February 14, 2015 on general, opencv tagged homebrew, install, mac, opencv, python

Install OpenCV for Python on Mac OS X

In our previous post we described how to develop driver assistance systems on Android devices. We are using OpenCV SDK for Android, but during the app development we had to test & calibrate the cameras using a computer. Out platform for now is Mac OS X (Yosemite). Therefore, we needed to install & configure OpenCV for Python on Mac.

Install OpenCV

The “traditional” way didn’t work out: downloading OpenCV zip from their website and then compile it & link it with Python. There is a simpler way to do it using Homebrew.

Homerew is a package manager for Mac OS X, more info can be found on their website.

Installing brew is simpler than you think, just run this in

terminal:

```
ruby -e "$(curl -fsSL
https://raw.githubusercontent.com/Homebrew/install/master/install)"
```

You might need to install Python first:

```
brew install python
```

Add OpenCV using the following commands:

```
brew tap homebrew/science
```

Install OpenCV:

```
brew install opencv
```

Your OpenCV installation will be located at:

```
/usr/local/Cellar/opencv/2.4.10/
```

Python setup

The final part is to setup Python, use the following:

```
cat ~/.bash_profile | grep PYTHONPATH
ln -s /usr/local/Cellar/opencv/2.4.10/lib/python2.7/site-
packages/cv.py cv.py
ln -s /usr/local/Cellar/opencv/2.4.10/lib/python2.7/site-
packages/cv2.so cv2.so
```

That's it! If you have issue with Python when running some OpenCV samples, you need to make sure that you have numpy & matplotlib installed. You can do this using brew, in terminal enter:

```
pip install numpy
pip install matplotlib
```

Demo

Here is a simple Python sample to test out that everything works fine:

```
import cv2
import numpy as np
from matplotlib import pyplot as plt

img = cv2.imread('road.png', 0)
plt.imshow(img, cmap='gray', interpolation='bicubic')
plt.xticks([]), plt.yticks([]) # to hide tick values on X and Y axis
plt.show()
```

More information & sources:

- OpenCV: http://www.opencv.org/
- Homebrew package manager: http://brew.sh/
- Install OpenCV for Python on Mac: https://jjyap.wordpress.com/2014/05/24/installing-opencv-2-4-9-on-mac-osx-with-python-support/
- Calibrate camera with OpenCV & Python: http://www.janeriksolem.net/2014/05/how-to-calibrate-camera-with-opencv-and.html
- OpenCV Python samples: https://github.com/Itseez/opencv/tree/master/samples/python2

Francesco di Niccolo • a year ago

Hello,

thank you for the article, with your help I've installed OpenCV with Homebrew.

In particular, I've installed OpenCV 3.0.0-beta because I need some new functions.

Stuff like SIFT, SURF, BRIEF and FREAK with OpenCV 2.4.10.1 are installed by default in the "nonfree" folder, but with OpenCV 3.0.0 they have been moved to a separate repository called "opencv_contrib" that Homebrew doesn't install by default.

So, I would to know if it is possible to install an external repository, like "opencv_contrib", with Homebrew, and how to do it; or if it is possible to add a repository in another (simple?) way without messing up everything installed with Homebrew.

https://github.com/itseez/open...

Thank you

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Yong Yuan ➚ Francesco di Niccolo • 7 months ago

Hi, I also face the problem. Have you solved it?

Reply • Share ›

Francesco di Niccolo ➚ Yong Yuan • 7 months ago

No, at the end I had to reinstall everything without Homebrew and it has worked.
However I have a blurred memory of the thing, this was 4 month ago, sorry :(

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Yong Yuan ➚ Francesco di Niccolo • 7 months ago

Thanks, I will try it later.

Reply • Share ›

MarkStrefford • 9 months ago

I couldn't get this working with OpenCV2.4.10 or OpenCV2.4.11. However seemed to work OK as soon as OpenCV2.4.11_1 became available and I installed it with Homebrew

Reply • Share ›

Will Huang • 8 months ago

Hello,

it is a great tutorial. But I have the following problems:

cat ~/.bash_profile | grep PYTHONPATH

I don't have .bash_profile in my home directory, is there anything wrong?

ln -s /usr/local/Cellar/opencv/2.4.10/lib/python2.7/site-packages/cv.py cv.py
ln -s /usr/local/Cellar/opencv/2.4.10/lib/python2.7/site-packages/cv2.so cv2.so
I got "ln: cv2.so: File exists" and "ln: cv.py: File exists".

Is it because of the missing bash_profile?

Thank you!

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Razvan Mod → Will Huang • 8 months ago

Open terminal, type "cd ~/" and then: "touch .bash_profile" to create the file.

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DaveGao • 8 months ago

hi!.

I have installed OpenCV successfully using brew on my mac with OS X 10.10.3. Created the symbolic link as well to the cv.py and cv.so files. when I use the import command in python I receive the following error

>>> import cv2

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

ImportError: dlopen(./cv2.so, 2): Library not loaded: /usr/local/lib/libImath-2_2.12.dylib

Referenced from: /usr/local/Cellar/opencv/2.4.11_1/lib/libopencv_highgui.2.4.dylib

Reason: image not found

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rickoshay • 6 months ago

What is the purpose of cat'ing ~/.bash_profile and grep'ing for PYTHONPATH?

1 Reply • Share ›

Lin • 6 months ago

Any suggestions? Thanks!

Reply • Share ›

Alex Sobrino ↗ Lin • 6 months ago

having the same issue :S

Reply • Share ›

cgrinaldi • 4 months ago

Thanks for the post! Helped keep me from bashing my head in :)

Reply • Share ›

lunabus • 3 months ago

Thank you so much for this!

Reply • Share ›

vinllen • 18 days ago

where do you want to link the cv.py and cv2.so

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vinllen ↗ vinllen • 18 days ago

I mv the cv2.so and cv.py into /usr/local/lib/python2.7/site-packages can solve the link error problem

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