
pytest-image-diff Documentation

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INSTALLATION

```
pip install pytest-image-diff
```

or from git

```
pip install -e git+https://github.com/ApiKawa/pytest-image-diff.git@master#egg=pytest-  
↪image-diff
```

Python>=3.6

USAGE

```
from typing import Union
from PIL import Image

def test_compare(image_diff):
    image: Image or str or bytes = Image.new()
    image2: Image or str or bytes = '/path/to/image.jpeg'
    image_diff(image, image2)

def test_regression(image_regression):
    image: Union[Image, str, bytes] = Image.new()
    image_regression(image, threshold=0.5)
```

Also use with assert

```
import pytest

from typing import Union
from PIL import Image

@pytest.fixture(scope="session")
def image_diff_throw_exception() -> bool:
    """
    Set default throw exception. By default - True
    """
    return False

def test_compare(image_diff):
    image: Image or str or bytes = Image.new()
    image2: Image or str or bytes = '/path/to/image.jpeg'
    assert image_diff(image, image2)
    assert image_diff(image, image2, threshold=0.5)
    # Also can check threshold in compare, ie
    assert image_diff(image, image2) < 0.5
    # For different checks in one test
    assert image_diff(image, image2, threshold=0.5, suffix="one")
    # Or without fixture image_diff_throw_exception
    assert image_diff(image, image2, threshold=0.5, throw_exception=False)
```

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```
def test_regression(image_regression):
    image: Union[Image, str, bytes] = Image.new()
    assert image_regression(image, threshold=0.5)
    # Also can check threshold in compare, ie
    assert image_regression(image) < 0.5
    # For different checks in one test
    assert image_regression(image, threshold=0.5, suffix="foo")
    # Or without fixture image_diff_throw_exception
    assert image_regression(image, threshold=0.5, throw_exception=False)
```

First run creates reference images

2.1 pytest-splinter

Fixture screenshot_regression enabled if pytest-splinter installed

```
import pytest

@pytest.fixture
def admin_browser(request, browser_instance_getter):
    """Admin browser fixture."""
    # browser_instance_getter function receives parent fixture -- our admin_browser
    return browser_instance_getter(request, admin_browser)

def test_2_browsers(browser, admin_browser, screenshot_regression):
    """Test using 2 browsers at the same time."""
    browser.visit('http://google.com')
    admin_browser.visit('http://admin.example.com')

    screenshot_regression(suffix="browser")
    screenshot_regression(admin_browser, suffix="admin browser")

def test_pytest_splinter(browser, screenshot_regression):
    # Recommend fix window size for avoid regression
    browser.driver.set_window_size(1280, 1024)

    browser.visit('http://google.com')

    screenshot_regression(suffix="main")
    # ... some interaction
    browser.click()
    screenshot_regression(suffix="success")
    # you can use xpath expression for part of page
    screenshot_regression(xpath="//h1")
```

2.1.1 API Reference

Config fixtures

`pytest_image_diff.plugin.image_diff_threshold()`

Set default threshold differences of images. By default - 0.001

Return type

float

`pytest_image_diff.plugin.image_diff_root(request)`

Root path for storing diff images. By default - `request.config.rootdir`

Return type

Union[str, Path]

`pytest_image_diff.plugin.image_diff_dir(image_diff_root)`

Path for store diff images. by default - `{image_diff_root}.tests/image_diff/`

Return type

Union[str, Path]

`pytest_image_diff.plugin.image_diff_reference_dir(image_diff_root)`

Path for store reference images

Return type

Union[str, Path]

`pytest_image_diff.plugin.image_diff_throw_exception()`

Set default throw exception. By default - True

Return type

bool

Fixtures

`pytest_image_diff.plugin.image_regression(request, _image_diff_info, image_diff_threshold, image_diff_throw_exception)`

Check regression image.

Parameters

- **image** – *PIL.Image* or *PathLike* or *io.BinaryIO*
- **threshold** – float, by default from *image_diff_threshold*
- **suffix** – str, need for multiple checks by one test

Return type

Generator[ImageRegressionCallableType, None, None]

Returns

bool

`pytest_image_diff.plugin.image_diff(request, _image_diff_info, image_diff_threshold, image_diff_throw_exception)`

Compare two image

Parameters

- **image** – *PIL.Image* or *PathLike* or *io.BinaryIO*
- **image2** – *PIL.Image* or *PathLike* or *io.BinaryIO*
- **threshold** – float, by default from *image_diff_threshold*
- **suffix** – str, need for multiple checks by one test

Return type

Generator[ImageDiffCallableType, None, None]

Returns

bool

pytest-splinter helper

2.1.2 Contributors

Run tests

```
pip install -r requirements.txt
pytest # run tests
tox # run test matrix
```

Run tests with pyenv with specific python and pypy

```
pyenv install 3.10-dev pypy3.7-7.3.5
pyenv local 3.10-dev pypy3.7-7.3.5
pip install -r requirements.txt
tox -e py310,pypy3
```

Type checks

```
tox -e type
```

Lint code

```
tox -e qa
```

Before commit

Install git hook

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

For pycharm needs install tox to global

Docs

```
pip install -r requirements.txt
cd docs
make html
```


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