Install Opencv 2.4.10 with Cuda, Qt5, OpenNI on Ubuntu 12.04

Tutorial modified from drewski.

1. Install Cmake GUI from Synaptic(cmake-qt-gui).

2. Download OpenCV from SourceForge, unzip installation package.

3. Install Cuda 5.5, see Configure_Cuda5-5_Ubuntu12.04_HP_Zbook15 tutorial.

4. Install Qt5, see Install_Qt5_RunFile tutorial.

5. Install GTK library:
   $ sudo apt-get install libgtk-3-0 libgtk-3-dev

6. Install OpenNI Library, see Kinect_Installation tutorial.

7. Install Gstreamer
   $ sudo apt-get install libgstreamer0.10-0 libgstreamer0.10-dev gstreamer0.10-tools gstreamer0.10-plugins-base libgstreamer-plugins-base0.10-dev gstreamer0.10-plugins-good gstreamer0.10-plugins-ugly gstreamer0.10-plugins-bad gstreamer0.10-ffmpeg

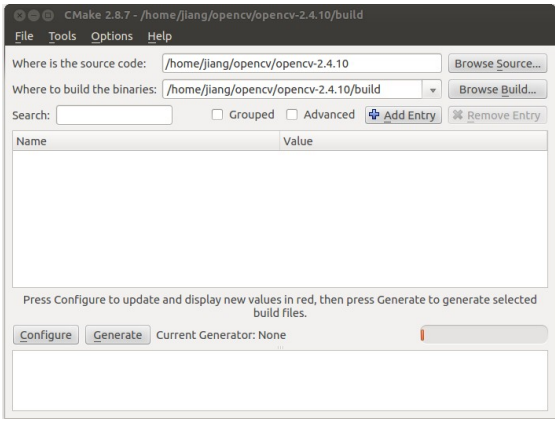
8. Install FFMPEG, see Compile_FFmpeg_on_Ubuntu_12.04 tutorial.

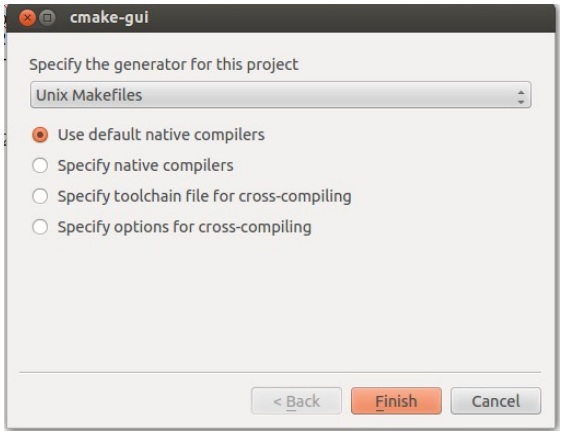
9. Install Java
   $ sudo apt-get install openjdk-7-jdk

10. Install OpenCV dependencies
    $ sudo apt-get update
    $ sudo apt-get upgrade
    $ sudo apt-get install build-essential libgtk2.0-dev libjpeg-dev libtiff4-dev libjasper-dev libopenexr-dev cmake python-dev python-numpy python-tk libtbb-dev libeigen3-dev yasm libfaac-dev libopencore-amrnb-dev libopencore-amrwb-dev libtheora-dev libvorbis-dev libxvidcore-dev libx264-dev libqt4-dev libqt4-opengl-dev sphinx-common texlive-latex-extra libv4l-dev libdc1394-22-dev libavcodec-dev libavformat-dev libswscale-dev default-jdk ant libvtk5-qt4-dev

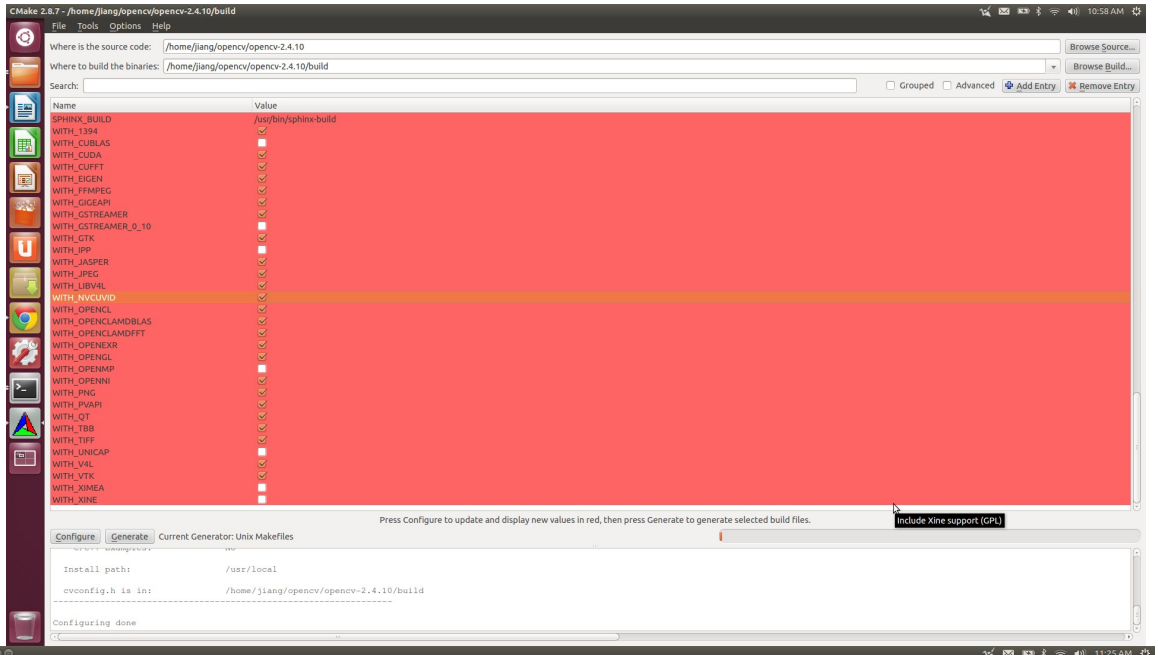
11. Build OpenCV
    $ cd opencv/opencv-2.4.10/
    $ mkdir build && cd build
    $ cmake-gui
    # during installation, you may get the error in CUDA_nvcuvid_LIBRARY (ADVANCED), then you need to link the nvcuvid library, do this:
    $ sudo su -c 'ln -s /usr/lib/nvidia-331-updates/libnvcuvid.so /usr/lib/libnvcuvid.so && ln -s /usr/lib/nvidia-331-updates/libnvcuvid.so.1 /usr/lib/libnvcuvid.so.1'

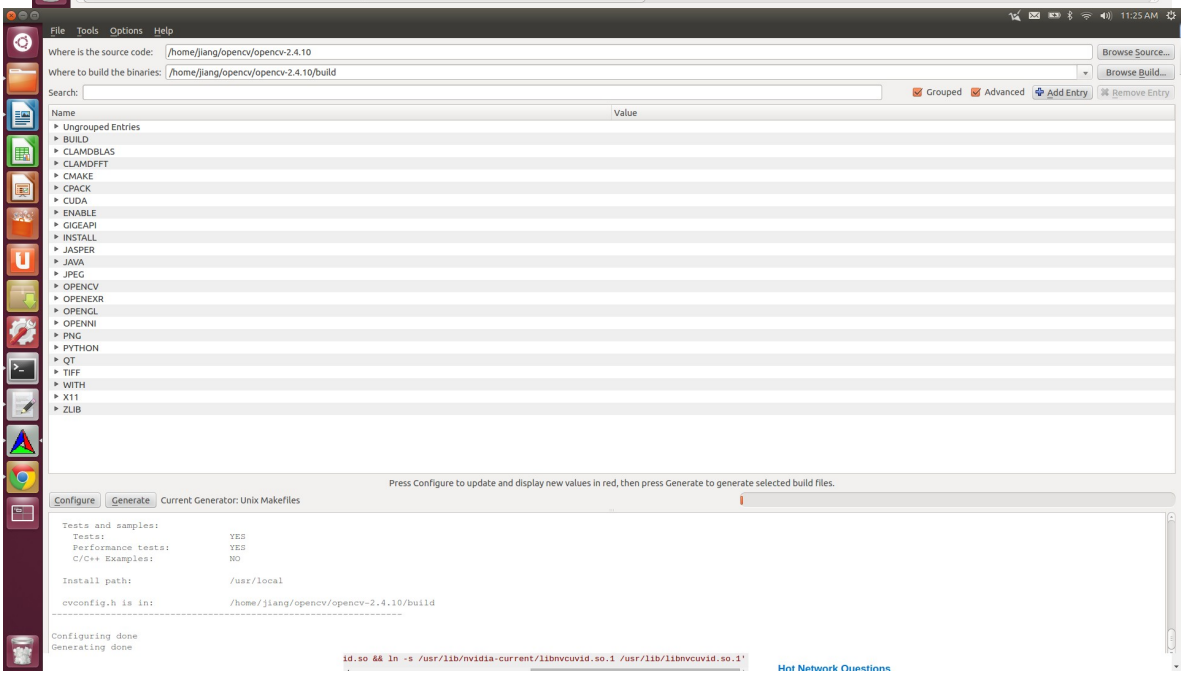
    configure again until all red color becomes write. Then hit generation.
    !!! Check the Option **INSTALL_TO_MANGLED_PATHS**





Dependencies Options:





12. Make build files

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$ cd ~/opencv/opencv-2.4.10/build/
$ make -j8
$ sudo make install
# add the OpenCV library to path
$ sudo gedit /etc/ld.so.conf.d/opencv.conf
      # add this to the file
       /usr/local/lib
# Load the configure file again
$  sudo ldconfig
# Add System Path
$  sudo gedit /etc/bash.bashrc
      # add the following content
           KG_CONFIG_PATH=$PKG_CONFIG_PATH:/usr/local/lib/pkgconfig
           export PKG_CONFIG_PATH

# save and exist
```

Congrats! Installation Done!