

Python packaging simplified

for end users,
app developers,
and open source contributors

Asheesh Laroia

Python packaging simplified

for end users,

Asheesh Laroia

```
$ python
```

```
$ python  
>>> import numbers
```

```
$ python
>>> import numbers
>>> numbers
<module 'numbers' from
'/usr/lib/python2.7/numbers.pyc'>
```

```
>>> import sys  
>>> sys.path
```

```
>>> import sys  
>>> sys.path  
[ '',  
  '/usr/lib/python2.7',  
  '/usr/lib/python2.7/plat-x86_64-linux-gnu',  
  '/usr/lib/python2.7/lib-tk',  
  '/usr/lib/python2.7/lib-old',  
  '/usr/lib/python2.7/lib-dynload',  
  '/home/me/.local/lib/python2.7/site-packages'  
  '/usr/local/lib/python2.7/dist-packages',  
  '/usr/lib/python2.7/dist-packages',  
  '/usr/lib/python2.7/dist-packages/PIL',  
  '/usr/lib/python2.7/dist-packages/gst-0.10',  
  '/usr/lib/python2.7/dist-packages/gtk-2.0',  
  '/usr/lib/pymodules/python2.7',  
 ]
```

```
>>> import sys  
>>> sys.path  
[ '',  
  '/usr/lib/python2.7',  
  '/usr/lib/python2.7/plat-x86_64-linux-gnu',  
  '/usr/lib/python2.7/lib-tk',  
  '/usr/lib/python2.7/lib-old',  
  '/usr/lib/python2.7/lib-dynload',  
  '/home/me/.local/lib/python2.7/site-packages'  
  '/usr/local/lib/python2.7/dist-packages',  
  '/usr/lib/python2.7/dist-packages',  
  '/usr/lib/python2.7/dist-packages/PIL',  
  '/usr/lib/python2.7/dist-packages/gst-0.10',  
  '/usr/lib/python2.7/dist-packages/gtk-2.0',  
  '/usr/lib/pymodules/python2.7',  
 ]
```

```
$ python
>>> import numbers
>>> numbers
<module 'numbers' from
'/usr/lib/python2.7/numbers.pyc'>
```

**Jumbo Peanut Butter Chip Dipped Cookies HURRICANE
SANDY SPECIAL**

\$25.00 USD



Eat dessert first!!

Etsy

```
>>> import etsy
```



```
>>> import etsy
```

A medium shot of a man with light brown hair, a well-groomed beard, and a mustache. He is wearing a dark, long-sleeved button-down shirt. He is seated at a desk, facing slightly to his left. In front of him is a computer monitor displaying a dark, indistinct image. The background is a plain, light-colored wall.

[etsy wrapper]

```
>>> import etsy
```

cheeseshop
pypi.python.org

[etsy wrapper]

 search

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python-etsy 0.1.2	9	Python wrapper for the Etsy api
gstatsd 0.6	2	A statsd service and client in Python + gevent

*: occurrence of search term weighted by field (name, summary, keywords, description, author, maintainer)

 search

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```
>>> import python-etsy  
File "<stdin>", line 1  
    import python-etsy  
           ^
```

```
SyntaxError: invalid syntax
```

 search

» Package Index > python-etsy > 0.1.2

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python-etsy

0.1.2

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*Python wrapper for the
Etsy api*

Why?

To make it easier to
interact with the Etsy API in Python.

Installation

```
| sudp pip install python-etsy
```

Usage

Initialization

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*Python wrapper for the
Etsy api*

Why?

To make it easier to
interact with the Etsy API in Python.

Installation

```
| sudp pip install python-etsy
```

Usage

Initialization

```
>>> from etsy import Etsy  
>>> e = Etsy(consumer_key, consumer_secr
```

Get info for user

```
>>> e.get_user_info('priestc')  
{u'count': 1,
```

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*Python wrapper for the
Etsy api*

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Why?

To make it easier to
interact with the Etsy API in Python.

Installation

```
| sudp pip install python-etsy
```

Usage

Initialization

```
>>> from etsy import Etsy  
>>> e = Etsy(consumer_key, consumer_secr
```

Get info for user

```
>>> e.get_user_info('priestc')  
{u'count': 1,
```

```
$ sudo pip install python-etsy
```



```
$ sudo pip install python-etsy
```



Genki Sudo

World Order

```
>>> import sys  
>>> sys.path  
[ '',  
# ...  
' /home/me/.local/lib/python2.7/  
site-packages ',  
]
```

```
$ pip install --user python-etsy
```

```
$ pip install --user python-etsy  
Downloading/unpacking python-etsy  
  Downloading python-etsy-0.1.2.tar.gz
```

```
$ pip install --user python-etsy  
Downloading/unpacking python-etsy  
  Downloading python-etsy-0.1.2.tar.gz
```

```
Successfully installed python-etsy  
Cleaning up...
```

```
$ pip install --user python-etsy  
Downloading/unpacking python-etsy  
  Downloading python-etsy-0.1.2.tar.gz
```

Successfully installed python-etsy

Cleaning up...

```
$ python  
>>> import etsy
```

```
$ pip install --user python-etsy  
Downloading/unpacking python-etsy  
  Downloading python-etsy-0.1.2.tar.gz
```

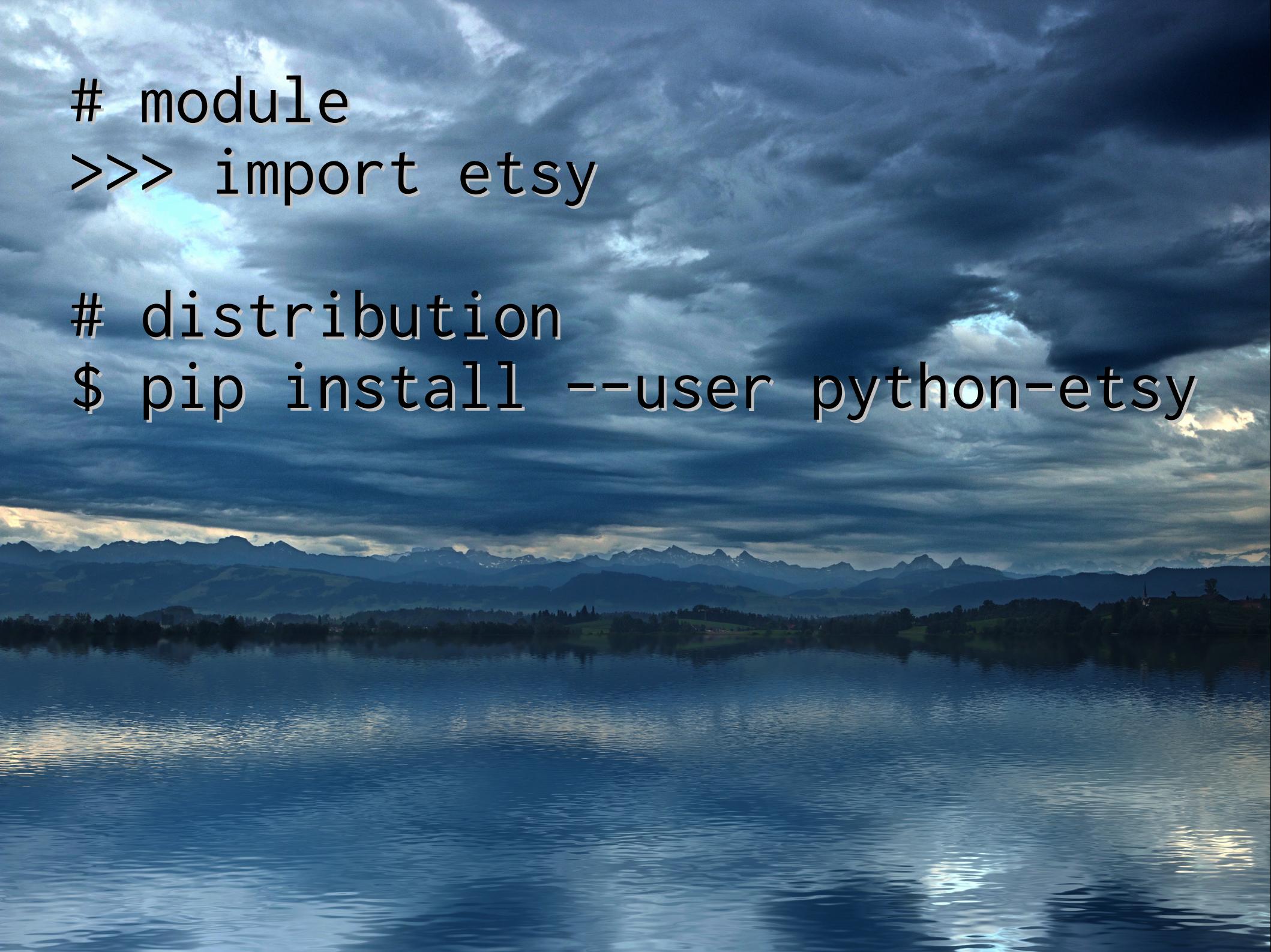
```
Successfully installed python-etsy  
Cleaning up...
```

```
$ python  
>>> import etsy  
>>> etsy  
<module 'etsy' from  
'/home/me/.local/lib/python2.7/  
site-packages/etsy/__init__.pyc'>
```



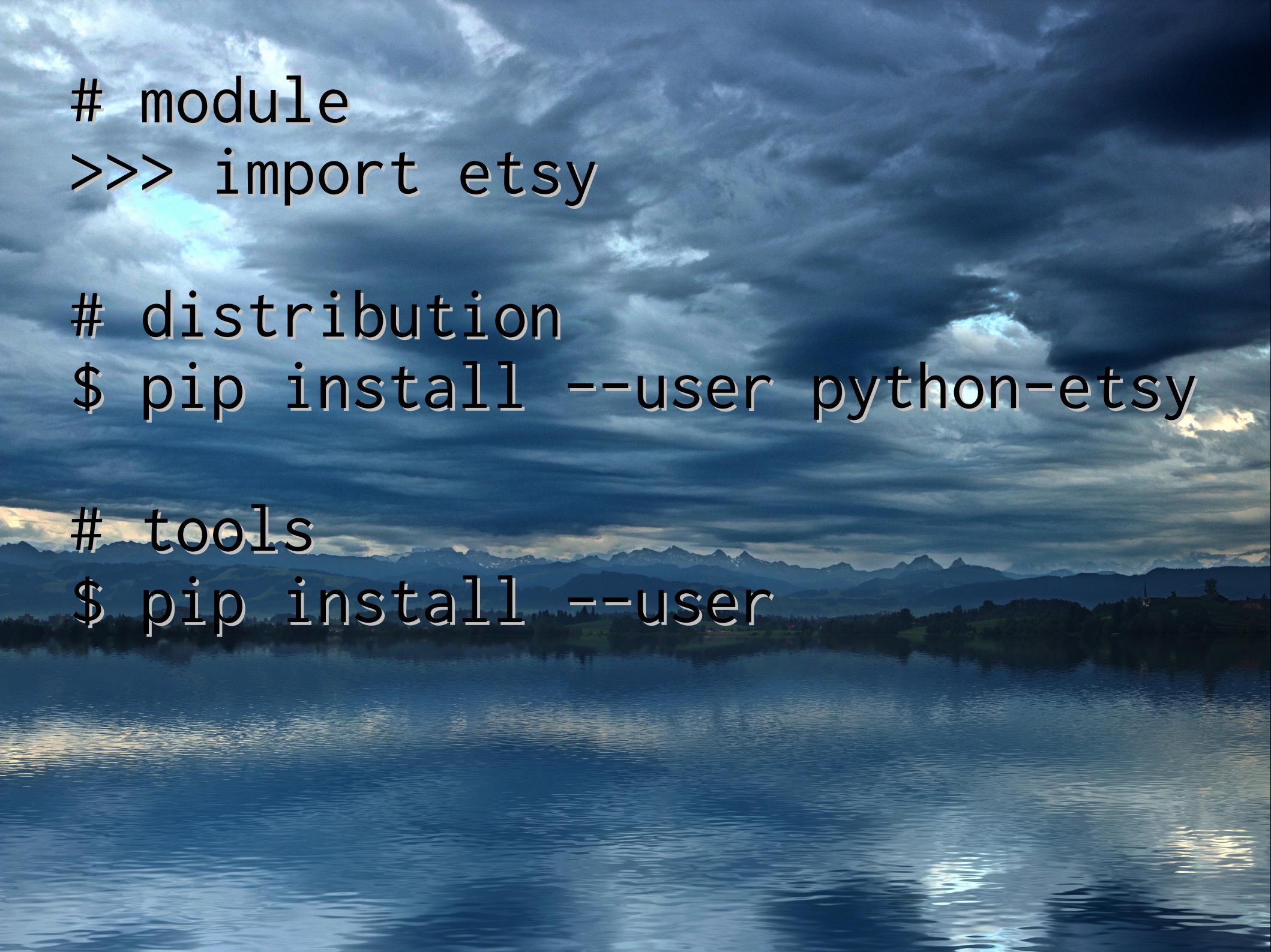
The background image shows a wide-angle view of a lake, likely Lake Lucerne, in Switzerland. The water is calm with gentle ripples. In the distance, a range of mountains is visible under a sky filled with heavy, dark clouds. Some lighter, blue-toned clouds are scattered throughout, particularly on the right side. The overall atmosphere is serene and slightly somber.

module
">>>> import etsy

The background of the image is a wide-angle photograph of a natural landscape. In the foreground, there is a calm body of water, likely a lake. Beyond the water, there are several layers of mountains under a sky filled with dark, heavy clouds. A small patch of lighter blue sky is visible through the clouds on the right side.

module
>>> import etsy

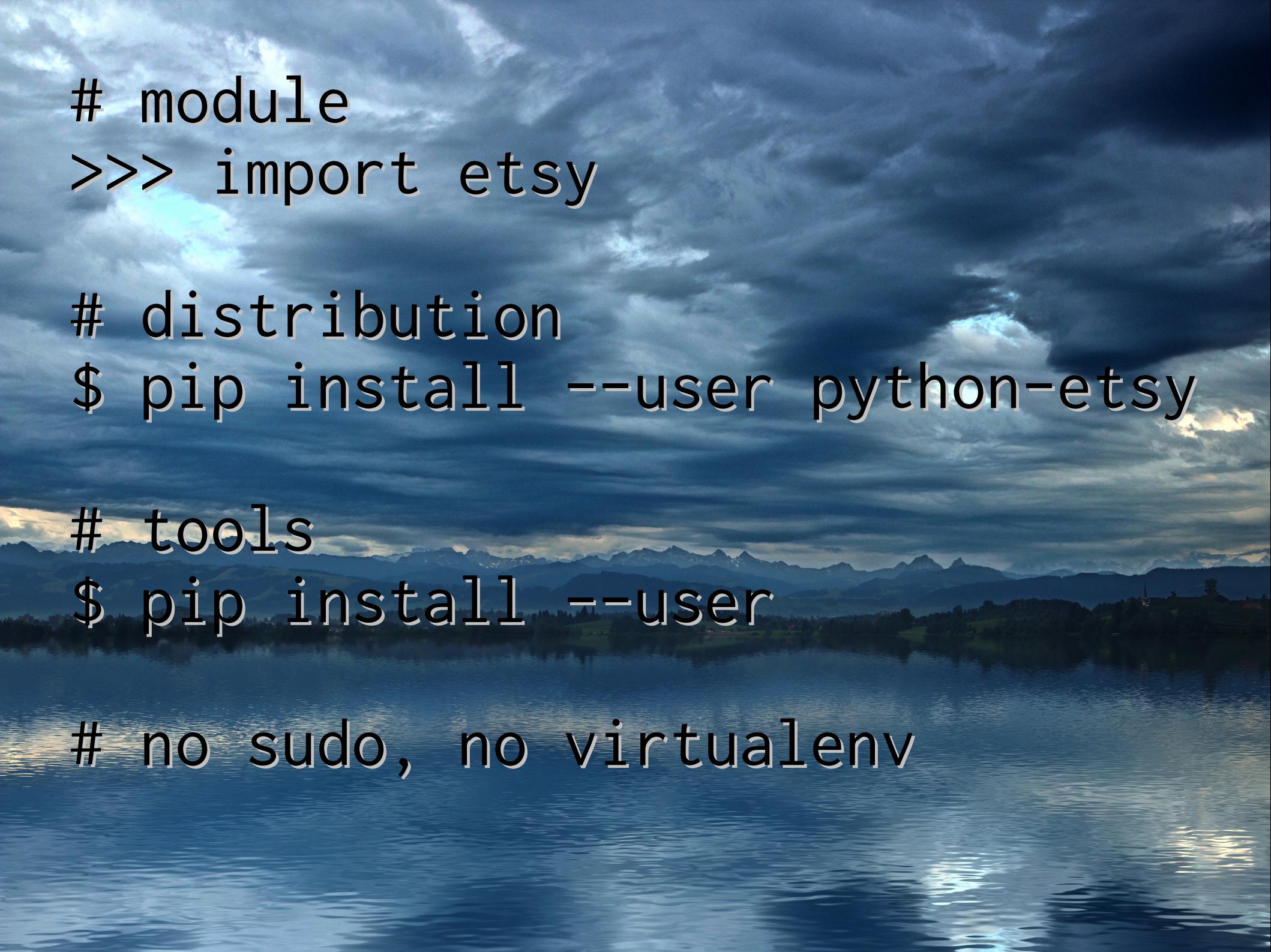
distribution
\$ pip install --user python-etsy

The background of the image is a photograph of a serene landscape. In the foreground, there is a calm body of water, likely a lake. Beyond the water, a range of mountains is visible under a sky filled with dramatic, dark clouds. The lighting suggests either sunrise or sunset, with some bright areas breaking through the clouds.

```
# module
>>> import etsy

# distribution
$ pip install --user python-etsy

# tools
$ pip install --user
```

The background of the slide features a wide-angle photograph of a natural landscape. In the foreground, there is a calm body of water, likely a lake. Beyond the water, a range of mountains is visible under a dramatic sky filled with dark, heavy clouds. A few bright, sunlit patches are visible through the clouds, particularly on the left and right sides. The overall atmosphere is moody and atmospheric.

```
# module  
>>> import etsy  
  
# distribution  
$ pip install --user python-etsy  
  
# tools  
$ pip install --user  
  
# no sudo, no virtualenv
```

A vintage-style Quality Ice Cream truck is shown from a low angle. The truck has a white body with blue and red stripes. A large menu board on top displays various ice cream flavors like Vanilla, Chocolate, and Strawberry. The background shows a brick building and trees.

```
$ pip install --user etsy
```

A vintage-style Quality Inn ice cream truck is shown from a low angle. The truck has a white body with a dark brown front. A large red sign on top reads "Quality Inn" in a stylized font, with "Ice Cream" below it in a smaller, rounded font. A menu board is attached to the side of the truck, listing various items like "TOP SECRET", "CHOCOLATE", "VANILLA", and "PEACH".

\$ pip install --user etsy
ValueError: Invalid IPv6 URL

A vintage-style Quality Inn ice cream truck is shown from a three-quarter front angle. The truck is white with a red stripe and features a large, illuminated sign on top that reads "Kuvality Ice Cream". The word "Kuvality" is in a stylized orange font, and "Ice Cream" is in a white font inside a red, rounded rectangular frame. The truck has several windows displaying various flavors of ice cream. A person's arm is visible on the right side, pointing towards the truck.

PyPI:

Wrong or missing
download URLs

A blurry photograph of a Quality Ice Cream shop. The shop has a large red sign with white lettering that reads "Quality Ice Cream". Below the sign is a menu board with various ice cream flavor options listed. In the foreground, there are several large tubs of ice cream in different colors (orange, green, blue, etc.) and some smaller containers. A person's arm is visible on the right side, pointing towards the menu.

PyPI:

Wrong or missing
download URLs

no
verification

pip:

under python 3.2:

```
$ pip install --user jinja2  
Downloading/unpacking jinja2
```

pip:

under python 3.2:

```
$ pip install --user jinja2  
Downloading/unpacking jinja2
```

```
# ...
```



File "jinja2/runtime.py",
line 44
SyntaxError: invalid syntax



File "jinja2/runtime.py",
line 44

SyntaxError: invalid syntax

Successfully installed jinja2
Cleaning up...

```
>>> import jinja2
```



```
>>> import jinja2
      File ".../jinja2/environment.py",
line 639
          u'...'.encode('iso-8859-15')
                                         ^
SyntaxError: invalid syntax
```

The Installation

The easiest way to install legit is through homebrew:

```
$ brew install legit
```

You can also install it with pip:

```
$ pip install legit
```

You'll then have the wonderful `legit` command available. Run it within a repository.

To install the git aliases, run the following command:

```
$ legit install
```

Caveats

- All remote operations are carried out by the remote identified in

```
$ pip install --user legit
```

```
$ pip install --user legit
```

```
$ legit  
Command not found.
```

```
$ pip install --user https://  
github.com/kennethreitz/legit
```

```
$ pip install --user https://  
github.com/kennethreitz/legit
```

Cannot unpack file... cannot
detect archive format

```
$ pip install --user git+  
https://github.com/kennethreitz/  
legit
```

```
$ pip install --user git+  
https://github.com/kennethreitz/  
legit
```

```
# ...
```

```
    Running setup.py install for  
legit
```

```
        Installing legit script to  
/home/me/.local/bin
```

```
$ pip install --user git+  
https://github.com/kennethreitz/  
legit
```

```
# ...  
    Running setup.py install for  
legit
```

```
    Installing legit script to  
/home/me/.local/bin  
$ legit  
legit: Command not found.
```

Installing legit script to
/home/me/.local/bin

\$ legit

legit: Command not found.

Installing legit script to
/home/me/.local/bin

```
$ legit
legit: Command not found.
$ PATH=$PATH:/home/me/.local/bin
```

Installing legit script to
/home/me/.local/bin

```
$ legit
legit: Command not found.
$ PATH=$PATH:/home/me/.local/bin
$ legit
Not a git repository.
```

```
$ pip
pip: Command not found.
$ # download get-pip.py
$ get-pip.py --user
$ pip
pip: Command not found.
$ PATH=~/local/bin:$PATH
$ pip --version
pip 1.5.4 from
/home/me/local/lib/python2.7/site-packages (python 2.7)
```

What if it's ''not'' on PyPI

Python packaging simplified

for
app developers,

What if it's ''not'' on PyPI

```
>>> wikimarkup.parse(  
    "What if it's ''not'' on PyPI")
```

```
>>> wikimarkup.parse(  
    "What if it's ''not'' on PyPI")  
'<p>What if it's <i>not</i> on  
PyPI\n</p>'
```

“Haven’t had time to finish
setting up code.curse.com.

I pushed... wikimarkup ... to
Google code.”

-- David Cramer, July 2007

```
$ ls -RF
.:
setup.py  wikimarkup/
```

```
$ ls -RF  
.:  
setup.py  wikimarkup/
```

```
./wikimarkup/:  
__init__.py
```

```
$ python setup.py register
```

```
$ python setup.py register  
running register  
running check
```

```
$ python setup.py register  
running register  
running check  
Registering wikimarkup to  
https://pypi.python.org/pypi
```

```
$ python setup.py sdist upload
```

```
$ python setup.py sdist upload  
python setup.py sdist upload  
running sdist  
running check
```

```
$ python setup.py sdist upload
python setup.py sdist upload
running sdist
running check
creating wikimarkup-1.0
creating dist
Creating tar archive
running upload
```

```
$ python setup.py sdist upload
python setup.py sdist upload
running sdist
running check
creating wikimarkup-1.0
creating dist
Creating tar archive
running upload
Submitting dist/wikimarkup-
1.0.tar.gz to
https://pypi.python.org/pypi
```

What if you don't

```
$ python setup.py sdist upload
```

```
from distutils.core import setup

setup(name='wikimarkup',
      version='1.0',
      packages=['wikimarkup'],
      )
```

```
from distutils.core import setup

if __name__ == '__main__':
    setup(name='wikimarkup',
          version='1.0',
          packages=['wikimarkup'],
    )
```

“Although the Distutils are included with Python 1.6 and later, they also have an independent existence so that Python 1.5.2 users can use them.”

-- Python docs

“Although the Distutils are included with Python 1.6 and later, they also have an independent existence so that Python 1.5.2 users can use them.”

-- Python 3 docs

```
from distutils.core import setup

setup(name='wikimarkup',
      version='1.0',
      packages=['wikimarkup'],
      )
```

```
from distutils.core import setup

setup(name='wikimarkup',
      version='1.0',
      description='Wiki Markup',
      author='Curse, Inc.',
      author_email='me@me.com',
      url='http://example.com/',
      packages=['wikimarkup'],
      )
```

```
~ $ cd myproject  
~/myproject $ ls  
mymodule.py
```

```
~ $ cd myproject  
~/myproject $ ls  
mymodule.py
```

```
# time passes  
~/myproject $ ls  
mymodule.py setup.py
```

```
~ $ cd myproject  
~/myproject $ ls  
mymodule.py
```

```
# time passes  
~/myproject $ ls  
mymodule.py setup.py
```

```
from distutils.core import setup

setup(
    # ...
    py_modules=['mymodule'],
)
```

```
from distutils.core import setup

setup(
    # ...
    py_modules=['mymodule'],
)
```

Python “packages”

```
~ $ cd myproject  
~/myproject $ ls  
mymodule.py
```

```
# time passes  
~/myproject $ ls  
mymodule.py setup.py
```

```
$ cd myproject
```

```
$ ls
```

```
mymodule.py
```

```
$ ls
```

```
mymodule.py setup.py
```

```
$ pip install --editable --user .
```

```
$ cd myproject
```

```
$ ls
```

```
mymodule.py
```

```
$ ls
```

```
mymodule.py setup.py
```

```
$ pip install --editable --user .
```

```
# aka setup.py develop --user
```

```
from distutils.core import setup

setup(name='wikimarkup',
      version='1.0',
      packages=['wikimarkup'],
      )
```

```
from distutils.core import setup

setup(name='wikimarkup',
      version='1.0',
      packages=['wikimarkup'],
      install_requires=[
          'coolmodule',
      ],
)
```

```
from distutils.core import setup

setup(name='wikimarkup',
      version='1.0',
      packages=['wikimarkup'],
      install_requires=[
          'coolmodule',
      ],
      # requires= ???
)
```

```
from distutils.core import setup

setup(entry_points={
    'console_scripts': [
        'prog=a.b:prog_func',
    ],
},
# ...
)
```

Python packaging simplified

for
Debian users,

```
# apt-get
```

```
# apt-get install python-imaging
```

```
# apt-get install python-lxml
```

```
$ python
>>> import lxml
>>> lxml
<module 'lxml' from
'/usr/lib/python2.7/dist-
packages/lxml/__init__.pyc'>
```

```
$ pip install mwparser
```

```
$ dpkg -l python-mwparser
ii  python-mwparser
    0.1-1
```

Python packaging simplified

for
Debian users,

Python packaging simplified

for
app developers,

Thanks

Image links available at
asheesh.org/scratch/Preso

Apologies & thanks to
maintainers, contributors,
and users of PyPI & pip

asheesh.org
@asheeshlaroia

```
from distutils.core import setup

setup(entry_points={
    'console_scripts': [
        'prog=a.b:prog_func',
    ],
},
# ...
)
```