DigiPyRo Project
Installing DigiPyRo

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1 Mac (OSX 10.10 or later)

1. Install `Xcode` & the `Command Line Tools` from the App Store (this may take 10-20 minutes). Then open `Xcode`, agree to the terms and open a terminal to install the command line tools. Enter the following in your terminal:
   `xcode-select --install`

2. Install `Homebrew`. This is a package manager, which allows you to easily install different packages that we need from the command line. Open a Terminal and enter the following:
   `cd ~`
   `ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"`
   For additional information on `Xcode` and `Homebrew`, see:
   `https://coolestguidesontheplanet.com/installing-homebrew-on-os-x-el-capitan-10-11-package-manager-for-unix-apps/`

3. Install `Python2` (with the help of `Homebrew`!). In your Terminal enter the following:
   `brew update`
   `brew install python`
   Note: It is important that you install `Python2` (which is installed by the command `brew install python`)! DigiPyRo will not work with `Python3`, so you must follow this step even if you have already intalled `Python3`.

4. Install `OpenCV`. Enter the following in your terminal:
   `brew tap homebrew/science`
   `brew install opencv`
   installing `OpenCV` may take 10-20 minutes.

5. Link `Python` and `OpenCV` together. Enter the following in your terminal:
   `cd ~`
   `touch .bash_profile` (this creates the file if it does not already exist)

```
cat ~/.bash_profile | grep PYTHONPATH
ln -s /usr/local/Cellar/opencv/2.4.13/lib/python2.7/site-packages/cv.py cv.py
ln -s /usr/local/Cellar/opencv/2.4.13/lib/python2.7/site-packages/cv2.so cv2.so
```
Note: the most recent releases of `Python` and `OpenCV` may have changed since this was written. You may need to adjust your version numbers accordingly:
```
ln -s /usr/local/Cellar/opencv/2.?.?/lib/python2.?/site-packages/cv.py cv.py
ln -s /usr/local/Cellar/opencv/2.?.?/lib/python2.?/site-packages/cv2.so cv2.so
```
In order to find your version numbers, simply navigate to the appropriate directory and type the command:
```
ls
```
to display the contents of the directory. You can then read your version number and adjust the previous two symlink commands accordingly.

Note: the `ln -s` command creates what is called a "symlink". Basically, your computer will not know where to search for `Python` and `OpenCV`, so we facilitate this process by creating aliases in your home directory.

6. Install the necessary `Python` modules. We will use `pip`, Python's built-in package manager which stands for the recursive title "`pip` installs packages". Enter the following in a terminal:
```
pip install numpy
pip install matplotlib
pip install scipy
```

7. Download `DigiPyRo`. Enter in a terminal:
```
git clone https://github.com/sam-may/DigiPyRo/tree/master
```

8. Check if everything is working! First let's check if `Python` and `OpenCV` are correctly linked. Open `Python` by entering the following in a terminal:
```
python
```
then enter:
```
import cv2
```
in the `Python` interpreter. If you see no errors then `Python` and `OpenCV` are correctly linked!
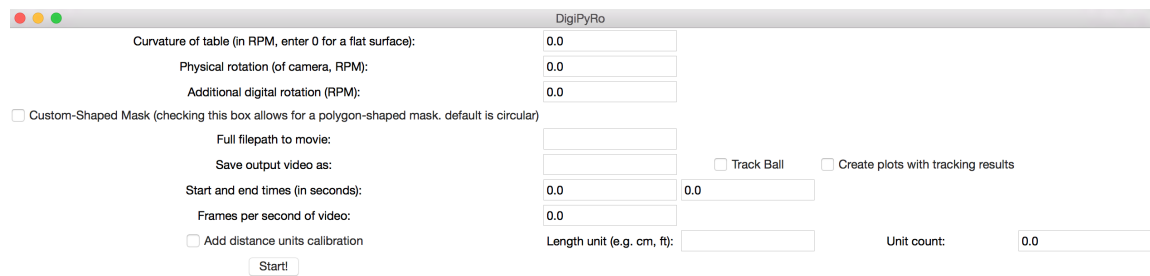
Now, let's try running `DigiPyRo`. Open a terminal and enter:
```
cd ~
cd DigiPyRo
python DigiPyRo.py
```

If this menu appears:

then you have successfully installed `DigiPyRo`! Well done.

2 Windows

`http://opencv-python-tutroals.readthedocs.io/en/latest/py_tutorials/py_setup/`
`py_setup_in_windows/py_setup_in_windows.html`