The Subtle Art of Discovering Python Modules

North Austin Pythonistas
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Goals

- Learn about built-in help()
- Learn about pydoc
- Learn new tricks with pip
- Brief survey of online resources

Built-in Help

```
$ python3

 ...

 Type "help", "copyright", "credits" or "license" for more information.

>>> help()
```

Built-in Help (cont)

```
>>> help()

Welcome to Python 3.7's help utility!

If this is your first time using Python, you should definitely check out the tutorial on the
Internet at https://docs.python.org/3.7/tutorial/. Enter the name of any module, keyword, or
topic to get help on writing Python programs and using Python modules. To quit this help
utility and return to the interpreter, just type “quit". To get a list of available modules,
keywords, symbols, or topics, type "modules", "keywords", "symbols", or "topics".  Each
module also comes with a one-line summary of what it does; to list the modules whose name or
summary contain a given string such as "spam", type "modules spam".

help>
```

Built-in Help (cont)

```
>>> help()

Welcome to Python 3.7's help utility!

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help>
```

Built-in Help (cont)

```
help> modules

__future__          argparse            http                requests
_abc                array               idlelib             requests_toolbelt
_ast                asn1crypto          idna                resource
_asyncio            ast                 imaplib             rlcompleter
_bisect             asynchat            imghdr              runpy
_blake2             asyncio             imp                 sched
_bootlocale         asyncore            importlib           secrets
_bz2                atexit              importlib_metadata  select
```

Built-in Help (cont)

```
help> modules path

Here is a list of modules whose name or summary contains 'path'.
If there are any, enter a module name to get more help.

ctypes.macholib.dylib - Generic dylib path manipulation
ctypes.macholib.framework - Generic framework path manipulation
genericpath - Path operations common to more than one OS
idlelib.idle_test.test_pathbrowser
idlelib.pathbrowser
```

Built-in Help (cont)

```
help> pathlib
```

```
Help on module pathlib:
NAME
    pathlib
CLASSES
    …
    class Path(PurePath)
     |  Path(*args, **kwargs)
     |
     |  PurePath subclass that can make system calls.
```

Built-in Help (cont)

```
>>> import pathlib

>>> home = pathlib.Path.home()

>>> help(home)

Help on PosixPath in module pathlib object:
class PosixPath(Path, PurePosixPath)
 |  PosixPath(*args, **kwargs)
 |
 |  Path subclass for non-Windows systems.
```

Built-in Help (cont)

```
>>> help(home.resolve)

Help on method resolve in module pathlib:


resolve(strict=False) method of pathlib.PosixPath instance
    Make the path absolute, resolving all symlinks on the way and also
    normalizing it (for example turning slashes into backslashes under
    Windows).


>>>
```

Pydoc – Python Documentation Reader

```
$ pydoc -h
...
$ pydoc modules
...
$ pydoc -k keyword
...
```

Pydoc (cont)

```
# trivia, the following is equivalent to pydoc

$ python -m pydoc <options>

...
```

Learn New Tricks with pip

* pip search <keyword>

```
$ pip search logging

logging (0.4.9.6)                       - A logging module for Python
Spruce-logging (0.1.3)                  - Logging
pretty-logging (1.0.1)                  - pretty logging
jk-logging (0.2019.9.10)                - This is a logging framework.
schemamacros-logging (0.1.0)            - logging for schemamacros
timezone-logging (0.1)                  - Logging with timezone
```

Learn New Tricks with pip (cont)

- pip show <installed_module>

```
$ pip show numpy
```

```
Name: numpy
Version: 1.17.2
Summary: NumPy is the fundamental package for array computing with Python.
Home-page: https://www.numpy.org
Author: Travis E. Oliphant et al.
Author-email: None
License: BSD
Location: /usr/local/lib/python3.7/site-packages
Requires:
Required-by: pandas, matplotlib
```

An Abbreviated Tour of Online Resources

- Websites / Blogs
- Newsletters
- Podcasts
- Curated Lists on Github
- Communities

Websites / Blogs

- docs.python.org/3
- realpython.com
- python.libhunt.com
- dbader.org
- planetpython.org
- stackoverflow.com/questions/tagged/python
- pymotw.com/3/
- docs.python-guide.org

Newsletters

- pythonweekly.com
- python.libhunt.com/newsletter
- pycoders.com
- docs.python-guide.org/intro/news/

Podcasts

- talkpython.fm – long form interview
- pythonbytes.fm – weekly short form news format
- testandcode.com
- teachingpython.fm
- dbader.org/blog/ultimate-list-of-python-podcasts

Curated Lists on Github

- github.com/vinta/awesome-python
- meta: github.com/jnv/lists

Communities

- pybit.es
- realpython.com
- pythonmorsels.com
- weeklypythonexercise.com

Thanks!

- Questions – erik.oshaughnessy@gmail.com

github.com/North-Austin-Pythonistas/Talks/2019/2019-09-Discoverability.pdf