天

www.python123.org

Anaconda

https://www.continuum.io

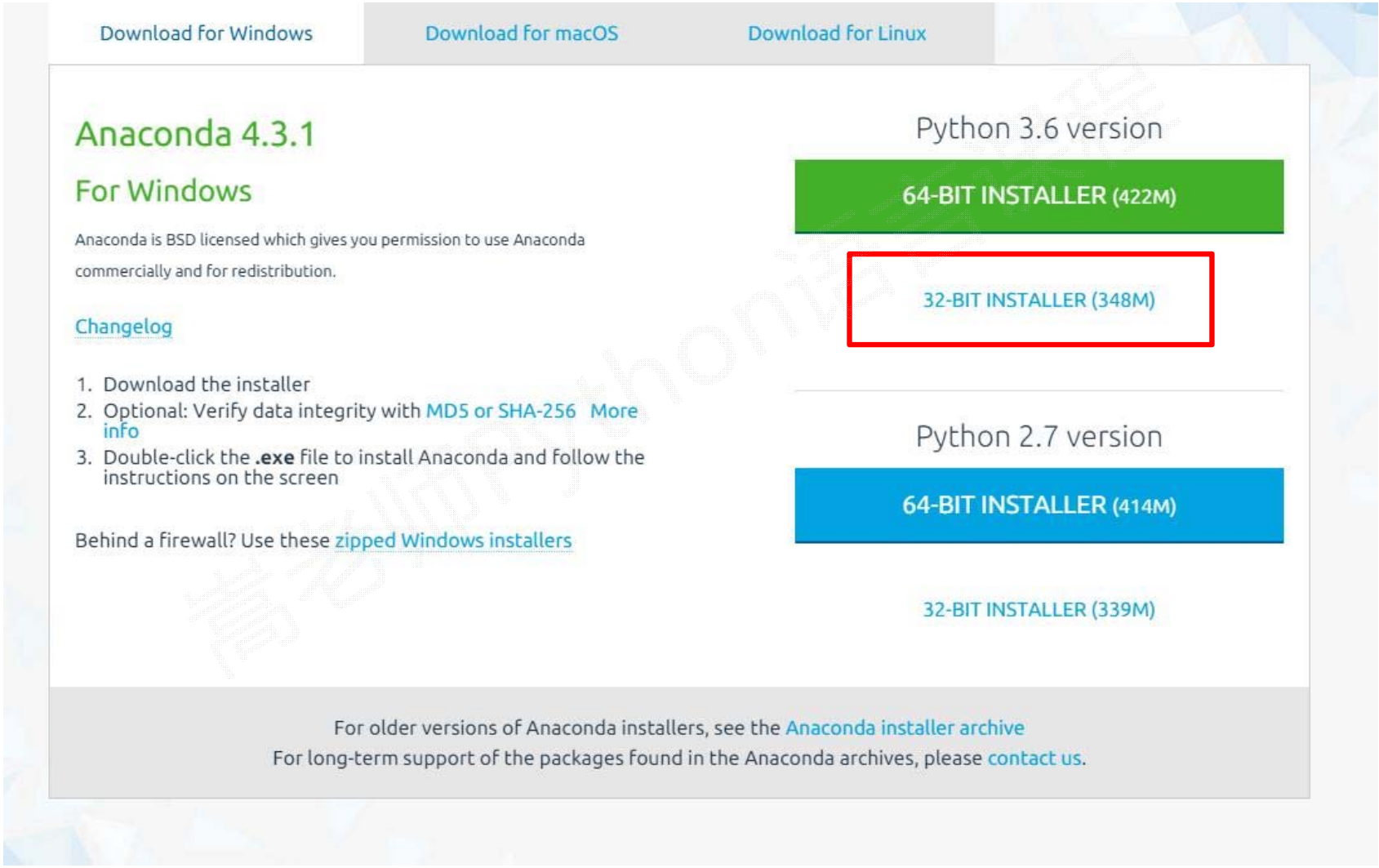
- 开源免费
- 支持近800个第三方库
- 包含多个主流工具
- 适合数据计算领域开发
- Win/Linux/OS X



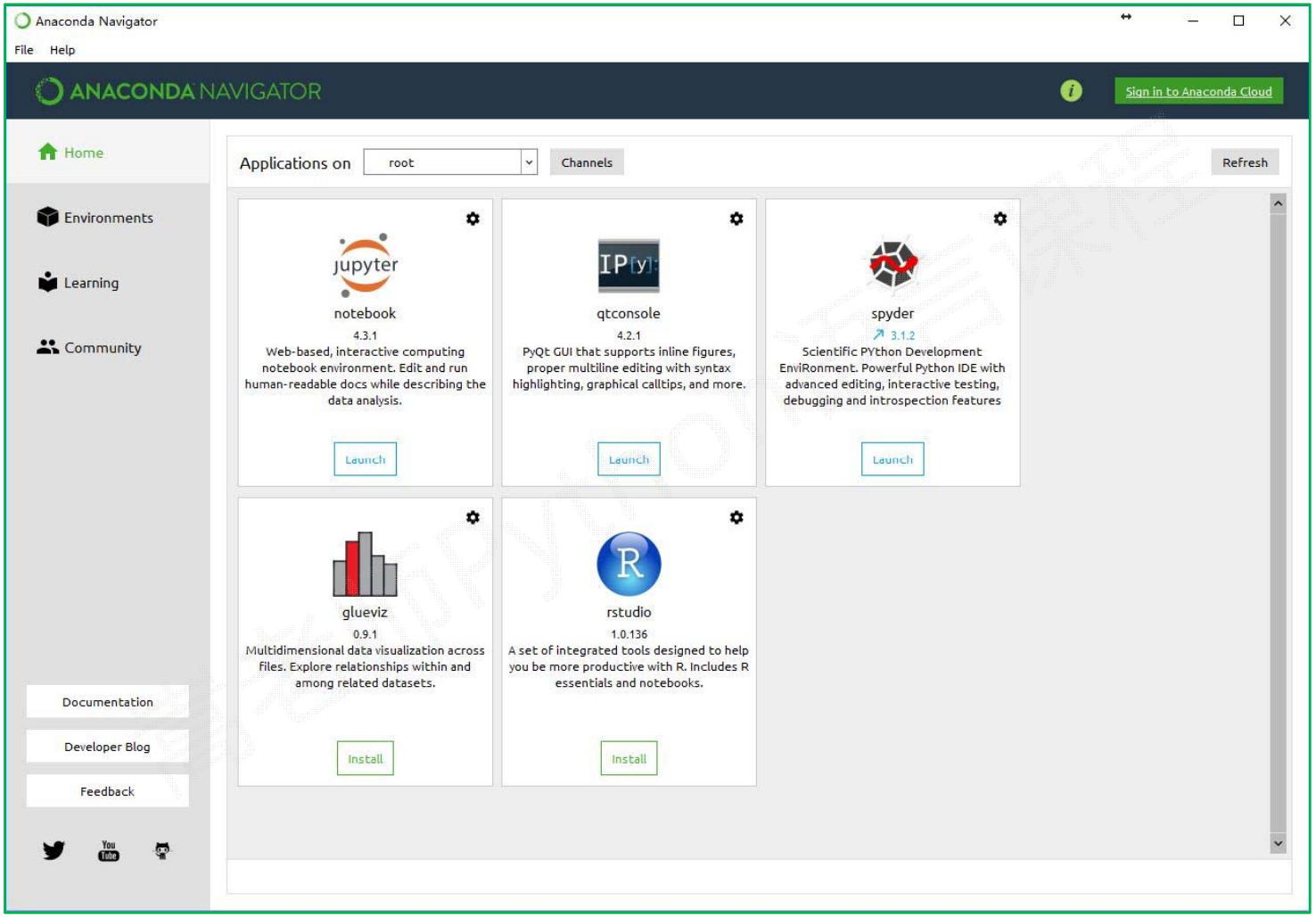
Anaconda首页

https://www.continuum.io/

Anaconda下载


Download for Windows
Download for macOS
Download for Linux
Anaconda 4.3.1
For Windows
Anaconda is BSD licensed which gives you permission to use Anaconda commercially and for redistribution.
Changelog
1. Download the installer
2. Optional: Verify data integrity with MD5 or SHA-256 More info
3. Double-click the .exe file to install Anaconda and follow the instructions on the screen
Behind a firewall? Use these zipped Windows installers
Python 3.6 version
64-BIT INSTALLER (422M)
32-BIT INSTALLER (348M)
Python 2.7 version
64-BIT INSTALLER (414M)
32-BIT INSTALLER (339M)
For older versions of Anaconda installers, see the Anaconda installer archive
For long-term support of the packages found in the Anaconda archives, please contact us.

Anaconda Navigator



Anaconda是一个集成各类Python工具的集成平台

包管理和环境管理工具：conda

黄老师Python编程课程

conda

conda：一个工具，用于包管理和环境管理，其中：

包管理与pip类似，管理Python第三方库

环境管理能够允许用户使用不同版本Python，并能灵活切换

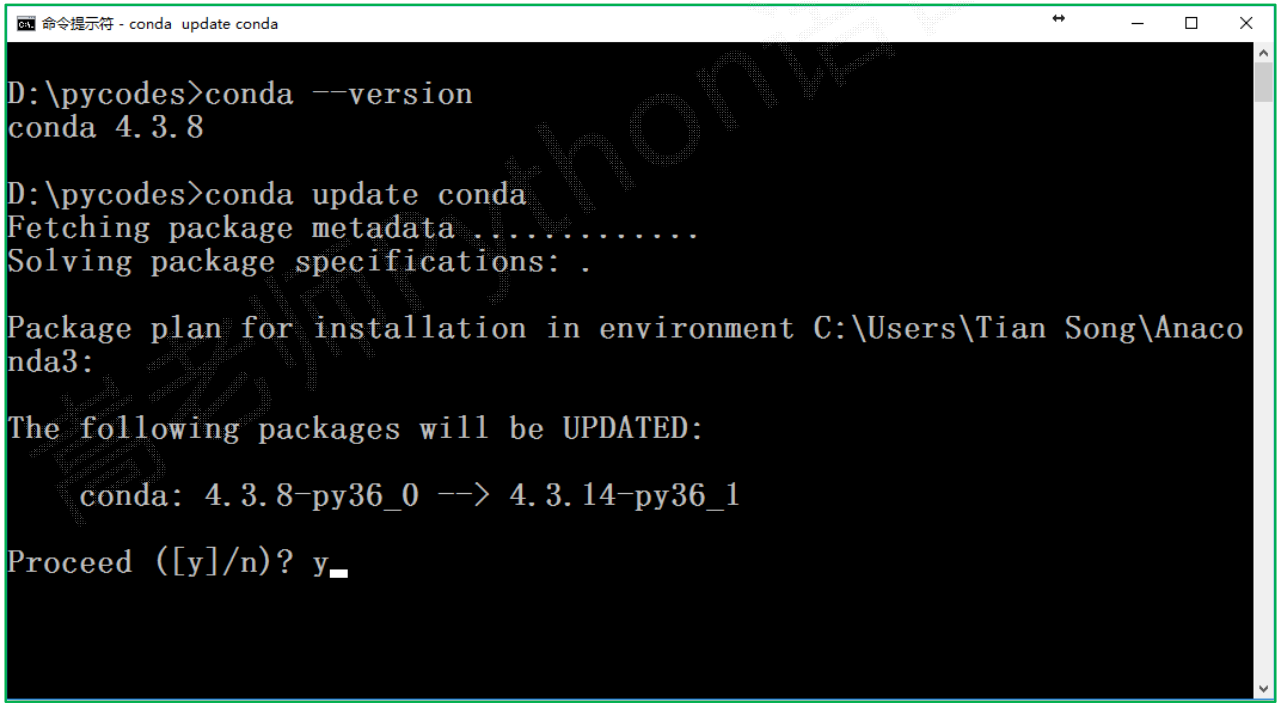
anaconda：一个集合，包括conda、某版本Python、一批第三方库等

conda将工具、第三方库、Python版本、conda都当作包，同等对待

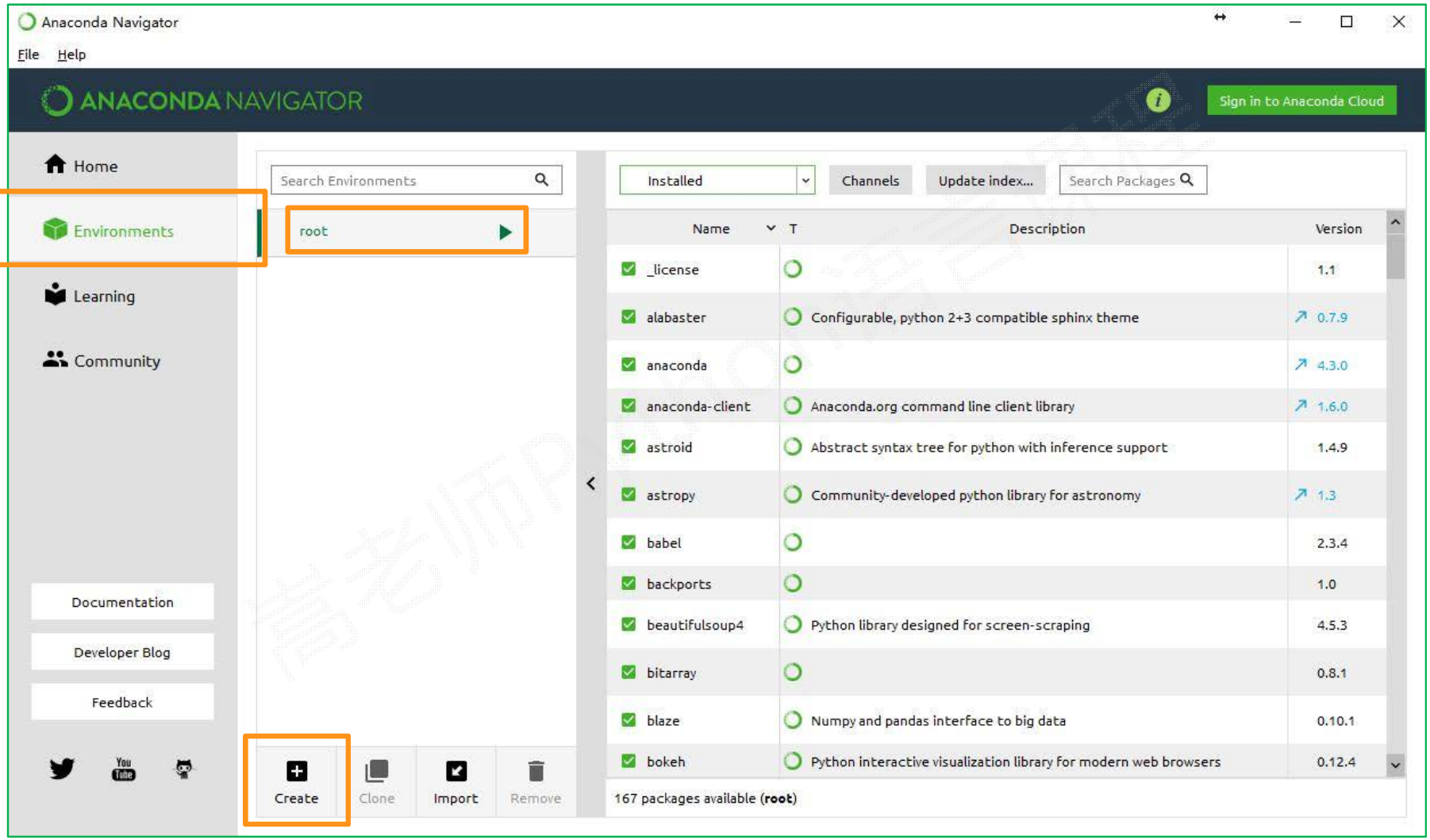
conda

Win平台： cmd，执行 conda --version 获取conda版本

执行 conda update conda 升级conda



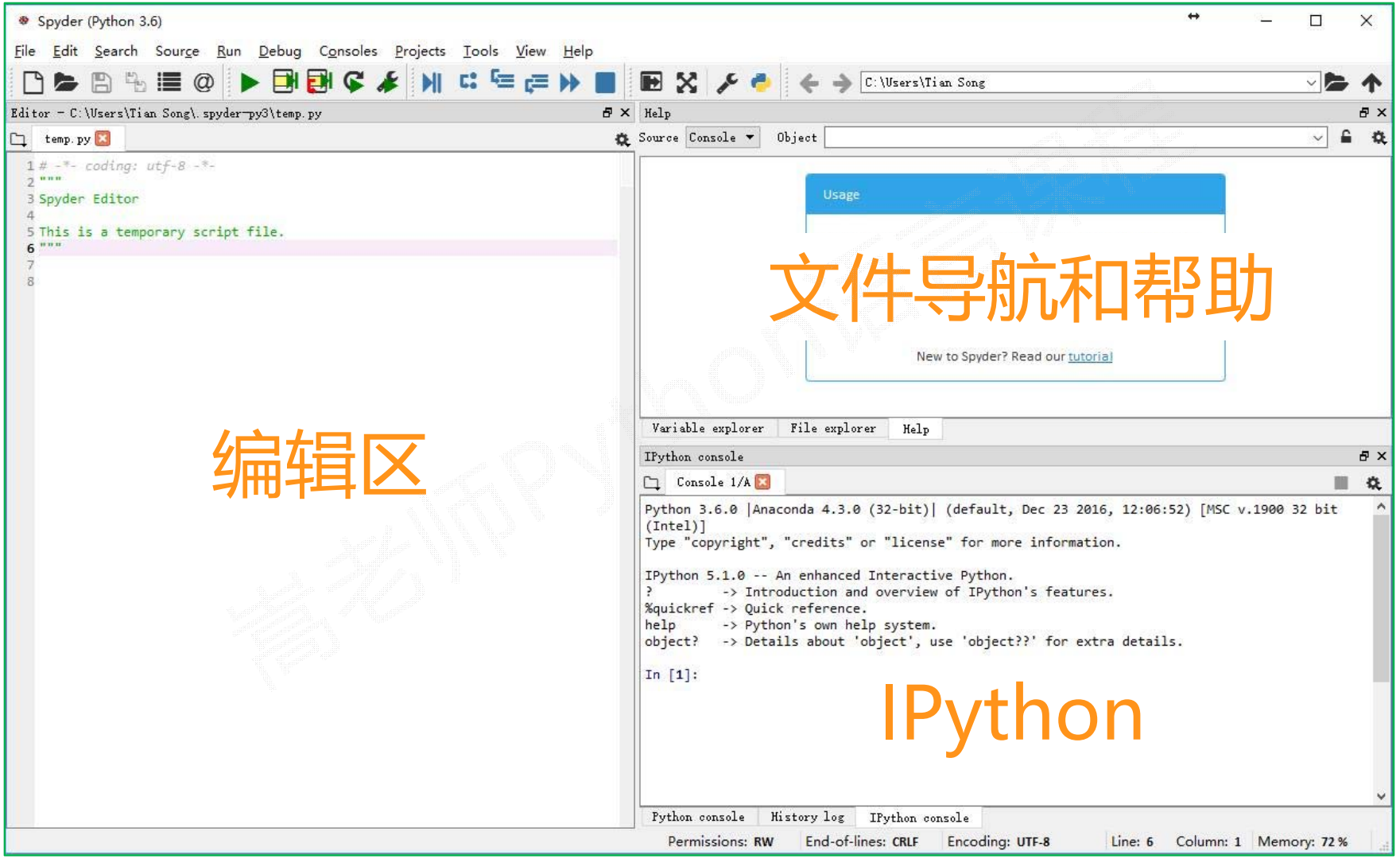
conda


Anaconda Navigator
File Help
ANACONDA NAVIGATOR
Sign in to Anaconda Cloud
Home
Environments
Learning
Community
Documentation
Developer Blog
Feedback
Search Environments
root
Create
Clone
Import
Remove
Installed
Channels
Update index...
Search Packages
Name
T
Description
Version
_license 1.1
alabaster Configurable, python 2+3 compatible sphinx theme 0.7.9
anaconda 4.3.0
anaconda-client Anaconda.org command line client library 1.6.0
astroid Abstract syntax tree for python with inference support 1.4.9
astropy Community-developed python library for astronomy 1.3
babel 2.3.4
backports 1.0
beautifulsoup4 Python library designed for screen-scraping 4.5.3
bitarray 0.8.1
blaze Numpy and pandas interface to big data 0.10.1
bokeh Python interactive visualization library for modern web browsers 0.12.4
167 packages available (root)

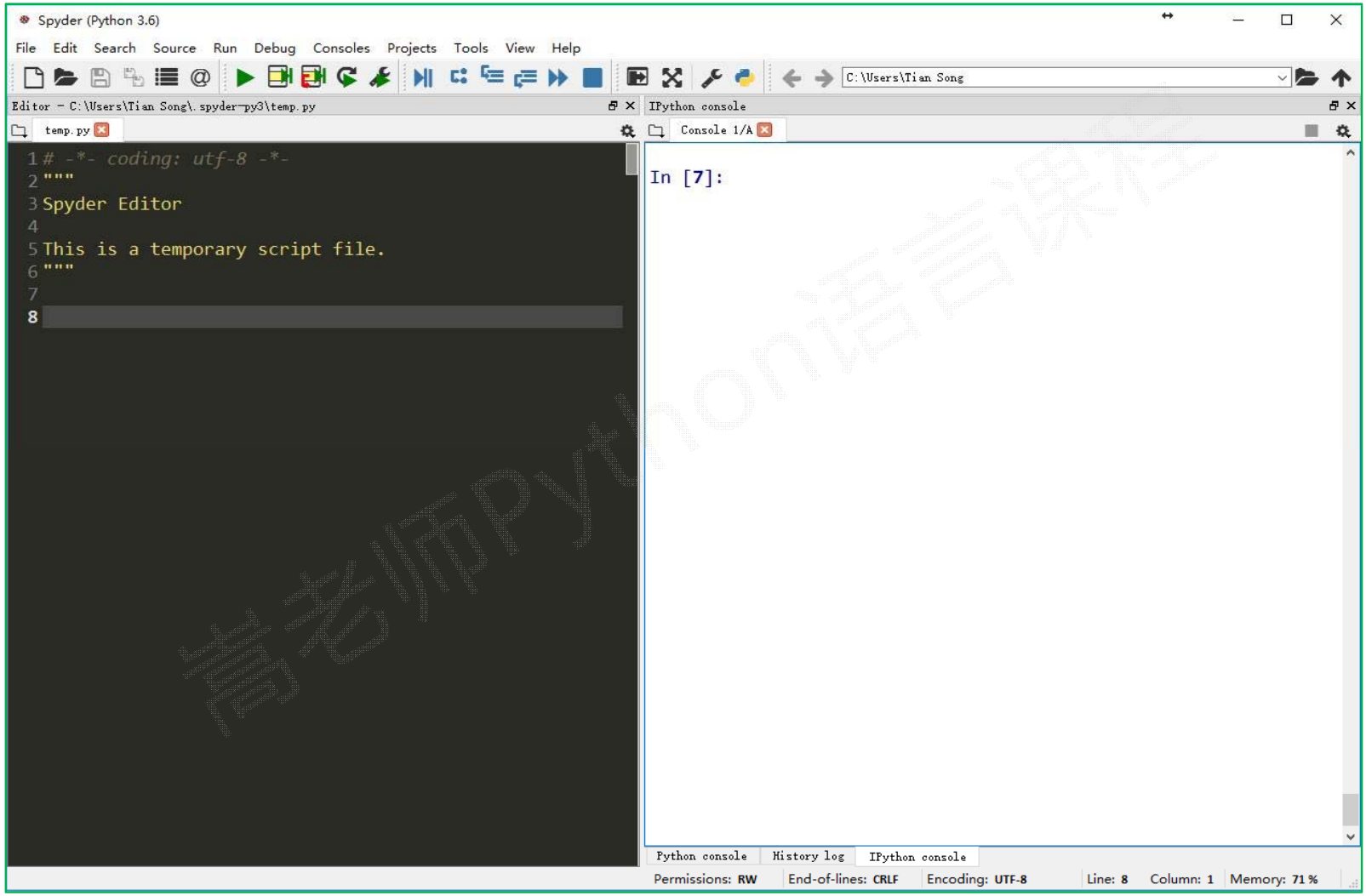
编程工具：Spyder

高老师Python语言课程

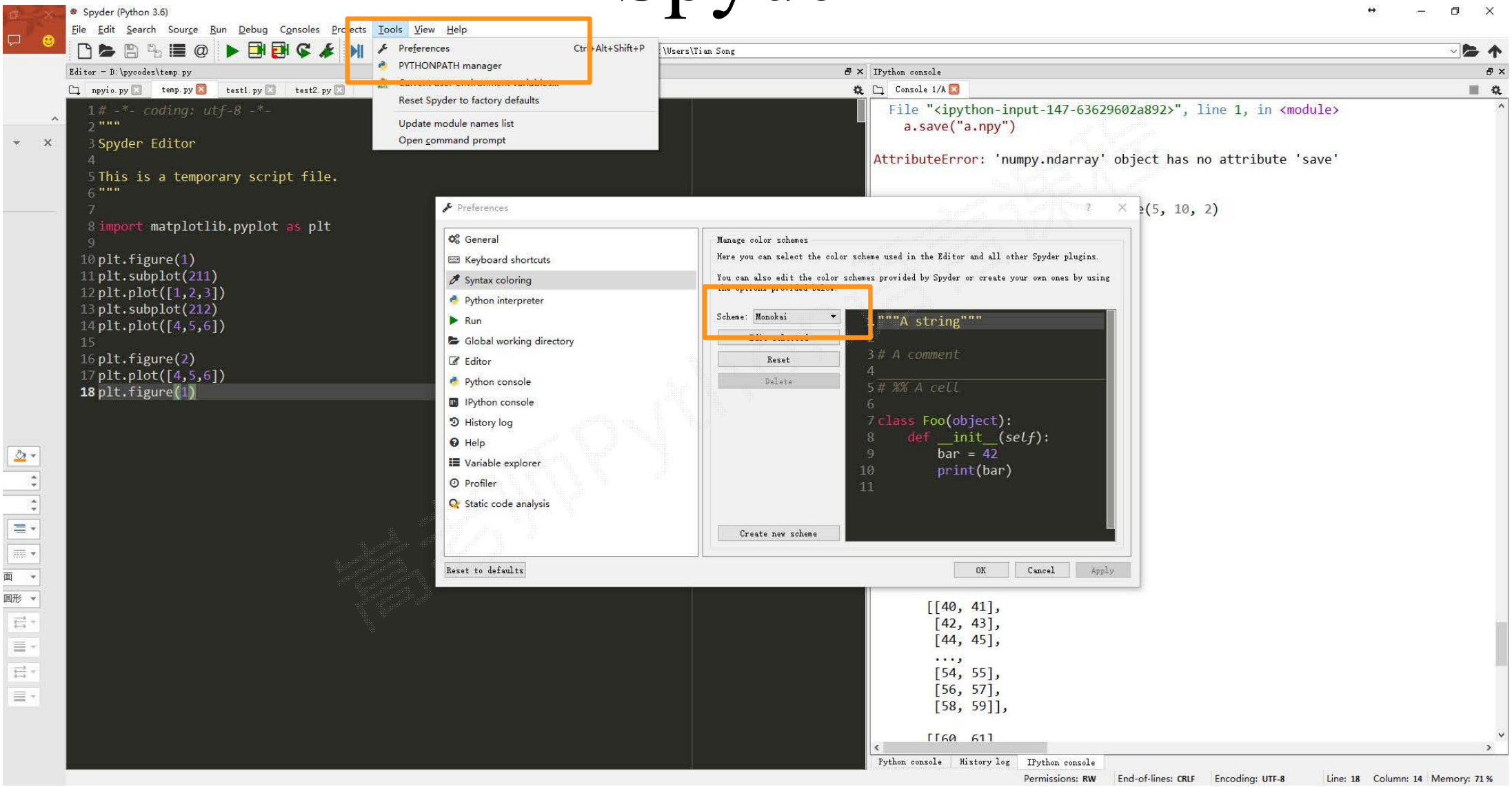
Spyder


Spyder (Python 3.6)
File Edit Search Source Run Debug Consoles Projects Tools View Help
C:\Users\Tian Song
Editor - C:\Users\Tian Song\.spyder-py3\temp.py
temp.py
-*- coding: utf-8 -*-
"""
Spyder Editor
This is a temporary script file.
"""
编辑区
Help
Source Console Object
Usage
New to Spyder? Read our tutorial
文件导航和帮助
Variable explorer File explorer Help
IPython console
Console 1/A
Python 3.6.0 |Anaconda 4.3.0 (32-bit)| (default, Dec 23 2016, 12:06:52) [MSC v.1900 32 bit (Intel)]
Type "copyright", "credits" or "license" for more information.
IPython 5.1.0 -- An enhanced Interactive Python.
? -> Introduction and overview of IPython's features.
%quickref -> Quick reference.
help -> Python's own help system.
object? -> Details about 'object', use 'object??' for extra details.
In [1]:
IPython
Python console History log IPython console
Permissions: RW End-of-lines: CRLF Encoding: UTF-8 Line: 6 Column: 1 Memory: 72 %

Spyder


Spyder (Python 3.6)
File Edit Search Source Run Debug Consoles Projects Tools View Help
C:\Users\Tian Song
Editor - C:\Users\Tian Song\.spyder-py3\temp.py
temp.py
1 # -*- coding: utf-8 -*-
2 """
3 Spyder Editor
4
5 This is a temporary script file.
6 """
7
8
IPython console
Console 1/A
In [7]:
Python console
History log
IPython console
Permissions: RW
End-of-lines: CRLF
Encoding: UTF-8
Line: 8
Column: 1
Memory: 71 %

Spyder


Spyder (Python 3.6)
File Edit Search Source Run Debug Consoles Projects Tools View Help
Preferences Ctrl+Alt+Shift+P
PYTHONPATH manager
Reset Spyder to factory defaults
Update module names list
Open command prompt
Editor - D:\pycodes\temp.py
npyio.py temp.py test1.py test2.py
-*- coding: utf-8 -*-
"""
Spyder Editor
This is a temporary script file.
"""
import matplotlib.pyplot as plt
plt.figure(1)
plt.subplot(211)
plt.plot([1,2,3])
plt.subplot(212)
plt.plot([4,5,6])
plt.figure(2)
plt.plot([4,5,6])
plt.figure(1)
IPython console
Console 1/A
File "<ipython-input-147-63629602a892>", line 1, in <module>
a.save("a.npy")
AttributeError: 'numpy.ndarray' object has no attribute 'save'
Preferences
General
Keyboard shortcuts
Syntax coloring
Python interpreter
Run
Global working directory
Editor
Python console
IPython console
History log
Help
Variable explorer
Profiler
Static code analysis
Manage color schemes
Here you can select the color scheme used in the Editor and all other Spyder plugins.
You can also edit the color schemes provided by Spyder or create your own ones by using the options provided below.
Scheme: Monokai
Reset
Delete
Create new scheme
"""A string"""
# A comment
# %% A cell
class Foo(object):
def __init__(self):
bar = 42
print(bar)
Reset to defaults
OK
Cancel
Apply
[[40, 41],
[42, 43],
[44, 45],
...,
[54, 55],
[56, 57],
[58, 59]],
Python console
History log
IPython console
Permissions: RW
End-of-lines: CRLF
Encoding: UTF-8
Line: 18
Column: 14
Memory: 71 %

交互式编程环境：IPython

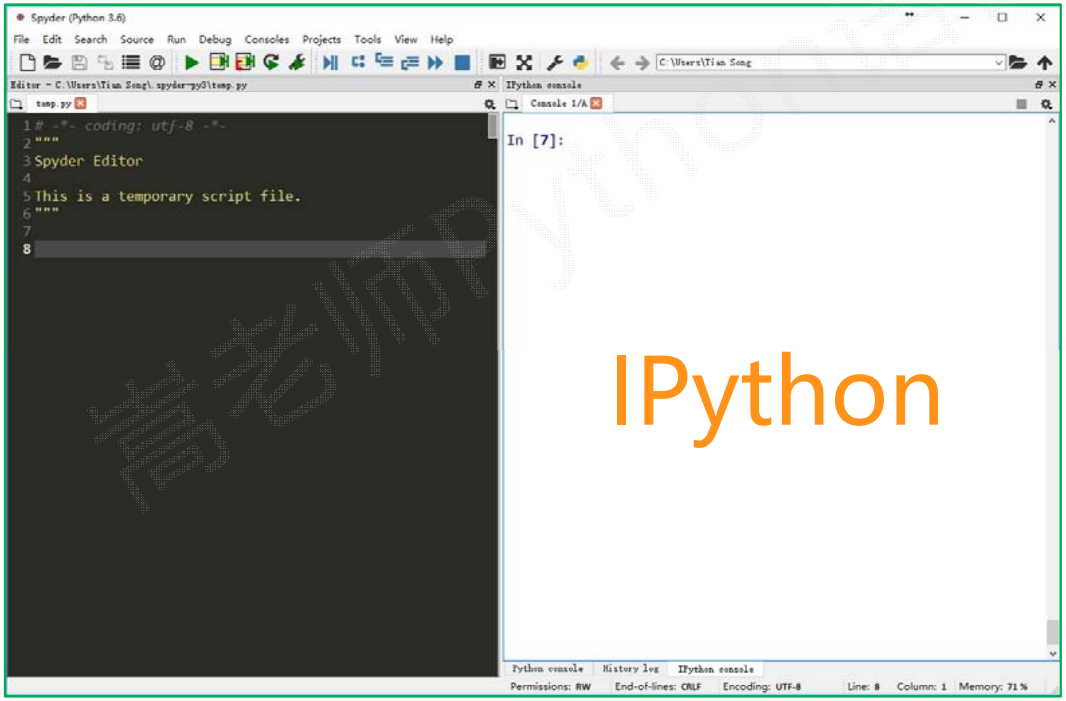
高老师Python课堂

IPython

IP[y]: IPython
Interactive Computing

IPython是一个功能强大的交互式shell

适合进行交互式数据可视化和GUI相关应用



IPython

IPython的?

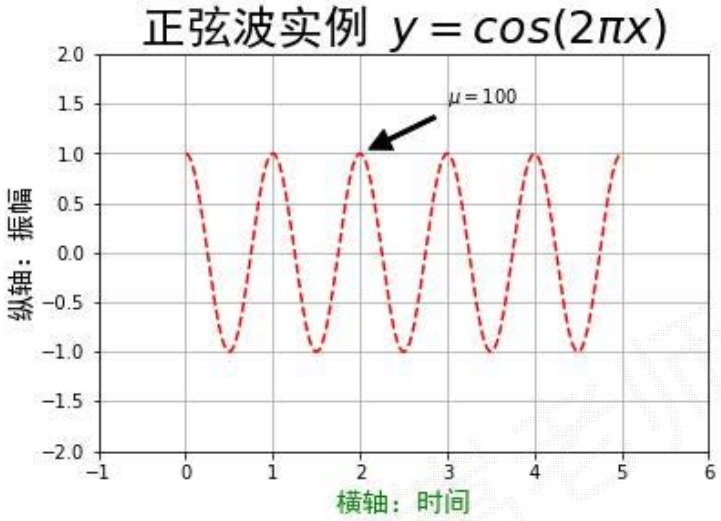
```
In [153]: import numpy as np

In [154]: a = np.arange(10)

In [155]: a
Out[155]: array([0, 1, 2, 3, 4, 5, 6, 7, 8, 9])

In [156]: a?
Type:            ndarray
String form:     [0 1 2 3 4 5 6 7 8 9]
Length:          10
File:            c:\users\tian song\anaconda3\lib\site-packages\numpy\__init__.py
Docstring:       <no docstring>
Class docstring:
ndarray(shape, dtype=float, buffer=None, offset=0,
        strides=None, order=None)

An array object represents a multidimensional, homogeneous array
of fixed-size items.  An associated data-type object describes the
format of each element in the array (its byte-order, how many bytes it
occupies in memory, whether it is an integer, a floating point number,
or something else, etc.)
```

变量前或后增加?将显示一些通用信息

包括函数对应的源代码

IPython的%run命令

```
In [158]: %run demo.py
```



%run用于运行.py程序

注意：%run在一个空的命名空间执行%

IPython的%魔术命令

常用命令	说明
%magic	显示所有魔术命令
%hist	IPython命令的输入历史
%pdb	异常发生后自动进入调试器
%reset	删除当前命名空间中的全部变量或名称
%who	显示Ipython当前命名空间中已经定义的变量
%time *statement*	给出代码的执行时间，*statement*表示一段代码
%timeit *statement*	多次执行代码，计算综合平均执行时间

IPython的%魔术命令

```
In [11]: a = np.random.randn(1000,1000)

In [12]: %timeit np.dot(a,a)
10 loops, best of 3: 85.7 ms per loop

In [13]: %who
a        np

In [14]: %hist
%who
import numpy as np
a = np.arange(10
a = np.arange(10)
print(a)
```

conda

IPython

Anaconda

Spyder

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