### Software Packaging

### Npm's "Left-pad problem"

11 lines of code downloaded 2.5 million times the moth before

#### Why PyPI?

- Copy & paste is not the way to share your code
- Developers can put tests and help improve the code
- Hopefully get developers depend on it

# Publish code make python better

- python version > 3.6.3
- python3 -m pip install --upgrade pip
- python3 -m pip install --upgrade build

## Publish code make python better

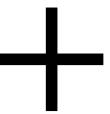
- General code that others can use
- Extract and make independent
- Put it in a src directory
- Make a pyproject.toml file

```
def say_hello(name=None):
    if name is None:
        return "Hello, world!"
    else:
        return f"Hello, {name}!"
```

### pyproject.tmol

- \$ python -m build
- Add .gitignore

### pyproject.tmol



#### More to put in the tmol file

```
readme = "README.md"
requires-python = ">=3.8"
license = {file = "LICENSE"}
keywords = ["Advent of Code", "captcha", ]
```

### Test package

- \$ pip install -e.
- -e: Link (not copy) to the library
- .: find package here

```
>>> from helloWorld import say_hello
>>> say_hello()
'Hello, world!'
>>> say_hello('Ali')
'Hello, Ali!'
>>>
```

## Before uploading? gitignore & classifiers

gitignore.io

License

```
classifiers = [
    "Programming Language :: Python :: 3",
    "License :: OSI Approved :: MIT License",
    "Operating System :: OS Independent",
]
```

## Before uploading? gitignore & classifiers

Add classifiers
 https://pypi.org/classifiers/

```
classifiers = [
    "Programming Language :: Python :: 3",
    "License :: OSI Approved :: MIT License",
    "Operating System :: OS Independent",
]
```

## Before uploading? Dependencies

 Make sure restrictions are as relaxed as they can be

• \$ pip install -e.

```
"License :: OSI Approved :: GNU General Public Licer
"Operating System :: OS Independent",
],
install_requires = [
    "package ~=1.7",
],
```

## Tests pyTest

• Development dependencies

Update README

#### Almost done!

```
[project.urls]
Homepage = "https://example.com"
Documentation = "https://readthedocs.org"
Repository = "https://github.com/me/spam.git"
Changelog = "https://github.com/me/spam/blob/master/CHANGELOG.md"

[project.scripts]
res-captcha = "resolve_captcha:main"
```

#### Publish!

#### As soon as you have covered the basics

- Push to PyPI with twine:
  - \$ python3 -m pip install --upgrade twine
  - \$ python3 -m twine upload --repository testpypi dist/\*

#### Is there a shortcut?

- \$ pip install cookicutter
- \$ cookicutter gh:ionelmc:cookicutter-pylibrary

