Python Packaging

David Arroyo Menéndez

May 15, 2019

Philosophy. Why?

Packaging is for extend you audience. Making easy the installation.

Downloading examples of packages

```
$ git clone https://github.com/davidam/damegender.git
$ git clone https://github.com/davidam/damepandas.git
$ git clone https://github.com/davidam/damenumpy.git
$ git clone https://github.com/davidam/damefunniest.git
$ git clone https://github.com/davidam/dametowel.git
```

```
from setuptools import setup

def readme():
with open('README.org') as f:
return f.read()

setup(name='damefunniest',
  version='0.4',
  description='The funniest joke in the world',
  long_description=readme(),
  classifiers=[
'Development Status :: 3 - Alpha',
'License :: OSI Approved :: GNU General Public License v3 (GPL
'Programming Language :: Python :: 3.6',
'Topic :: Text Processing :: Linguistic',
  ],
  keywords='funniest joke comedy flying circus'
```

Commands for create a package from setup.py

```
To install from local:
$ pip install -e .

To install create tar.gz in dist directory:
$ python3 setup.py register sdist

To upload to pypi:
$ twine upload dist/damefunniest-0.1.tar.gz

To install from Internet:
$ pip3 install damefunniest
```

Tree structure for a package

```
./tests
./tests/test_joke.py
./tests/test_command_line.py
./app
./bin
./bin/funniest-joke
./__init__.py
./command_line.py
```

Damegender is a real package: Methods (I)

```python
import os
import re
from setuptools import setup


cwd = os.getcwd()

def files_one_level(directory):
    f = os.popen('find '+ directory )
    l = []
    for line in f:
        fields = line.strip().split()
        l.append(fields[0])
    return l
```

```
def files_one_level_drop_pwd(directory):
    f = os.popen('find '+ directory)
    l = []
    for line in f:
        fields = line.strip().split()
        if not(os.path.isdir(fields[0])) and ("__init__.py" not
            l.append(drop_pwd(fields[0]))
    return l
```

```
def drop_pwd(s):
    cwd = os.getcwd()
    result = ""
    if re.search(cwd, s):
        result = re.sub(cwd+'/', '', s)
    return result
```

```
setup(name='damegender',
      version='0.0.37',
      description='Gender Detection Tool by David Arroyo MEnénd
      long_description='Gender Detection Tool by David Arroyo M
      classifiers=[
          "Programming Language :: Python :: 3",
          "License :: OSI Approved :: GNU General Public Licens
          "Operating System :: OS Independent",
      ],
      keywords='gender repositories',
      url='http://github.com/davidam/damegender',
      author='David Arroyo Menéndez',
      author_email='davidam@gnu.org',
      license='GPLv3',
      packages=['damegender', 'damegender.app', 'damegender.fil
      package_dir={'damegender': 'src/damegender', 'damegender.
```

Explaining attributes

- version
- classifiers
- license
- packages
- package$_{dir}$
- data$_{files}$
- scripts and entry$_{points}$
- install$_{requires}$

Philosophy matters

- On a release, you must execute test from your package.
- More dependencies, less control over your source and your quality of source
- Less dependencies, more work for you.

References

License

This document is under a Creative Commons Attribution 4.0 International