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best python packages, MoviePy, numpy, pandas, Pendulum, pyqt, pytest, python 2020, python packages, Tkinter, top python packages

Top 10 Python Packages Every Developer Should Learn

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There are more than 200,000 Python packages in the world (and that's just counting those hosted on PyPI, the official Python Package Index). That begs the question: with so many packages out

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end, this list focuses on Python packages that cover a wide range of programming scenarios and goals, as opposed to just focusing on a specific niche, like data science or Web development.

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#1 NumPy

You can do basic mathematical operations without any special Python packages. However, if you're going to do any kind of complex math, the NumPy package will make your coding life much easier.

NumPy provides tools to help build multi-dimensional arrays and perform calculations on the data stored in them. You can solve algebraic formulas, perform common statistical operations, and much more.

While NumPy is a valuable Python package for a variety of general-purpose programming tasks, it's particularly important if you want to do machine learning, since it provides part of the foundation for libraries like TensorFlow.

#2 Pendulum

If you have at least a little Python programming experience, you probably know that you can use the datetime module to manage dates and times within an application.
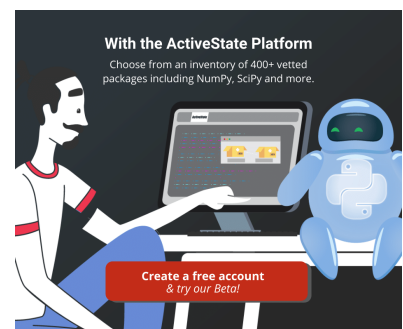
While datetime is great for basic work along these lines, the Pendulum Python package makes it

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use it with code you've already written based on datetime. With only a few exceptions, Pendulum will work just as well, without the need to modify the code, while providing extra features not present in plain-old datetime.

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#3 Python Imaging Library

If your Python application interacts with images in any way, the Python imaging library, also known as PIL or Pillow, is a Python must-have. It makes it easy to write code that opens, modifies, and saves images in a variety of formats.

If you're doing more advanced work with images (like image recognition, in which case OpenCV would be a good package to consider), Pillow won't cut it on its own. But for basic image importing, manipulation, and exporting, Pillow is your go-to solution.

#4 MoviePy

MoviePy is to videos what Pillow is to images. It provides a range of functionality for common tasks associated with importing, modifying, and exporting video files. It also lets you do things like insert titles into videos or rotate videos 90 degrees (if for some reason you decide you want to do that).

Like Pillow, MoviePy is not intended as a tool for advanced data manipulation. If you're writing a video editing app, you'll probably also need to rely on OpenCV (which can work with videos as well as

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Writing code that sends HTTP requests can be tricky, due in no small part to the fact that HTTP does not exactly format data in a way that is easy for humans to read.

The Requests Python package (motto: "HTTP for Humans") tackles this problem by automating many of the tedious tasks that you would otherwise need to perform in order to send HTTP requests from your application. It removes the need to add query strings, or do POST form encoding. It also keeps connections with HTTP servers alive automatically, eliminating the need to write a bunch of code for doing that.

In short, if your application sends any data over HTTP, Requests is a must-have package.

#6 Tkinter

Want to develop a Python app with a Graphical User Interface (GUI)? There are a variety of packages designed to help you do that (indeed, we could make a top ten list of just Python GUI packages). But I think most Python developers would agree that Tkinter is the most important — and most commonly used — framework for creating GUIs. It binds Python to the TK GUI toolkit, which works on virtually every modern operating system.

Unless you have a strong preference for a different GUI toolkit, Tkinter is probably the best place to start when creating a Python GUI.

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programming than Tkinter. That means that PyQT
may be overkill if you're building an app that has a
pretty simple interface — say, just a window with
some buttons and text fields — but it is a good
tool if you want to build a complex, multi-
dimensional GUI.

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#8 Pandas

There is a long list of Python packages designed
for working with complex data sets. But arguably,
Pandas is the most important. Pandas helps you
manipulate and analyze large sets of data without
having to learn a specialized data-processing
language like R.

Pandas has its limits in that it's not intended for
advanced statistical modelling (in that case, you
would want to learn R, or use a Python package
like statsmodels). But if you need to do things like
process time-series data or perform statistical
analysis on a data set, Pandas has you covered.

#9 Pywin32

For Windows Python programming in particular,
Pywin32 is a must-have package. It provides
access to many of the native Windows API
functions, allowing you to do things like interact
with the Windows registry, use the Windows
clipboard, and much more.

Pywin32 won't do you much good if you're
building a cross-platform Python app, but
Windows developers might find that they like it so

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code is essential. The Pytest package provides a
variety of modules to help you do this. Whether
it's a simple un**DEVELOPERS**s m**ENTERPRISE**ex **SUPPORT**   **COMPANY**   **RESOURCES**   **BLOG**
functional test, Pytest can help you write it.

Conclusions

If your favorite Python library or framework didn't
make this list of the top ten must-have Python
packages, don't take offense. The Python
ecosystem has generated so many valuable
packages that it would be impossible to include all
of the important ones even on a top 100 list, let
alone a top 10 list. Still, for general-purpose
Python programming, the packages described
above often come in handy.

> ❯ ActivePython contains all the key, must-have
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Top 10 Python Packages with Examples

Here are the top 10 Python packages critical to improving your programming experience, and which will immediately let you become a more efficient and effective Python coder.

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How to Install Python Packages using a Script

In some cases, you may need to automate the updating of multiple deployments. This guide provides shows how to create a Python script to install packages.

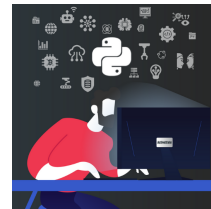Ⓦ **ActiveState**

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