pyscreenshot Documentation

Release 0.4.2

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Jun 21, 2017

Contents

CHAPTER 1

About

The `pyscreenshot` module can be used to copy the contents of the screen to a PIL or Pillow image memory using various back-ends. Replacement for the ImageGrab Module, which works on Windows only, so Windows users don't need this library. For handling image memory (e.g. saving to file, converting,..) please read PIL or Pillow documentation.

Links:

- home: https://github.com/ponty/pyscreenshot
- documentation: http://pyscreenshot.readthedocs.org
- PYPI: https://pypi.python.org/pypi/pyscreenshot

Goal: Pyscreenshot tries to allow to take screenshots without installing 3rd party libraries. It is cross-platform but useful for Linux based distributions. It is only a pure Python wrapper, a thin layer over existing back-ends. Its strategy should work on most Linux distributions: a lot of back-ends are wrapped, if at least one exists then it works, if not then one back-end should be installed. Performance and interactivity are not important for this library.

Features:

- Cross-platform wrapper
- Capturing the whole desktop
- Capturing an area
- saving to PIL or Pillow image memory
- some back-ends are based on this discussion: http://stackoverflow.com/questions/69645/take-a-screenshot-via-a-python-script-linux
- pure Python library
- supported python versions: 2.7, 3.3, 3.4, 3.5
- **Plugin based, it has wrappers for various back-ends:**
  - scrot

  - ImageMagick
  - PyGTK
  - PIL or Pillow (only on windows)
  - PyQt4
  - PySide
  - wxPython
  - Quartz (Mac)
  - screencapture (Mac)
- time: 0.1s - 1.0s

Known problems:

- ImageMagick creates blackbox on some systems
- PyGTK back-end does not check $DISPLAY -> not working with Xvfb

Similar projects:

- http://sourceforge.net/projects/gtkshots/
- http://pypi.python.org/pypi/autopy

CHAPTER 2

Examples

grab and show the whole screen:

```
#-- include('examples/showgrabfullscreen.py') --#
import pyscreenshot as ImageGrab

if __name__ == '__main__':

    # grab fullscreen
    im = ImageGrab.grab()

    # save image file
    im.save('screenshot.png')

    # show image in a window
    im.show()
#-#
```

to start the example:

```
python -m pyscreenshot.examples.showgrabfullscreen
```

grab and show the part of the screen:

```
#-- include('examples/showgrabbox.py')--#
import pyscreenshot as ImageGrab

if __name__ == '__main__':
    # part of the screen
    im = ImageGrab.grab(bbox=(10, 10, 510, 510))  # X1,Y1,X2,Y2
    im.show()
#-#
```

to start the example:

```
python -m pyscreenshot.examples.showgrabbox
```

CHAPTER 3

Installation

General

- install pip
- install PIL or Pillow
- install at least one back-end
- install the program:

```
# as root
pip install pyscreenshot
```

Ubuntu 14.04

```
sudo apt-get install python-pip
sudo apt-get install python-pil
sudo pip install pyscreenshot
# optional back-ends
sudo apt-get install scrot imagemagick python-gtk2 python-qt4 python-wxgtk2.8 python-
↪pyside
# optional for examples
sudo pip install entrypoint2
```

Uninstall

```
# as root
pip uninstall pyscreenshot
```

CHAPTER 4

Command line interface

Back-end performance:

```
The performance can be checked with pyscreenshot.check.speedtest.

Example:

#-- sh('python -m pyscreenshot.check.speedtest --virtual-display 2>/dev/null') --#

n=10
------------------------------------------------------
wx                    1.2  sec        (  120 ms per call)
pygtk                 1.2  sec        (  124 ms per call)
pyqt                  1.4  sec        (  136 ms per call)
scrot                 0.93 sec        (   93 ms per call)
imagemagick           0.67 sec        (   67 ms per call)
pyside                1.3  sec        (  133 ms per call)
#-#
```

Print versions:

```
#-- sh('python -m pyscreenshot.check.versions 2> /dev/null ')--#
pyscreenshot         0.4.2
wx                   2.8.12.1
pygtk                2.28.6
pyqt                 4.10.4
scrot                0.8
imagemagick          6.7.7
pyside               1.2.1
#-#
```

CHAPTER 5

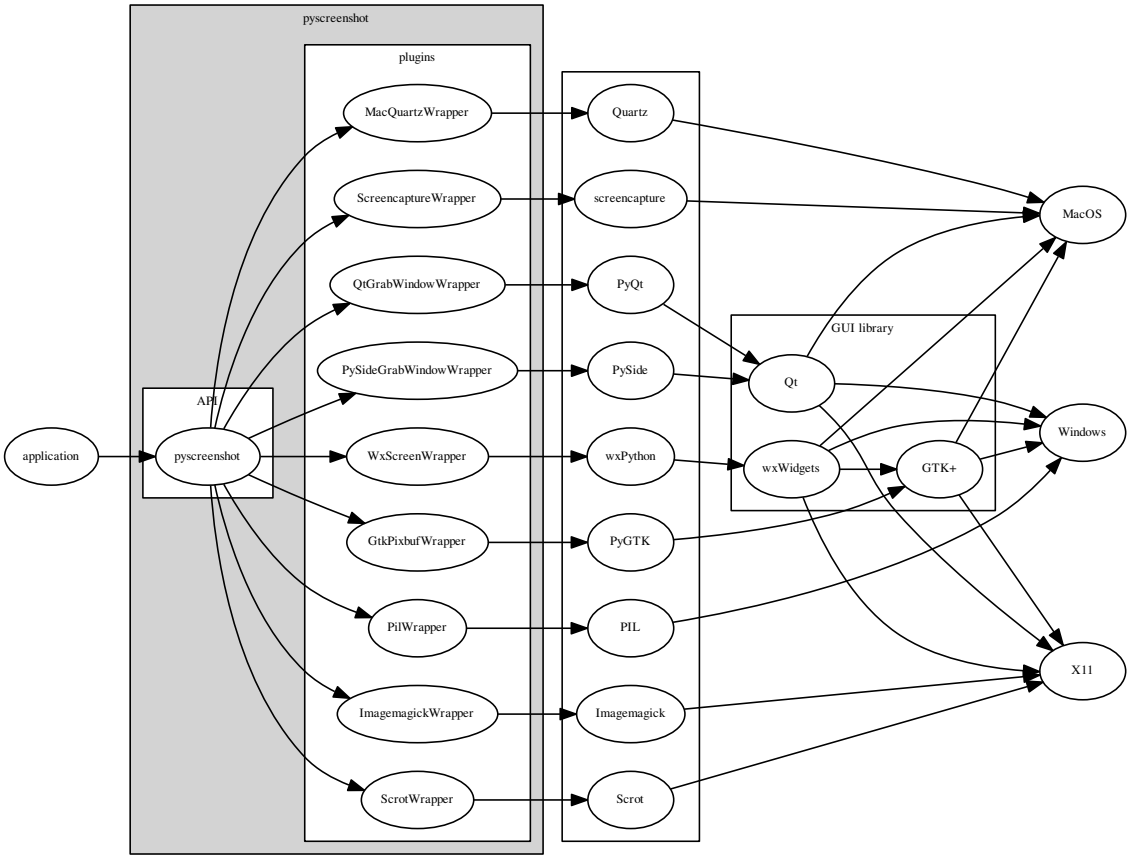
command line help

```
#-- sh('python -m pyscreenshot.check.speedtest --help')--#
usage: speedtest.py [-h] [-v] [--debug]

optional arguments:
  -h, --help            show this help message and exit
  -v, --virtual-display
  --debug               set logging level to DEBUG
#-#
```

```
#-- sh('python -m pyscreenshot.check.versions --help')--#
usage: versions.py [-h] [--debug]

optional arguments:
  -h, --help  show this help message and exit
  --debug     set logging level to DEBUG
#-#
```

CHAPTER 6

Hierarchy



CHAPTER 7

API

pyscreenshot.**backend_version**(*backend*, *childprocess=None*)
Back-end version

Parameters

- **backend** – back-end (examples:scrot, wx,..)
- **childprocess** – see *grab()*

Returns version as string

pyscreenshot.**backends**()
Back-end names as a list

Returns back-ends as string list

pyscreenshot.**childprocess_default_value**()
IDLE has problem with multiprocessing. Therefore the default is False for childprocess if the program was started inside IDLE.

pyscreenshot.**grab**(*bbox=None*, *childprocess=None*, *backend=None*)
Copy the contents of the screen to PIL image memory.

Parameters

- **bbox** – optional bounding box (x1,y1,x2,y2)
- **childprocess** – pyscreenshot can cause an error, if it is used on more different virtual displays and back-end is not in different process. Some back-ends are always different processes: scrot, imagemagick The default is False if the program was started inside IDLE, otherwise it is True.
- **backend** – back-end can be forced if set (examples:scrot, wx,..), otherwise back-end is automatic

pyscreenshot.**grab_to_file**(*filename*, *childprocess=None*, *backend=None*)
Copy the contents of the screen to a file. Internal function! Use `PIL.Image.save()` for saving image to file.

Parameters

- **filename** – file for saving
- **childprocess** – see *grab()*
- **backend** – see *grab()*

Python Module Index

p

Index