Python Standard Library & List of Important Libraries

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Python Libraries – Python Standard Library & List of Important Libraries

What is the Python Libraries?

We know that a module is a file with some Python code, and a package is a directory for sub packages and modules. But the line between a package and a **Python library**is quite blurred.
A Python library is a reusable chunk of code that you may want to include in your programs/ projects. Compared to languages like C++ or C, a Python libraries do not pertain to any specific context in Python. Here, a 'library' loosely describes a collection of core modules. Essentially, then, a library is a collection of modules. A package is a library that can be installed using a package manager like rubygems or npm.

Learn: A Comprehensive Guide on Python Packages

Python Standard Library

The Python Standard Library is a collection of exact syntax, token, and semantics of Python. It comes bundled with core Python distribution. We mentioned this when we began with an introduction.

It is written in C, and handles functionality like I/O and other core modules. All this functionality together makes Python the language it is. More than 200 core modules

sit at the heart of the standard library. This library ships with Python. But in addition to this library, you can also access a growing collection of several thousand components from the Python Package Index (PyPI). We mentioned it in the previous blog.

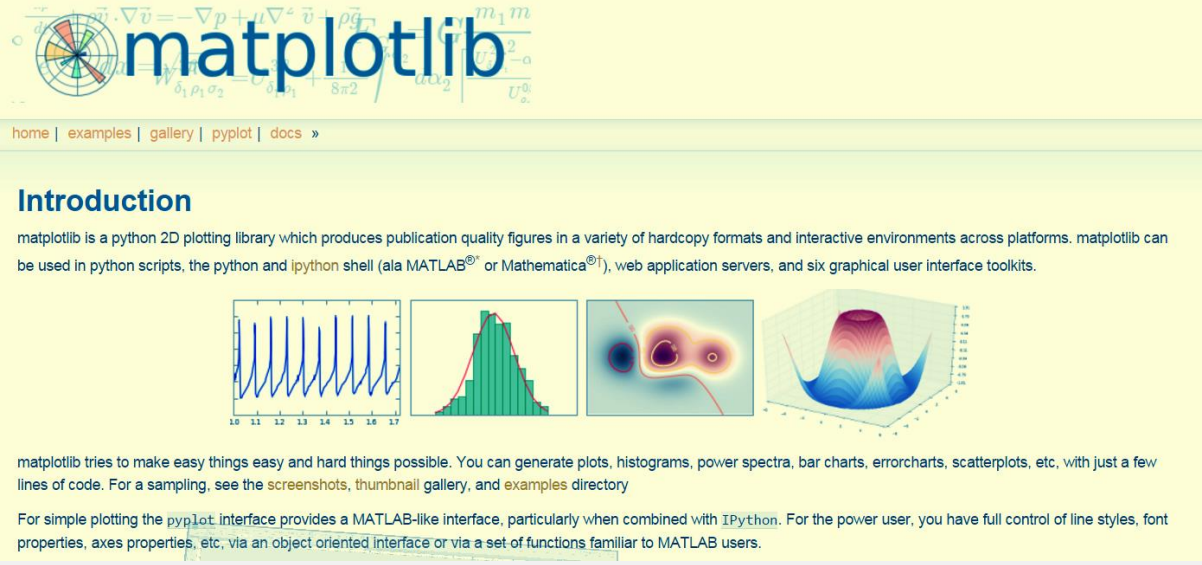
Learn: Python Tuples vs Lists – Comparison between Lists and Tuples

Important Python Libraries

Next, we will see twenty Python libraries list that will take you places in your journey with Python. These are also the Python libraries for Data Science.

a. Matplotlib

Matplotlib helps with data analyzing, and is a numerical plotting library. We talked about it in Python for Data Science.



Python Libraries Tutorial- matplotlib

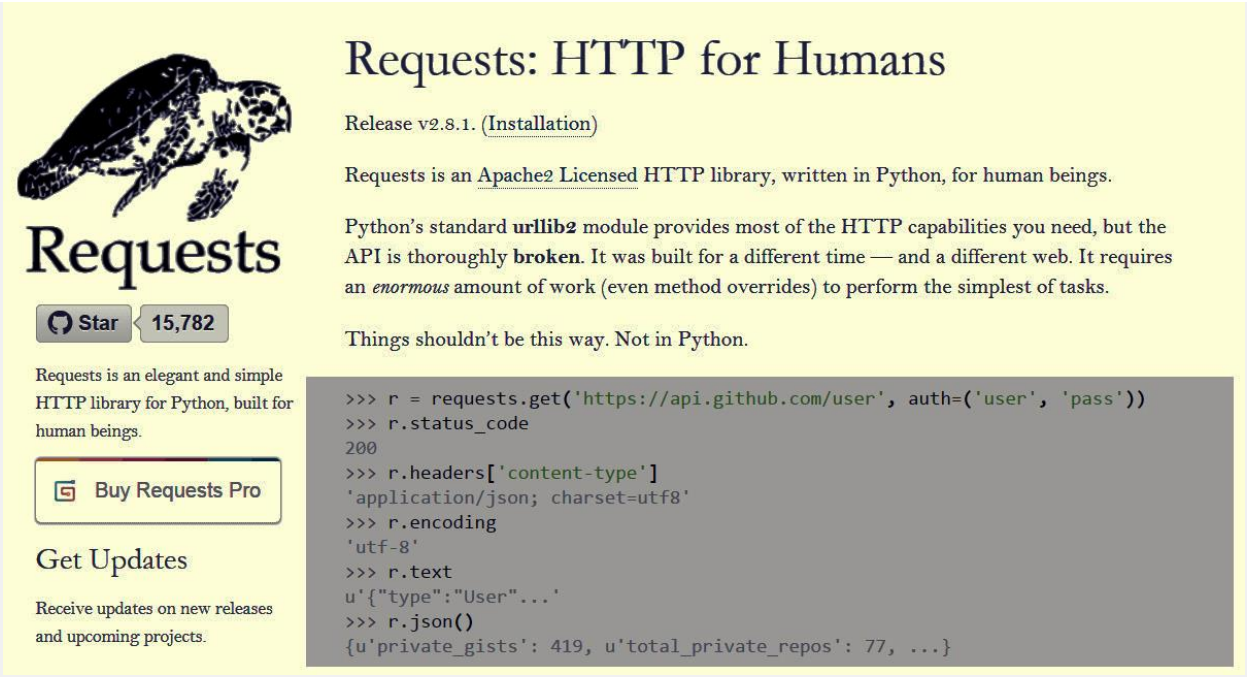
b. Pandas

Like we've said before, Pandas is a must for data-science. It provides fast, expressive, and flexible data structures to easily (and intuitively) work with structured (tabular, multidimensional, potentially heterogeneous) and time-series data.

Python Libraries Tutorial – Pandas

c. Requests

Requests is a Python Library that lets you send HTTP/1.1 requests, add headers, form data, multipart files, and parameters with simple Python dictionaries. It also lets you access the response data in the same way.

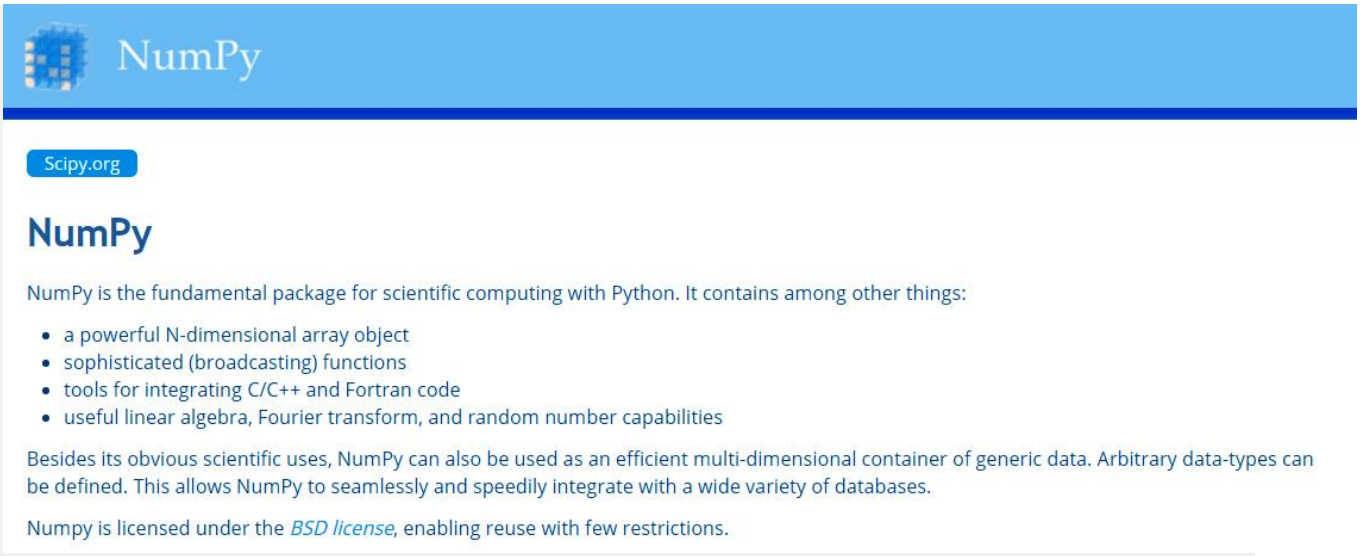


Python Libraries Tutorial- Requests

Learn: [How to Install Python on Windows]

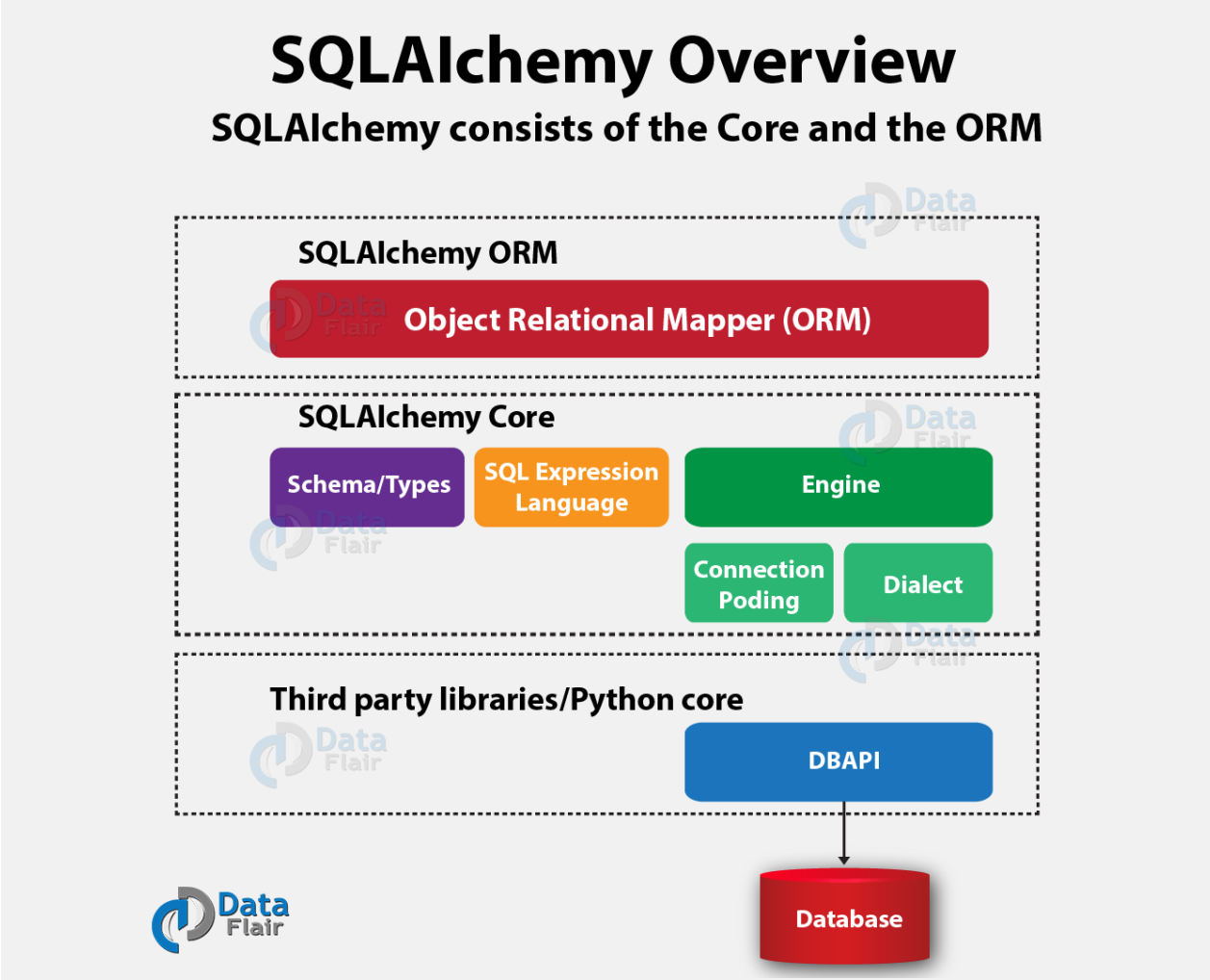
d. NumPy

It has advanced math functions and a rudimentary scientific computing package.



Python Libraries Tutorial – NumPy

e. SQLAlchemy

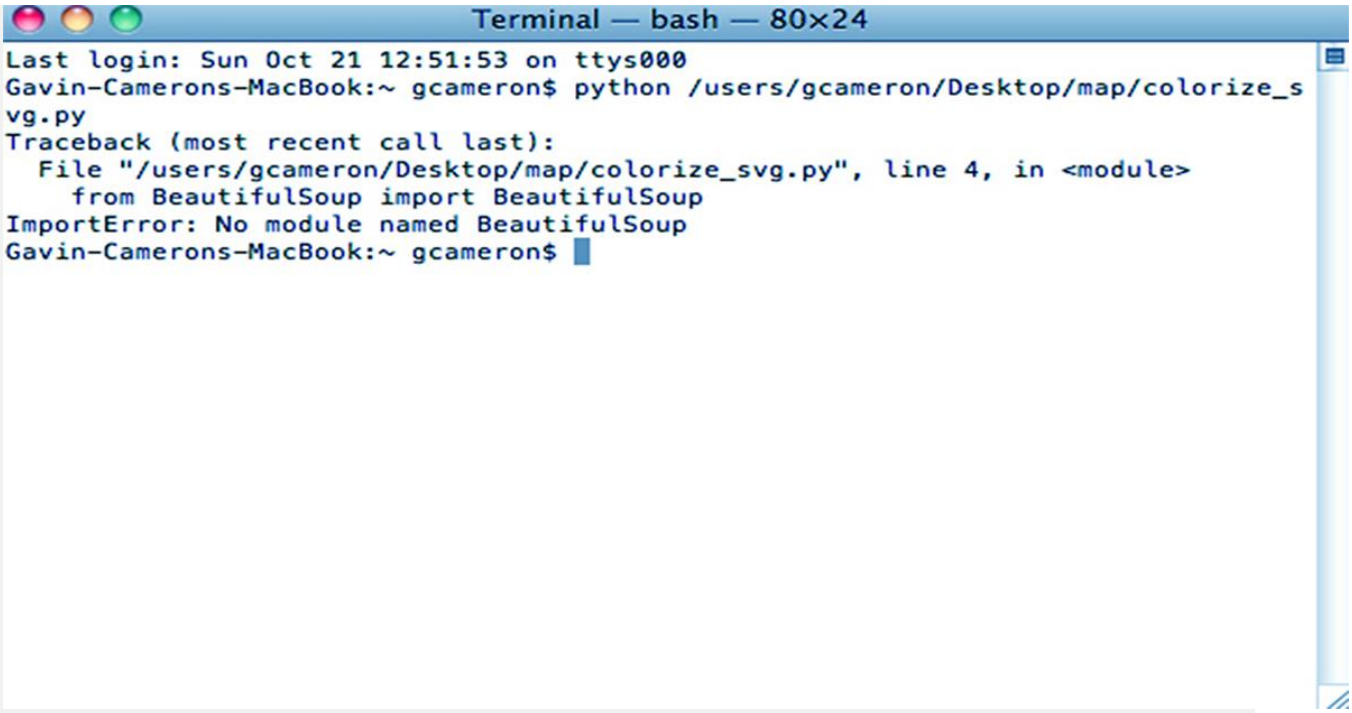


Python Libraries Tutorial – SQLAlchemy Overview

SQLAlchemy is a library with well-known enterprise-level patterns. It was designed for efficient and high-performing database-access.

f. BeautifulSoup

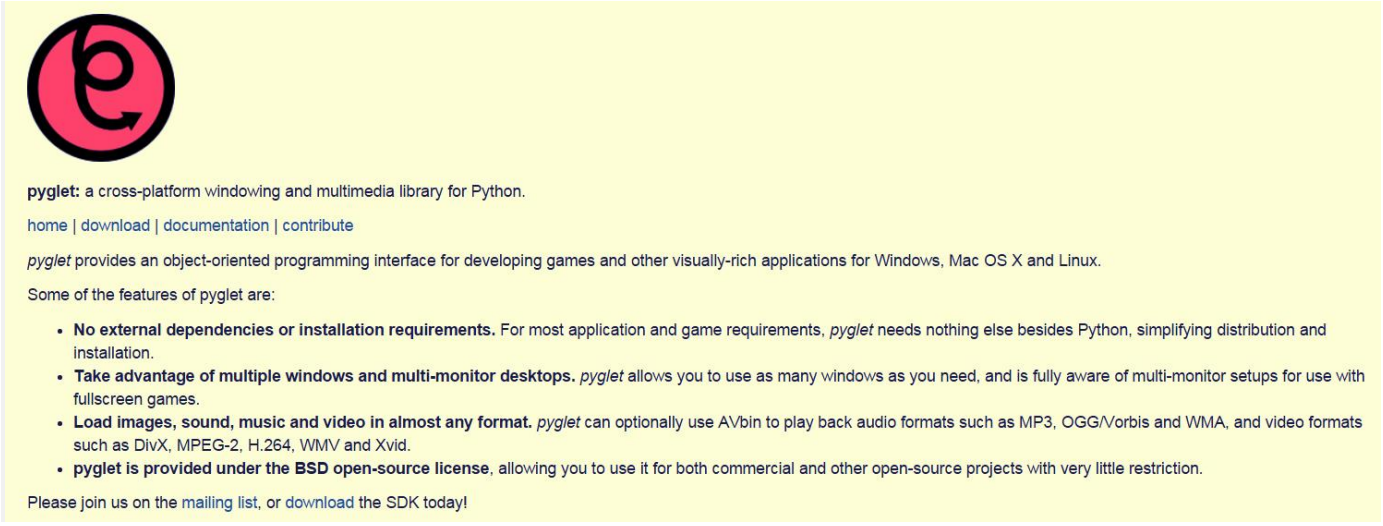
It may be a bit slow, BeautifulSoup has an excellent XML- and HTML- parsing library for beginners.



Python Libraries Tutorial – BeautifulSoup

g. Pyglet

Pyglet is an excellent choice for an object-oriented programming interface in developing games. In fact, it also finds use in developing other visually-rich applications for Mac OS X, Windows, and Linux. In the 90s, when people were bored, they resorted to playing Minecraft on their computers. Pyglet is the engine behind Minecraft.



pyglet: a cross-platform windowing and multimedia library for Python.

home | download | documentation | contribute

pyglet provides an object-oriented programming interface for developing games and other visually-rich applications for Windows, Mac OS X and Linux.

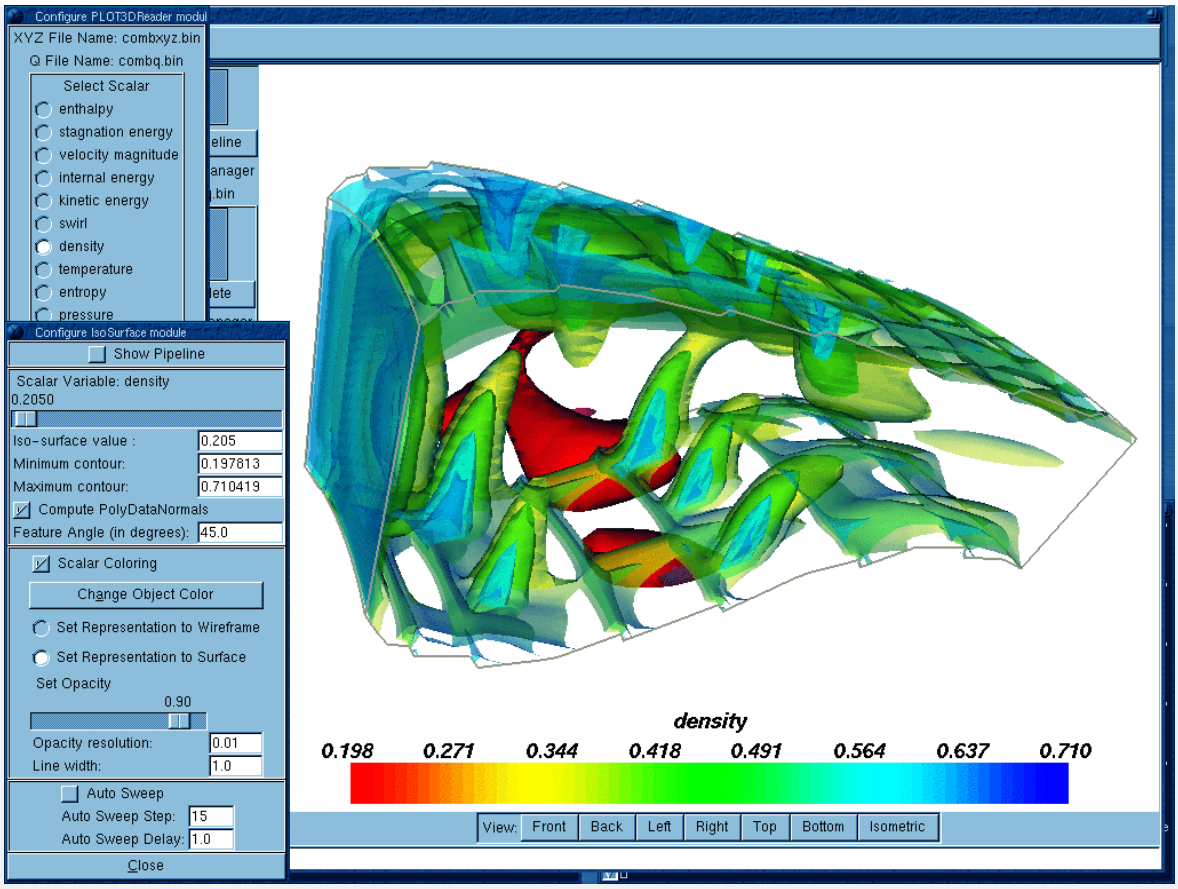
Some of the features of pyglet are:

- **No external dependencies or installation requirements.** For most application and game requirements, *pyglet* needs nothing else besides Python, simplifying distribution and installation.
- **Take advantage of multiple windows and multi-monitor desktops.** *pyglet* allows you to use as many windows as you need, and is fully aware of multi-monitor setups for use with fullscreen games.
- **Load images, sound, music and video in almost any format.** *pyglet* can optionally use AVbin to play back audio formats such as MP3, OGG/Vorbis and WMA, and video formats such as DivX, MPEG-2, H.264, WMV and Xvid.
- **pyglet is provided under the BSD open-source license**, allowing you to use it for both commercial and other open-source projects with very little restriction.

Please join us on the mailing list, or download the SDK today!

h. SciPy

Next up is SciPy, one of the libraries we have been talking so much about. It has a number of user-friendly and efficient numerical routines. These include routines for optimization and numerical integration.

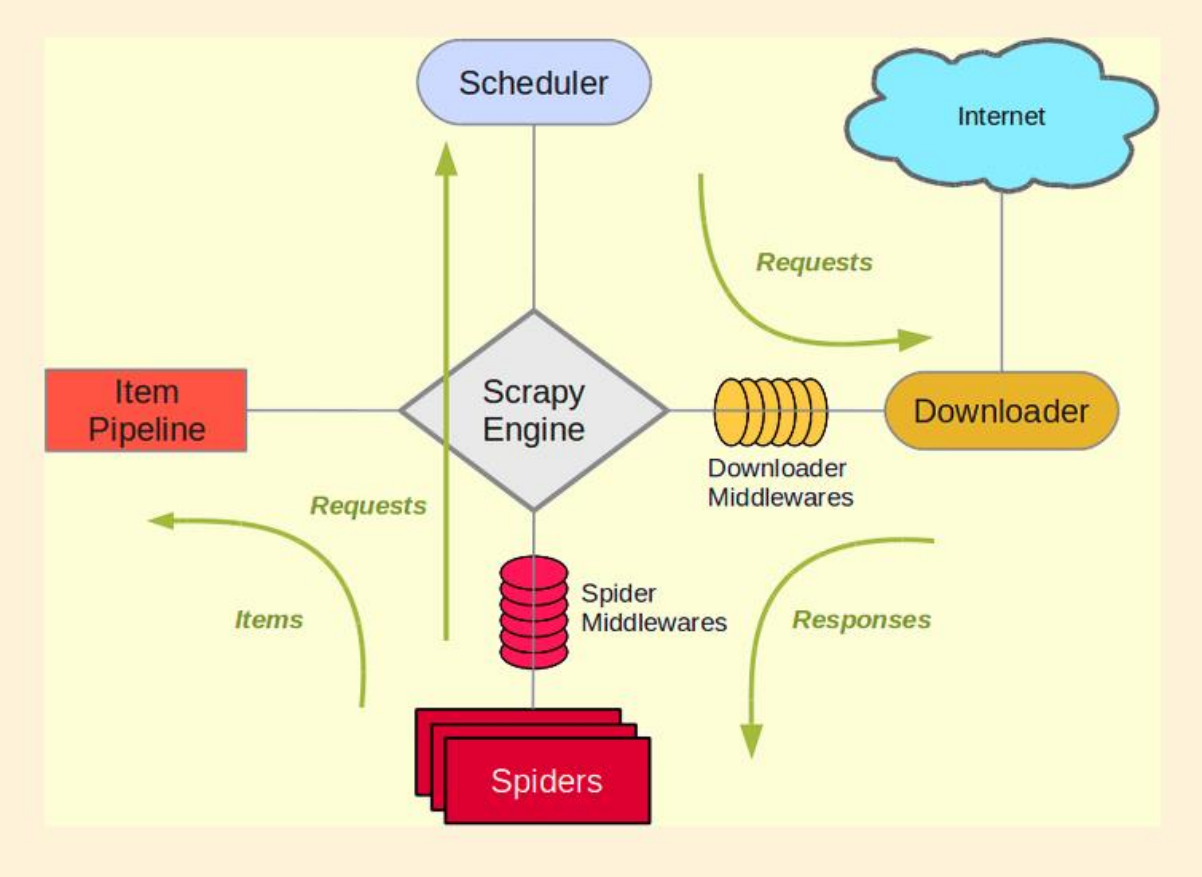


Python Libraries Tutorial- SciPy

Learn: 7 Reasons Why Should I Learn Python in 2018

i. Scrapy

If your motive is fast, high-level screen scraping and web crawling, go for Scrapy. You can use it for purposes from data mining to monitoring and automated testing.



Python Libraries Tutorial- Scrapy

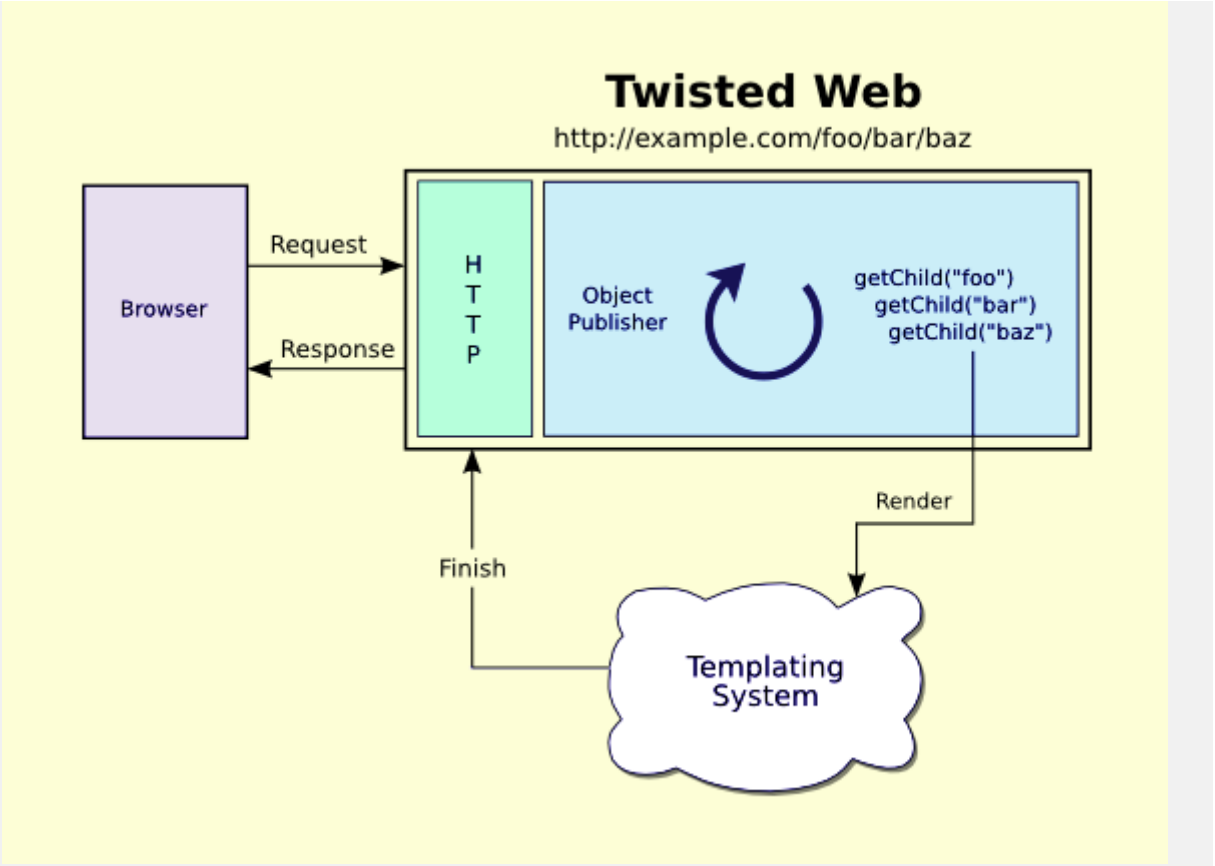
j. PyGame

PyGame provides an extremely easy interface to the Simple Directmedia Library (SDL) platform-independent graphic, audio, and input libraries.

Python Libraries Tutorial – PyGame

k. Python Twisted

An event-driven networking engine, Twisted is written in Python, and licensed under the open-source MIT license.



Python Libraries Tutorial – Twisted

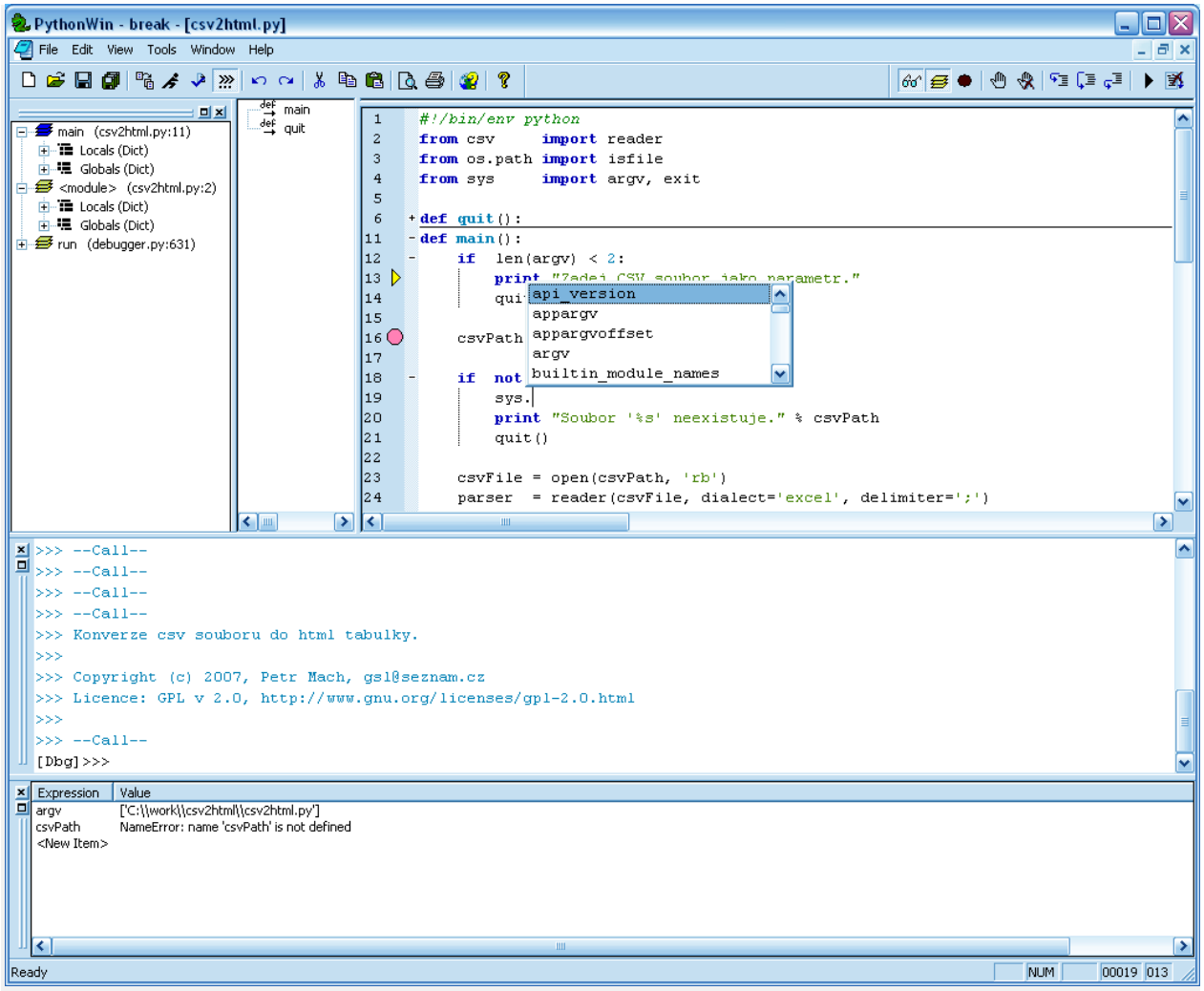
l. Pillow

Pillow is a friendly fork of PIL (Python Imaging Library), but is more user-friendly. If you work with images, Pillow is your best friend.

Python Libraries Tutorial- Pillow

m. pywin32

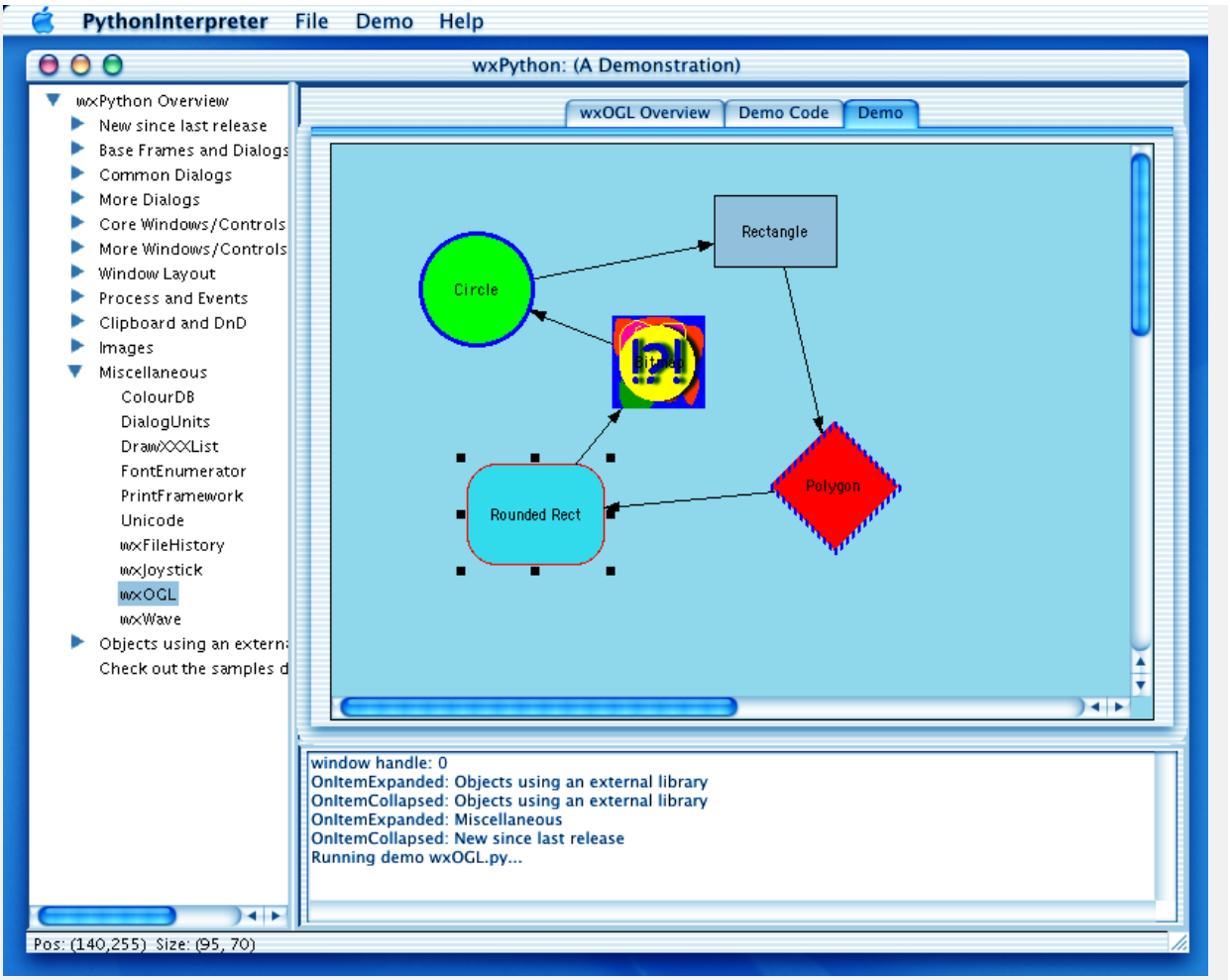
This provides useful methods and class for interaction with Windows, as the name suggests.



Python pywin32 Library

n. wxPython

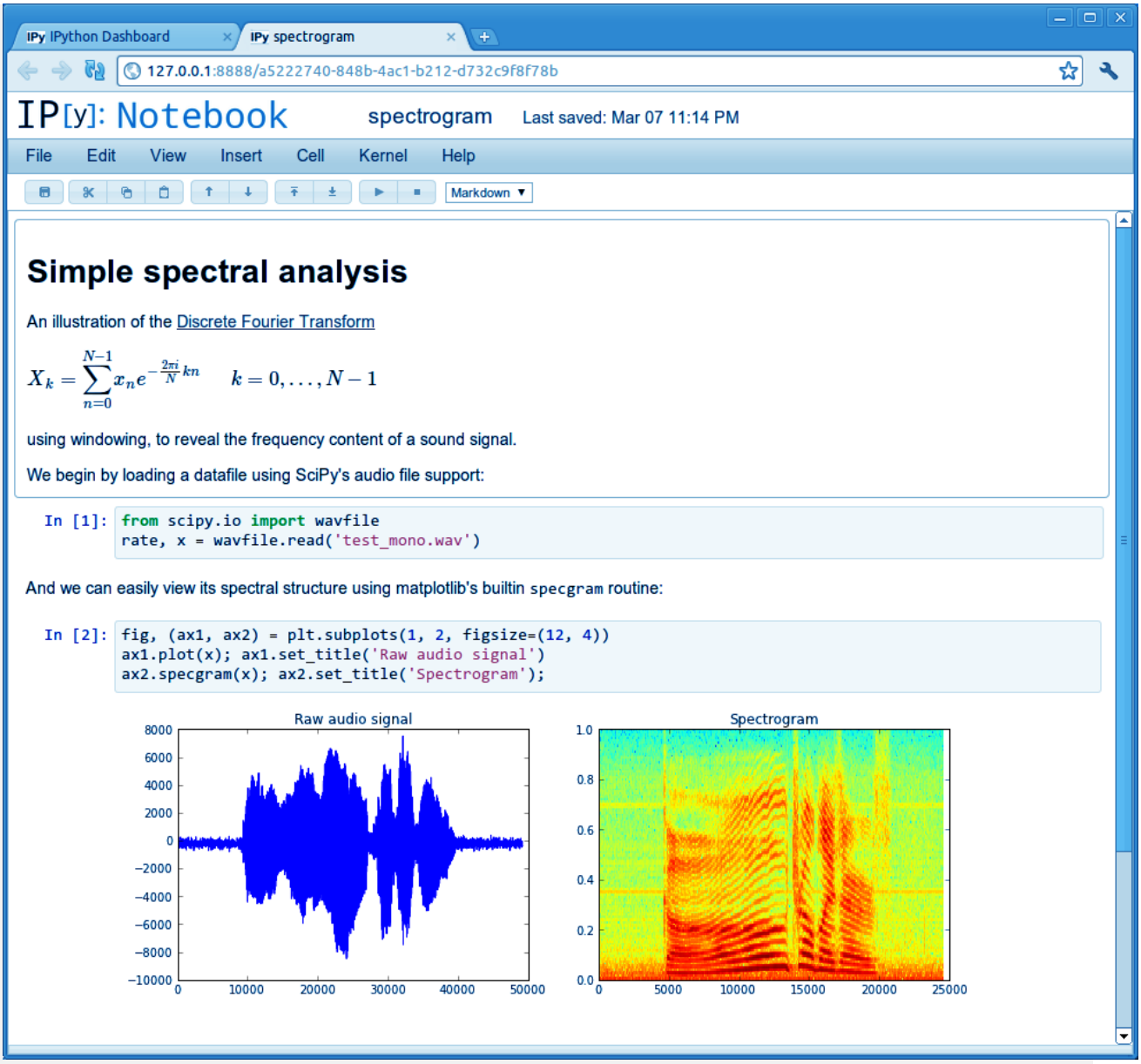
It is a wrapper around wxWidgets for Python.



Python wxPython Library

o. iPython

iPython Python Library has an architecture that facilitates parallel and distributed computing. With it, you can develop, execute, debug, and monitor parallel applications.



Python Library – iPython

Learn: Python Regular Expressions

p. Nose

Nose delivers an alternate test discovery and running process for unittest. This intends to mimic py.test's behavior as much as it can.

Python Nose Library

q. Flask

A web framework, Flask is built with a small core and many extensions.

Python Flask Library

r. SymPy

It is an open-source library for symbolic math. With very simple and comprehensible code that is easily extensible, SymPy is a full-fledged Computer Algebra System (CAS). It is written in Python, and hence does not need external libraries.

Python SymPy Library

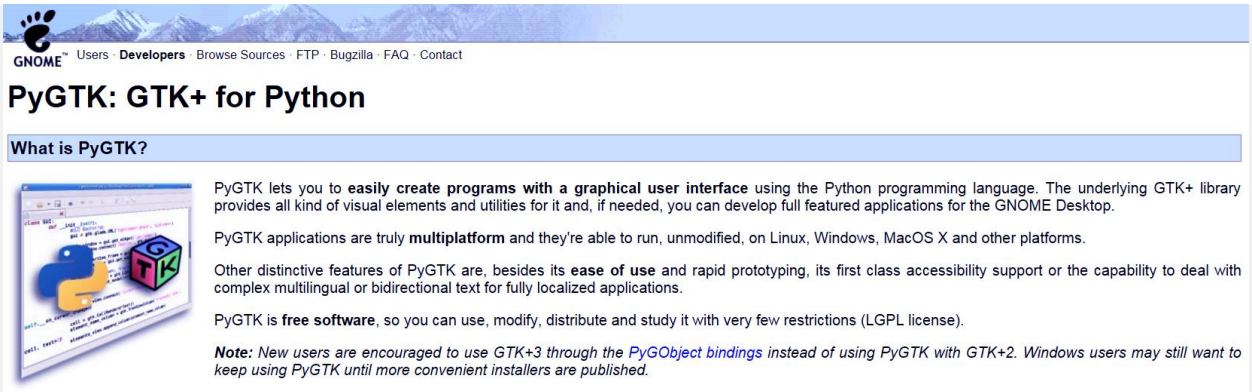
s. Fabric

Along with being a library, Fabric is a command-line tool for streamlining the use of SSH for application deployment or systems administration tasks. With it, you can execute local or remote shell commands, upload/download files, and even prompt running user for input, or abort execution.

Python Fabric Library

t. PyGTK

PyGTK lets you easily create programs with a GUI (Graphical User Interface) with Python.



Python PyGTK Library

Learn:[The Tremendous Python Career Opportunities in 2018]

So, this was all about Python Libraries Tutorial. Hope you like our explanation,

Conclusion

Now you know which libraries to go for if you choose to extend a career in Python. Many of these help us with data-science as well. Or if you wish to go out of your way, create your own library, and get it published with the PyPI; help the community grow. Furthermore, if you have any query, please share with us!