OPENCV 3.3.1 INSTALLATION – UBUNTU 16.04.3

1. Open the terminal (CTRL+ALT+T) and install some required packaged using the following command:

```
sudo apt-get install -y build-essential cmake git libgtk2.0-dev
pkg-config libavcodec-dev libavformat-dev libswscale-dev python-
dev python-numpy libtbb2 libtbb-dev libjpeg-dev libpng-dev
libtiff-dev libjasper-dev libdc1394-22-dev cmake-curses-gui
libtiff5-dev libopenexr-dev  python-tk 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 libv4l-dev default-jdk ant
libvtk5-qt4-dev vim meld gitg terminator
```

2. Create your workspace and move to it with the following commands:

```
cd

mkdir workspace

cd workspace
```

3. Download the required packages for installing OpenCV with the following commands:

```
git clone https://github.com/opencv/opencv.git

cd opencv

git checkout 3.3.1

cd /home/$USER/workspace/opencv

git clone https://github.com/opencv/opencv_contrib.git

cd opencv_contrib

git checkout 3.3.1

cd /home/$USER/workspace/opencv
```

4. Use CMake to generate the project:

```
mkdir build && cd build

cmake -D WITH_TBB=ON -D BUILD_NEW_PYTHON_SUPPORT=ON -D
WITH_V4L=ON -D INSTALL_C_EXAMPLES=OFF -D
INSTALL_PYTHON_EXAMPLES=OFF -D BUILD_EXAMPLES=OFF -D WITH_QT=ON -
D WITH_OPENGL=ON -D WITH_VTK=ON .. -DCMAKE_BUILD_TYPE=RELEASE -
DOPENCV_EXTRA_MODULES_PATH=/home/$USER/workspace/opencv/opencv_co
ntrib/modules ..
```

5. Compile and install OpenCV (warning: it could take some time):

```
make -j8 -l8

sudo make install
```

6. Update the system settings to find the library in your future projects:

```
echo '/usr/local/lib' | sudo tee --append
/etc/ld.so.conf.d/opencv.conf

sudo ldconfig

echo 'PKG_CONFIG_PATH=$PKG_CONFIG_PATH:/usr/local/lib/pkgconfig'
| sudo tee --append ~/.bashrc

echo 'export PKG_CONFIG_PATH' | sudo tee --append ~/.bashrc

source ~/.bashrc
```