
PyScaffold Documentation

Release 2.4.4

Blue Yonder

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PyScaffold helps you to easily setup a new Python project, it is as easy as:

```
putup my_project
```

This will create a new subdirectory called *my_project*, inside which you will find a git repository, *setup.py*, and the folders *document* and *test*, ready for some serious coding.

Type `putup -h` to learn about more configuration options. PyScaffold assumes that you have [Git](#) installed and set up on your PC, meaning at least your name and email configured. The scaffold of `my_project` provides you with a lot of *features*. PyScaffold is compatible with Python 2.7, 3.3 and 3.4.

1.1 Features

PyScaffold comes with a lot of elaborated features and configuration defaults to make the most common tasks in developing, maintaining and distributing your own Python package as easy as possible.

1.1.1 Configuration & Packaging

All configuration can be done in `setup.cfg` like changing the description, url, classifiers and even console scripts of your project with the help of `pbr`. That means in most cases it is not necessary to tamper with `setup.py`. The syntax of `setup.cfg` is pretty much self-explanatory and well commented, check out this [example](#) or [pbr's usage manual](#).

In order to build a source, binary or wheel distribution, just run `python setup.py sdist`, `python setup.py bdist` or `python setup.py bdist_wheel`.

Namespace Packages

Optionally, [namespace packages](#) can be used, if you are planning to distribute a larger package as a collection of smaller ones. For example, use:

```
putup my_project --package my_package --with-namespace com.my_domain
```

to define `my_package` inside the namespace `com.my_domain` in java-style.

Package and Files Data

Additional data, e.g. images and text files, inside your package can be configured under the `[files]` section in `setup.cfg`. It is not necessary to have an `MANIFEST.in` file for this to work. To read this data in your code, use:

```
from pkgutil import get_data
data = get_data('my_package', 'path/to/my/data.txt')
```

Note: Make sure that all files you specify in `[files]` have been added to the repository!

1.1.2 Complete Git Integration

Your project is already an initialised Git repository and `setup.py` uses the information of tags to infer the version of your project with the help of `setuptools_scm`. To use this feature you need to tag with the format `MAJOR.MINOR[.PATCH]`, e.g. `0.0.1` or `0.1`. Run `python setup.py --version` to retrieve the current PEP440-compliant version. This version will be used when building a package and is also accessible through `my_project.__version__`.

Unleash the power of Git by using its [pre-commit hooks](#). This feature is available through the `--with-pre-commit` flag. After your project's scaffold was generated, make sure `pre-commit` is installed, e.g. `pip install pre-commit`, then just run `pre-commit install`.

It goes unsaid that also a default `.gitignore` file is provided that is well adjusted for Python projects and the most common tools.

1.1.3 Sphinx Documentation

Build the documentation with `python setup.py docs` and run doctests with `python setup.py doctest`. Start editing the file `docs/index.rst` to extend the documentation. The documentation also works with [Read the Docs](#).

In order to use the `numpydoc` documentation style, the flag `--with-numpydoc` can be specified.

1.1.4 Unittest & Coverage

Run `python setup.py test` to run all unittests defined in the subfolder `tests` with the help of `py.test` and `pytest-runner`. Some sane default flags for `py.test` are already defined in the `[pytest]` section of `setup.cfg`. The `py.test` plugin `pytest-cov` is used to automatically generate a coverage report. It is also possible to provide additional parameters and flags on the commandline, e.g., type:

```
python setup.py test --addopts -h
```

to show the help of `py.test`.

JUnit and Coverage HTML/XML

For usage with a continuous integration software JUnit and Coverage XML output can be activated in `setup.cfg`. Use the flag `--with-travis` to generate templates of the [Travis](#) configuration files `.travis.yml` and `tests/travis_install.sh` which even features the coverage and stats system [Coveralls](#). In order to use the virtualenv management and test tool [Tox](#) the flag `--with-tox` can be specified.

Managing test environments with tox

Run `tox` to generate test virtual environments for various python environments defined in the generated `tox.ini`. Testing and building `sdist`s for python 2.7 and python 3.4 is just as simple with `tox` as:

```
tox -e py27,py34
```

Environments for tests with the the static code analyzers `pyflakes` and `pep8` which are bundled in `flake8` are included as well. Run it explicitly with:

```
tox -e flake8
```


With `tox`, you can use the `--recreate` flag to force `tox` to create new environments. By default, PyScaffold's `tox` configuration will execute tests for a variety of python versions. If an environment is not available on the system the tests are skipped gracefully. You can rely on the [tox documentation](#) for detailed configuration options.

1.1.5 Requirements Management

Add the requirements of your project to the `requirements.txt` file which will be automatically used by `setup.py`. This also allows you to easily customize a plain virtual environment with:

```
pip install -r requirements.txt
```

Since PyScaffold uses `pbr` it is also possible to define requirements depending on your Python version. Use the environment variable `PBR_REQUIREMENTS_FILES` to define a comma-separated list of requirement files if you want to use non-default names and locations.

1.1.6 Licenses

All licenses from [choosealicense.com](#) can be easily selected with the help of the `--license` flag.

1.1.7 Django

Create a Django project with the flag `--with-django` which is equivalent to `django-admin.py startproject my_project` enhanced by PyScaffold's features.

1.1.8 Cookiecutter

With the help of [Cookiecutter](#) it is possible to customize your project setup. Just use the flag `--with-cookiecutter TEMPLATE` to use a cookiecutter template which will be refined by PyScaffold afterwards.

1.1.9 Easy Updating

Keep your project's scaffold up-to-date by applying `putup --update my_project` when a new version of PyScaffold was released. An update will only overwrite files that are not often altered by users like `setup.py`. To update all files use `--update --force`. An existing project that was not setup with PyScaffold can be converted with `putup --force existing_project`. The force option is completely safe to use since the git repository of the existing project is not touched! Also check out if [configuration options](#) in `setup.cfg` have changed.

Note: If you are updating from a PyScaffold version before 2.0, you must manually remove the files `versioneer.py` and `MANIFEST.in`. If you are updating from a version before 2.2, you must remove `${PACKAGE}/_version.py`.

1.2 Installation

1.2.1 Requirements

The installation of PyScaffold requires:

- `setuptools`
- `six`

Additionally, if you want to create a Django project or want to use cookiecutter:

- `Django`
- `cookiecutter`

Note: In most cases only Django needs to be installed manually since PyScaffold will download and install its requirements automatically when using `pip`. One exception might be `setuptools` if you are not using a current version of [Virtual Environments](#) as development environment. In case you are using the system installation of Python from your Linux distribution make sure `setuptools` is installed. To install it on Debian or Ubuntu:

```
sudo apt-get install python-setuptools
```

In case of Redhat or Fedora:

```
sudo yum install python-setuptools
```

1.2.2 Installation

If you have `pip` installed, then simply type:

```
pip install --upgrade pyscaffold
```

to get the latest stable version. The most recent development version can be installed with:

```
pip install --pre --upgrade pyscaffold
```

Using `pip` also has the advantage that all requirements are automatically installed.

If you want to install PyScaffold with all features like Django and cookiecutter support, run:

```
pip install --upgrade pyscaffold[ALL]
```

1.2.3 Additional Requirements

If you run commands like `python setup.py test` and `python setup.py docs` within your project, some additional requirements like `py.test` will be installed automatically. This is quite comfortable on the one hand but will also pollute your project with a lot of `egg-folders`. In order to avoid this just install following packages inside your virtual environment before you run `setup.py` commands like `doc` and `test`:

- `Sphinx`
- `py.test`
- `pytest-cov`

1.3 Configuration

Projects set up with PyScaffold feature an easy package configuration with `setup.cfg`. Check out the example below as well as [pbr's usage manual](#).

```

[metadata]
name = my_project
summary = A test project that was set up with PyScaffold
author = Florian Wilhelm
author-email = Florian.Wilhelm@blue-yonder.com
license = new BSD
home-page = http://...
description-file = README.rst
# Add here all kinds of additional classifiers as defined under
# https://pypi.python.org/pypi?%3Aaction=list_classifiers
classifiers = Development Status :: 5 - Production/Stable,
              Topic :: Utilities,
              Programming Language :: Python,
              Programming Language :: Python :: 2,
              Programming Language :: Python :: 2.7,
              Programming Language :: Python :: 3,
              Programming Language :: Python :: 3.3,
              Programming Language :: Python :: 3.4,
              Environment :: Console,
              Intended Audience :: Developers,
              License :: OSI Approved :: BSD License,
              Operating System :: POSIX :: Linux,
              Operating System :: Unix,
              Operating System :: MacOS,
              Operating System :: Microsoft :: Windows

[entry_points]
# Add here console scripts like:
console_scripts =
    run_my_project = my_project.cli:run
# as well as other entry_points.

[files]
# Add here 'data_files', 'packages' or 'namespace_packages'.
# Additional data files are defined as key value pairs of source and target:
packages =
    my_project
data_files =
    share/my_project/docs = docs/*

[extras]
# Add here additional requirements for extra features, like:
# PDF =
#     ReportLab>=1.2
#     RXP
ALL =
    django
    cookiecutter

[test]
# py.test options when running `python setup.py test`
addopts = tests

[pytest]
# Options for py.test:
# Specify command line options as you would do when invoking py.test directly.
# e.g. --cov-report html (or xml) for html/xml output or --junitxml junit.xml
# in order to write a coverage file that can be read by Jenkins.

```

```
addopts =
    --cov my_project --cov-report term-missing
    --verbose

[aliases]
docs = build_sphinx

[bdist_wheel]
# Use this option if your package is pure-python
universal = 1

[build_sphinx]
# Options for Sphinx build
source_dir = docs
build_dir = docs/_build

[pbr]
# Let pbr run sphinx-apidoc
autodoc_tree_index_modules = True
# autodoc_tree_excludes = ...
# Let pbr itself generate the apidoc
# autodoc_index_modules = True
# autodoc_exclude_modules = ...
# Convert warnings to errors
# warnerrors = True

[devpi:upload]
# Options for the devpi: PyPI server and packaging tool
# VCS export must be deactivated since we are using setuptools-scm
no-vcs = 1
format = bdist_wheel
```

1.4 Contributing

PyScaffold is developed by [Blue Yonder](#) developers to help automating and standardizing the process of project setups. You are very welcome to join in our effort if you would like to contribute.

1.4.1 Chat

Join our [chat](#) to get in direct contact with the developers of PyScaffold.

1.4.2 Bug Reports

If you experience bugs or in general issues with PyScaffold, please file a bug report to our [Bug Tracker](#).

1.4.3 Code

If you would like to contribute to PyScaffold, fork the [main repository](#) on GitHub, then submit a “pull request” (PR):

1. [Create an account](#) on GitHub if you do not already have one.
2. Fork the project repository: click on the *Fork* button near the top of the page. This creates a copy of the code under your account on the GitHub server.

3. Clone this copy to your local disk:

```
git clone git@github.com:YourLogin/pyscaffold.git
```

4. Run `python setup.py egg_info` after a fresh checkout. This will generate some critically needed files.
5. Create a branch to hold your changes:

```
git checkout -b my-feature
```

and start making changes. Never work in the master branch!

6. Work on this copy, on your computer, using [Git](#) to do the version control. When you're done editing, do:

```
git add modified_files
git commit
```

to record your changes in Git, then push them to GitHub with:

```
git push -u origin my-feature
```

7. Go to the web page of your PyScaffold fork, and click "Create pull request" to send your changes to the maintainers for review. Find more detailed information [here](#).

1.5 License

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1.6 Developers

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1.7 Release Notes

1.7.1 Version 2.4.4, 2015-10-29

- Fix problem with bad upload of version 2.4.3 to PyPI, issue #80

1.7.2 Version 2.4.3, 2015-10-27

- Fix problem with version numbering if `setup.py` is not in the root directory, issue #76

1.7.3 Version 2.4.2, 2015-09-16

- Fix version conflicts due to too tight pinning, issue #69

1.7.4 Version 2.4.1, 2015-09-09

- Fix installation with additional requirements `pyscaffold[ALL]`
- Updated pbr version to 1.7

1.7.5 Version 2.4, 2015-09-02

- Allow different `py.test` options when invoking with `py.test` or `python setup.py test`
- Check if Sphinx is needed and add it to `setup_requires`
- Updated pre-commit plugins
- Replaced `pytest-runner` by an improved version
- Let pbr do `sphinx-apidoc`, removed from `conf.py`, issue #65

Note: Due to the switch to a modified `pytest-runner` version it is necessary to update `setup.cfg`. Please check the *example*.

1.7.6 Version 2.3, 2015-08-26

- Format of setup.cfg changed due to usage of pbr, issue #59
- Much cleaner setup.py due to usage of pbr, issue #59
- PyScaffold can be easily called from another script, issue #58
- Internally dictionaries instead of namespace objects are used for options, issue #57
- Added a section for devpi in setup.cfg, issue #62

Note: Due to the switch to `pbr`, it is necessary to update `setup.cfg` according to the new syntax.

1.7.7 Version 2.2.1, 2015-06-18

- FIX: Removed putup console script in setup.cfg template

1.7.8 Version 2.2, 2015-06-01

- Allow recursive inclusion of data files in setup.cfg, issue #49
- Replaced hand-written PyTest runner by `pytest-runner`, issue #47
- Improved default README.rst, issue #51
- Use `tests/conftest.py` instead of `tests/__init__.py`, issue #52
- Use `setuptools_scm` for versioning, issue #43
- Require `setuptools>=9.0`, issue #56
- Do not create `skeleton.py` during an update, issue #55

Note: Due to the switch to `setuptools_scm` the following changes apply:

- use `python setup.py --version` instead of `python setup.py version`
 - `git archive` can no longer be used for packaging (and was never meant for it anyway)
 - initial tag `v0.0` is no longer necessary and thus not created in new projects
 - tags do no longer need to start with `v`
-

1.7.9 Version 2.1, 2015-04-16

- Use alabaster as default Sphinx theme
- Parameter `data_files` is now a section in setup.cfg
- Allow definition of `extras_require` in setup.cfg
- Added a CHANGES.rst file for logging changes
- Added support for cookiecutter
- FIX: Handle an empty Git repository if necessary

1.7.10 Version 2.0.4, 2015-03-17

- Typo and wrong Sphinx usage in the RTD documentation

1.7.11 Version 2.0.3, 2015-03-17

- FIX: Removed misleading *include_package_data* option in *setup.cfg*
- Allow selection of a proprietary license
- Updated some documentations
- Added -U as short parameter for `--update`

1.7.12 Version 2.0.2, 2015-03-04

- FIX: Version retrieval with *setup.py* install
- `argparse` example for version retrieval in *skeleton.py*
- FIX: `import my_package` should be quiet (`verbose=False`)

1.7.13 Version 2.0.1, 2015-02-27

- FIX: Installation bug under Windows 7

1.7.14 Version 2.0, 2015-02-25

- Split configuration and logic into *setup.cfg* and *setup.py*
- Removed `.pre` from version string (newer PEP 440)
- FIX: Sphinx now works if package name does not equal project name
- Allow namespace packages with `--with-namespace`
- Added a *skeleton.py* as a `console_script` template
- Set `v0.0` as initial tag to support PEP440 version inference
- Integration of the Versioneer functionality into *setup.py*
- Usage of *data_files* configuration instead of *MANIFEST.in*
- Allow configuration of *package_data* in *setup.cfg*
- Link from Sphinx docs to *AUTHORS.rst*

1.7.15 Version 1.4, 2014-12-16

- Added `numpydoc` flag `--with-numpydoc`
- Fix: Add `django` to requirements if `--with-django`
- Fix: Don't overwrite *index.rst* during update

1.7.16 Version 1.3.2, 2014-12-02

- Fix: path of Travis install script

1.7.17 Version 1.3.1, 2014-11-24

- Fix: `-with-tox` tuple bug #28

1.7.18 Version 1.3, 2014-11-17

- Support for Tox (<https://tox.readthedocs.org/>)
- flake8: exclude some files
- Usage of UTF8 as file encoding
- Fix: create non-existent files during update
- Fix: unit tests on MacOS
- Fix: unit tests on Windows
- Fix: Correct version when doing `setup.py` install

1.7.19 Version 1.2, 2014-10-13

- Support pre-commit hooks (<http://pre-commit.com/>)

1.7.20 Version 1.1, 2014-09-29

- Changed COPYING to LICENSE
- Support for all licenses from <http://choosealicense.com/>
- Fix: Allow update of license again
- Update to Versioneer 0.12

1.7.21 Version 1.0, 2014-09-05

- Fix when overwritten project has a git repository
- Documentation updates
- License section in Sphinx
- Django project support with `-with-django` flag
- Travis project support with `-with-travis` flag
- Replaced `sh` with own implementation
- Fix: new `git describe` version to PEP440 conversion
- `conf.py` improvements
- Added source code documentation
- Fix: Some Python 2/3 compatibility issues

- Support for Windows
- Dropped Python 2.6 support
- Some classifier updates

1.7.22 Version 0.9, 2014-07-27

- Documentation updates due to RTD
- Added a `-force` flag
- Some cleanups in `setup.py`

1.7.23 Version 0.8, 2014-07-25

- Update to Versioneer 0.10
- Moved sphinx-apidoc from `setup.py` to `conf.py`
- Better support for `make html`

1.7.24 Version 0.7, 2014-06-05

- Added Python 3.4 tests and support
- Flag `-update` updates only some files now
- Usage of `setup_requires` instead of `six` code

1.7.25 Version 0.6.1, 2014-05-15

- Fix: Removed `six` dependency in `setup.py`

1.7.26 Version 0.6, 2014-05-14

- Better usage of `six`
- Return non-zero exit status when doctests fail
- Updated README
- Fixes in Sphinx Makefile

1.7.27 Version 0.5, 2014-05-02

- Simplified some Travis tests
- Nicer output in case of errors
- Updated PyScaffold's own `setup.py`
- Added `-junit_xml` and `-coverage_xml/html` option
- Updated `.gitignore` file

1.7.28 Version 0.4.1, 2014-04-27

- Problem fixed with pytest-cov installation

1.7.29 Version 0.4, 2014-04-23

- PEP8 and PyFlakes fixes
- Added `--version` flag
- Small fixes and cleanups

1.7.30 Version 0.3, 2014-04-18

- PEP8 fixes
- More documentation
- Added update feature
- Fixes in `setup.py`

1.7.31 Version 0.2, 2014-04-15

- Checks when creating the project
- Fixes in COPYING
- Usage of `sh` instead of `GitPython`
- PEP8 fixes
- Python 3 compatibility
- Coverage with Coverall.io
- Some more unittests

1.7.32 Version 0.1.2, 2014-04-10

- Bugfix in `Manifest.in`
- Python 2.6 problems fixed

1.7.33 Version 0.1.1, 2014-04-10

- Unittesting with Travis
- Switch to `string.Template`
- Minor bugfixes

1.7.34 Version 0.1, 2014-04-03

- First release

1.8 pyscaffold

1.8.1 pyscaffold package

Submodules

pyscaffold.cli module

Command-Line-Interface of PyScaffold

`pyscaffold.cli.create_project` (*opts*)

Create the project's directory structure

Parameters *opts* – options as dictionary

`pyscaffold.cli.get_default_opts` (*project_name*, ***aux_opts*)

Creates default options using auxiliary options as keyword argument

Use this function if you want to use PyScaffold from another application in order to generate an option dictionary that can then be passed to `create_project`.

Parameters

- **project_name** – name of the project
- **aux_opts** – auxiliary options as keyword parameters

Returns options with default values set as dictionary

`pyscaffold.cli.main` (*args*)

PyScaffold is a tool for putting up the scaffold of a Python project.

`pyscaffold.cli.make_sanity_checks` (*opts*)

Perform some sanity checks, e.g., if git is installed.

Parameters *opts* – options as dictionary

`pyscaffold.cli.parse_args` (*args*)

Parse command line parameters

Parameters *args* – command line parameters as list of strings

Returns command line parameters as dictionary

`pyscaffold.cli.run` (**args*, ***kwargs*)

Entry point for setup.py

pyscaffold.info module

Provide general information about the system, user etc.

`pyscaffold.info.email` ()

Retrieve the user's email

Returns user's email as string

`pyscaffold.info.is_git_configured` ()

Check if user.name and user.email is set globally in git

Returns boolean

`pyscaffold.info.is_git_installed()`

Check if git is installed

Returns boolean

`pyscaffold.info.project(opts)`

Update user options with the options of an existing PyScaffold project

Parameters `opts` – options as dictionary

Returns options with updated values as dictionary

`pyscaffold.info.username()`

Retrieve the user's name

Returns user's name as string

pyscaffold.integration module

Integration part for hooking into distutils/setuptools

Rationale: The `use_pyscaffold` keyword is unknown to setuptools' `setup(...)` command, therefore the `entry_points` are checked for a function to handle this keyword which is `pyscaffold_keyword` below. This is where we hook into setuptools and apply the magic of `setuptools_scm` and `pbr`.

`pyscaffold.integration.build_cmd_docs()`

Return Sphinx's BuildDoc if available otherwise a dummy command

Returns command as `Command`

`pyscaffold.integration.deactivate_pbr_authors_changelog()`

Deactivate automatic generation of AUTHORS and ChangeLog file

This is an automatism of `pbr` and we rather keep track of our own AUTHORS.rst and CHANGES.rst files.

`pyscaffold.integration.local_version2str(version)`

Create the local part of a PEP440 version string

Parameters `version` – version object as `setuptools_scm.version.ScmVersion`

Returns local version string

`pyscaffold.integration.pyscaffold_keyword(dist, keyword, value)`

Handles the `use_pyscaffold` keyword of the `setup(...)` command

Parameters

- **dist** – distribution object as `setuptools.dist`
- **keyword** – keyword argument = 'use_pyscaffold'
- **value** – value of the keyword argument

`pyscaffold.integration.version2str(version)`

Creates a PEP440 version string

Parameters `version` – version object as `setuptools_scm.version.ScmVersion`

Returns version string

pyscaffold.pytest_runner module

This module provides a test runner for setup.py copied over from <https://bitbucket.org/pytest-dev/pytest-runner/> in order to make some improvements.

Follow the discussion under: <https://bitbucket.org/pytest-dev/pytest-runner/issues/7/support-all-pytest-commands>

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```
class pyscaffold.pytest_runner.PyTest (dist, **kw)
    Bases: setuptools.command.test.test

    finalize_options ()

    initialize_options ()

    static marker_passes (marker)
        Given an environment marker, return True if the marker is valid and matches this environment.

    run ()
        Override run to ensure requirements are available in this session (but don't install them anywhere).

    run_tests ()

    user_options = [('extras', None, 'Install (all) setuptools extras when running tests'), ('index-url', None, 'Specify an in
```

pyscaffold.repo module

Functionality for working with a git repository

```
pyscaffold.repo.add_tag (project, tag_name, message=None)
    Add an (annotated) tag to the git repository.
```

Parameters

- **project** – path to the project as string
- **tag_name** – name of the tag as string
- **message** – optional tag message as string

```
pyscaffold.repo.get_git_root ()
    Return the path to the top-level of the git repository.
```

```
pyscaffold.repo.git_tree_add (struct, prefix='')
    Adds recursively a directory structure to git
```

Parameters

- **struct** – directory structure as dictionary of dictionaries
- **prefix** – prefix for the given directory structure as string

`pyscaffold.repo.init_commit_repo` (*project, struct*)

Initialize a git repository

Parameters

- **project** – path to the project as string
- **struct** – directory structure as dictionary of dictionaries

`pyscaffold.repo.is_git_repo` (*folder*)

Check if a folder is a git repository

Parameters **folder** – path as string

pyscaffold.shell module

Shell commands like git, django-admin.py etc.

class `pyscaffold.shell.ShellCommand` (*command, shell=True, cwd=None*)

Bases: `object`

Shell command that can be called with flags like git('add', 'file')

Parameters

- **command** – command to handle
- **shell** – run the command in the shell
- **cwd** – current working dir to run the command

`pyscaffold.shell.called_process_error2exit_decorator` (*func*)

Decorator to convert given CalledProcessError to an exit message

This avoids displaying nasty stack traces to end-users

`pyscaffold.shell.get_git_cmd` (***args*)

Retrieve the git shell command depending on the current platform

All additional parameters are passed to `ShellCommand`

pyscaffold.structure module

Functionality to generate and work with the directory structure of a project

class `pyscaffold.structure.FileOp`

Bases: `object`

Namespace for file operations during an update

NO_OVERWRITE: Do not overwrite an existing file during update **NO_CREATE**: Do not create the file during an update

NO_CREATE = 1

NO_OVERWRITE = 0

`pyscaffold.structure.add_namespace` (*opts, struct*)

Prepend the namespace to a given file structure

Parameters

- **opts** – options as dictionary
- **struct** – directory structure as dictionary of dictionaries

Returns directory structure as dictionary of dictionaries

`pyscaffold.structure.apply_update_rules` (*rules, struct, prefix=None*)
Apply update rules using *FileOp* to a directory structure

Parameters

- **rules** – directory structure as dictionary of dictionaries with *FileOp* keys. The structure will be modified.
- **struct** – directory structure as dictionary of dictionaries
- **prefix** – prefix path for the structure

Returns directory structure with keys removed according to the rules

`pyscaffold.structure.create_cookiecutter` (*opts*)
Create a cookie cutter template

Parameters **opts** – options as dictionary

`pyscaffold.structure.create_django_proj` (*opts*)
Creates a standard Django project with django-admin.py

Parameters **opts** – options as dictionary

`pyscaffold.structure.create_structure` (*struct, prefix=None, update=False*)
Manifests a directory structure in the filesystem

Parameters

- **struct** – directory structure as dictionary of dictionaries
- **prefix** – prefix path for the structure
- **update** – update an existing directory structure as boolean

`pyscaffold.structure.make_structure` (*opts*)
Creates the project structure as dictionary of dictionaries

Parameters **opts** – options as dictionary

Returns structure as dictionary of dictionaries

pyscaffold.templates module

Templates for all files of a project's scaffold

`pyscaffold.templates.authors` (*opts*)
Template of AUTHORS.rst

Parameters **opts** – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.changes` (*opts*)
Template of CHANGES.rst

Parameters **opts** – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.conftest_py` (*opts*)

Template of `conftest.py`

Parameters `opts` – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.coveragerc` (*opts*)

Template of `.coveragerc`

Parameters `opts` – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.get_template` (*name*)

Retrieve the template by name

Parameters `name` – name of template

Returns template as `string.Template`

`pyscaffold.templates.gitignore` (*opts*)

Template of `.gitignore`

Parameters `opts` – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.gitignore_empty` (*opts*)

Template of empty `.gitignore`

Parameters `opts` – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.init` (*opts*)

Template of `__init__.py`

Parameters `opts` – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.license` (*opts*)

Template of `LICENSE.txt`

Parameters `opts` – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.namespace` (*opts*)

Template of `__init__.py` defining a namespace package

Parameters `opts` – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.pre_commit_config` (*opts*)

Template of `.pre-commit-config.yaml`

Parameters `opts` – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.readme` (*opts*)

Template of `README.rst`

Parameters `opts` – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.requirements` (*opts*)
Template of requirements.txt

Parameters *opts* – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.setup_cfg` (*opts*)
Template of setup.cfg

Parameters *opts* – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.setup_py` (*opts*)
Template of setup.py

Parameters *opts* – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.skeleton` (*opts*)
Template of skeleton.py defining a basic console script

Parameters *opts* – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.sphinx_authors` (*opts*)
Template of authors.rst

Parameters *opts* – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.sphinx_changes` (*opts*)
Template of changes.rst

Parameters *opts* – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.sphinx_conf` (*opts*)
Template of conf.py

Parameters *opts* – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.sphinx_index` (*opts*)
Template of index.rst

Parameters *opts* – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.sphinx_license` (*opts*)
Template of license.rst

Parameters *opts* – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.sphinx_makefile` (*opts*)
Template of Sphinx's Makefile

Parameters `opts` – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.tox(opts)`

Template of tox.ini

Parameters `opts` – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.travis(opts)`

Template of .travis.yml

Parameters `opts` – mapping parameters as dictionary

Returns file content as string

`pyscaffold.templates.travis_install(opts)`

Template of travis_install.sh

Parameters `opts` – mapping parameters as dictionary

Returns file content as string

pyscaffold.utils module

Miscellaneous utilities and tools

`pyscaffold.utils.best_fit_license(txt)`

Finds proper license name for the license defined in txt

Parameters `txt` – license name as string

Returns license name as string

`pyscaffold.utils.chdir(*args, **kwargs)`

Contextmanager to change into a directory

Parameters `path` – path to change into as string

`pyscaffold.utils.check_setuptools_version()`

Checks that setuptools has all necessary capabilities for setuptools_scm

`pyscaffold.utils.exceptions2exit(exception_list)`

Decorator to convert given exceptions to exit messages

This avoids displaying nasty stack traces to end-users

Parameters `exception_list` – list of exceptions to convert

`pyscaffold.utils.get_files(pattern)`

Retrieve all files in the current directory by a pattern. Use `**` as greedy wildcard and `*` as non-greedy wildcard.

Parameters `pattern` – The pattern as used by `distutils.filelist.Filelist`

`pyscaffold.utils.is_valid_identifier(string)`

Check if string is a valid package name

Parameters `string` – package name as string

Returns boolean

`pyscaffold.utils.levenshtein(s1, s2)`

Calculate the Levenshtein distance between two strings

Parameters

- **s1** – first string
- **s2** – second string

Returns distance between s1 and s2 as integer

`pyscaffold.utils.list2str` (*lst*, *indent=0*, *brackets=True*, *quotes=True*)
Generate a Python syntax list string with an indentation

Parameters

- **lst** – list
- **indent** – indention as integer
- **brackets** – surround the list expression by brackets as boolean
- **quotes** – surround each item with quotes

Returns string

`pyscaffold.utils.make_valid_identifier` (*string*)
Try to make a valid package name identifier from a string

Parameters **string** – invalid package name as string

Returns valid package name as string or `RuntimeError`

`pyscaffold.utils.prepare_namespace` (*namespace_str*)
Check the validity of *namespace_str* and split it up into a list

Parameters **namespace_str** – namespace as string, e.g. “com.blue_yonder”

Returns list of namespaces, e.g. [”com”, “com.blue_yonder”]

`pyscaffold.utils.utf8_decode` (*string*)
Decode a Python 2 str object to unicode for compatibility with Python 3

Parameters **string** – Python 2 str object or Python 3 str object

Returns Python 2 unicode object or Python 3 str object

`pyscaffold.utils.utf8_encode` (*string*)
Encode a Python 2 unicode object to str for compatibility with Python 3

Parameters **string** – Python 2 unicode object or Python 3 str object

Returns Python 2 str object or Python 3 str object

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