

Distribution of Software

Luís Pedro Coelho

Programming for Scientists

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University of Pittsburgh

Carnegie Mellon

Why Make Your Software Available?

- You **want** to.
- You **have** to.

What is open-source?

Intellectual Property

Wikipedia-level introduction to intellectual property:

- 1 copyright
- 2 patent
- 3 trademark

A license is a **loosening** of the default “All Rights Reserved” framework.

- 1 Public-domain
- 2 BSD or MIT licenses
- 3 GPL (copy-left)
- 4 ... (10 million others)

Public Domain

I can do whatever I want.

MIT License

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<http://www.gnu.org>

Free Software

- Free as in beer (gratis)
- Free as in speech (libre)

GNU General Public License (GPL)

You can distribute & modify the software as long as

- you make the source code available,
- you license your modifications under the GPL.

You can use BSD licensed code in a GPL.
BSD is **GPL compatible**.

GNU Lesser General Public License (LGPL)

If you write a library and release it under the LGPL,
then closed-source programs can use it.



Summary

- Think about your license
- Pick either BSD/MIT, or GPL, or LGPL
- Be careful about code re-use

Non-Code Open Source

- Creative Commons.
- GFDL
- ...

Restrictions

- **Attribution** [By] you need to state the source
- **Non-Commercial** [NC] you cannot use it for commercial purposes
- **Non-Derivative** [ND] you may not modify the work
- **Share-Alike** [SA] you must license your derivative works similarly

Mix & match to get a license, e.g., By-NC-SA.

How do you actually distribute your software?

- Put it on your home page
- Put it in PyPI (Python Package Index)
- Use a service like [sourceforge](#), [google code](#), [launchpad](#), . . .

Distributing Software: setup.py

```
import setuptools
long_description = '''...'''

classifiers = ['Development Status :: 2 - Pre-Alpha',
               'License :: OSI Approved :: MIT License',
               'Programming Language :: Python',]

setuptools.setup(name = 'Particles', version = '0.1',
                 description = 'A Task Based Framework',
                 long_description = long_description,
                 author = 'Spring 09 Class of 98111 (CMU)',
                 author_email = 'lpc@cmu.edu',
                 license = 'MIT', platforms = ['Any'],
                 classifiers = classifiers,
                 url = 'http://code.google.com/p/particles/',
                 packages = setuptools.find_packages(exclude='tests'),
                 )
```

Python Package Index