

opencv install

linux

prereq: ubuntu 16:04 or 18:04

```
sudo apt-get install -y build-essential cmake
# GUI (if you want to use GTK instead of Qt, replace 'qt5-default' with
'libgtkglext1-dev' and remove '-DWITH_QT=ON' option in CMake):
sudo apt-get install -y libvtk6-dev libgtkglext1-dev

# GUI qt
# sudo apt install -y qt5-default

# Media I/O:
sudo apt-get install -y zlib1g-dev libjpeg-dev libwebp-dev libpng-dev
libtiff5-dev libjasper-dev libopenexr-dev libgdal-dev

# Video I/O:
sudo apt-get install -y libdc1394-22-dev libavcodec-dev libavformat-dev
libswscale-dev libtheora-dev libvorbis-dev libxvidcore-dev libx264-dev yasm
libopencore-amrnb-dev libopencore-amrwb-dev libv4l-dev libxine2-dev

# Parallelism and linear algebra libraries:
sudo apt-get install -y libtbb-dev libeigen3-dev

# Python 2 & 3:
sudo apt-get install -y python-dev python-tk python-numpy python3-dev
python3-tk python3-numpy

# others
sudo apt-get install -y libopenexr-dev

# Java:
# sudo apt-get install -y ant default-jdk

# Documentation:
# sudo apt-get install -y doxygen
```

download sources from release or ...

```
wget https://github.com/opencv/opencv/archive/3.4.1.zip
unzip 3.4.1.zip
rm 3.4.1.zip
mv opencv-3.4.1 OpenCV
```

```
cd OpenCV
```

... from git (better if compiling darknet)

```
cd /opt
git clone -b 3.4 --depth 1 https://github.com/opencv/opencv.git opencv.git
ln -sf opencv.git OpenCV
cd OpenCV
```

compile

```
mkdir build
cd build
# cmake -DWITH_QT=ON -DWITH_OPENGL=ON -DFORCE_VTK=ON -DWITH_TBB=ON -
DWITH_GDAL=ON -DWITH_XINE=ON -DBUILD_EXAMPLES=ON ..
# cmake -DWITH_OPENGL=ON -DFORCE_VTK=ON -DWITH_TBB=ON -DWITH_GDAL=ON -
DWITH_XINE=ON -DENABLE_PRECOMPILED_HEADERS=OFF -DWITH_JASPER=OFF ..
# with openCL
# cmake -DWITH_OPENGL=ON -DFORCE_VTK=ON -DWITH_TBB=ON -DWITH_GDAL=ON -
DWITH_XINE=ON -DENABLE_PRECOMPILED_HEADERS=OFF -DWITH_JASPER=OFF -
DWITH_OPENCL=ON ..
# with openCL and CUDA
#cmake -DWITH_OPENGL=ON -DFORCE_VTK=ON -DWITH_TBB=ON -DWITH_GDAL=ON -
DWITH_XINE=ON -DENABLE_PRECOMPILED_HEADERS=OFF -DWITH_JASPER=OFF -
DWITH_OPENCL=ON -DWITH_CUDA=ON ..
cmake -D CMAKE_BUILD_TYPE=Release -D CMAKE_INSTALL_PREFIX=/usr/local ..

time make -j4
# 13:42 on flinx
# 5:02 on mostro
```

install

```
sudo make install
sudo ldconfig
```

android

prereq:

- substitute /opt/android-sdk/tools with https://dl.google.com/android/repository/tools_r25.2.5-linux.zip
- android sdk in /opt/android-sdk

```
cd /opt
git clone -b 3.4 --depth 1 https://github.com/opencv/opencv.git opencv.git
```

[platforms/android/ndk.config.py](#)

```
vars=dict(BUILD_ANDROID_PROJECTS='OFF')

ABIs = [
    #ABI("2", "armeabi-v7a", "arm-linux-androideabi-4.9",
    cmake_vars=dict(ANDROID_ABI='armeabi-v7a with NEON')),
    #ABI("1", "armeabi", "arm-linux-androideabi-4.9",
    cmake_vars=dict(WITH_TBB='OFF')),
    ABI("3", "arm64-v8a", "aarch64-linux-android-4.9",
    cmake_vars=vars),
    ABI("5", "x86_64", "x86_64-4.9", cmake_vars=vars),
    #ABI("4", "x86", "x86-4.9"),
]
```

create /opt/OpenCV-android-sdk-compiled

```
cd /opt/opencv.git
python ./platforms/android/build_sdk.py \
  --config ndk.config.py \
  --ndk_path /opt/android-sdk/ndk-bundle \
  --sdk_path /opt/android-sdk \
  /opt/OpenCV-android-sdk-compiled .
```

From:

<https://wiki.csgalileo.org/> - Galileo Labs

Permanent link:

<https://wiki.csgalileo.org/tips/opencv/install?rev=1528732574>

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