

## Instructions for preparing for the OpenCV Tutorial at ICDSC-08

Tutorial: Sunday Sept. 7, 2008, 09:00 – 12:00, Y2E2 iRoom

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### Installing OpenCV

Instructions can be found on the OpenCV wiki, <http://opencvlibrary.sourceforge.net/> for Windows, Linux or MacOS.

I recommend you get the latest version of OpenCV from the sourceforge CVS repository. If you get the version 1 release from sourceforge, it's OK, but you won't be able to run the stereo demo.

For getting the code from CVS:

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- - - WINDOWS - - -

For Windows users, you'll need a CVS program. I recommend TortoiseCVS (<http://www.tortoisecvs.org/>), which integrates nicely with Windows Explorer.

On Windows, if you want the latest OpenCV from the CVS repository then you'll need to access the CVSROOT directory:

[:pserver:anonymous@opencvlibrary.cvs.sourceforge.net:2401/cvsroot/opencvlibrary](pserver:anonymous@opencvlibrary.cvs.sourceforge.net:2401/cvsroot/opencvlibrary)

For the tortoiseCVS, launch the program by finding the directory you want, right clicking and selecting CVS checkout. When the program launches, Put the above :pserver line in the CVSROOT box.

The protocol is Password server (:pserver:)

No protocol parameters

Server is [opencvlibrary.cvs.sourceforge.net](http://opencvlibrary.cvs.sourceforge.net)

Port is probably 2401

Repository folder is /cvsroot/opencvlibrary

Username is anonymous.

After you download the code, you must build it using the MSVC sln or dsw file in the opencv \_make directory.

The alternative for Windows is to go to [http://sourceforge.net/project/showfiles.php?group\\_id=22870](http://sourceforge.net/project/showfiles.php?group_id=22870) and download the opencv-win release 1.0 which is a self extracting exe file. You will be able to run all but the stereo related demos.

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- - - LINUX - - -

On Linux, you can get the opencv CVS using the following two commands:

```
cvs -d:pserver:anonymous@opencvlibrary.cvs.sourceforge.net:/cvsroot/opencvlibrary login
```

When asked for password, hit return. Then use:

```
cvs -z3 -d:pserver:anonymous@opencvlibrary.cvs.sourceforge.net:/cvsroot/opencvlibrary co -P opencv
```

Linux needs other files to build OpenCV. You can use `sudo synaptic` or `sudo apt-get` to get the following packages:

GTK+ 2.x or higher, including headers.

pkgconfig, libpng, zlib, libjpeg, libtiff, and libjasper with development files.

Python 2.3, 2.4, or 2.5 with headers installed (developer package).

libavcodec and the other libav\* libraries (including headers) from ffmpeg 0.4.9-pre1 or later.

FFMPEG instructions:

Download ffmpeg from <http://ffmpeg.mplayerhq.hu/download.html>. You have to build a shared library of the ffmpeg program to use it with other open source programs such as OpenCV. To build and use a shared

ffmpeg library:

```
$> ./configure --enable-shared
```

```
$> make
```

```
$> sudo make install
```

You will end up with: `/usr/local/lib/libavcodec.so.*`, `/usr/local/lib/libavformat.so.*`, `/usr/local/lib/libavutil.so.*`, and include files under various `/usr/local/include/libav*`.

To build OpenCV once you've down the above

```
$> autoreconf --force
```

```
$> ./configure
```

```
$> make
```

```
$> sudo make install
```

```
$> sudo ldconfig
```

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Ubuntu modification (if you can't get ffmpeg to work):

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\* `sudo synaptic`

o and get gstreamer and install gstreamer files, particularly `libgstreamer0.10-dev`

\* Then configure opencv with `./configure --with-gstreamer`

o as follows:

```
$> autoreconf --force
```

```
$> ./configure --with-gstreamer
```

```
$> make
```

```
$> sudo make install
```

```
$> sudo ldconfig
```

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The alternative for Linux (though you'll still need the other files) is to go to [http://sourceforge.net/project/showfiles.php?group\\_id=22870](http://sourceforge.net/project/showfiles.php?group_id=22870) and download the opencv-linux release 1.0 which is a gz file. Then:

```
$> tar xvzf OpenCV-1.0.0.tar.gz
```

```
$> cd opencv-1.0.0
```

```
$> ./configure --prefix=/opencv_library_install_path/opencv-1.0.0
```

```
$> make
```

```
$> sudo make install - - - - -
```

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