

# Project 2 Phase 1

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## 1. Requirements

### 1. Install Eigen3

```
# Start by installing all the dependencies.
# CMake
sudo apt-get install cmake
# google-glog + gflags
sudo apt-get install libgoogle-glog-dev libgflags-dev
# Eigen3
sudo apt-get install libeigen3-dev
```

### 2. Install OpenCV 3.4.16

#### a. OpenCV Release <https://opencv.org/releases/> Download OpenCV-3.4.16

Source code

#### b. Install requirements and build tool we need

```
sudo apt install build-essential cmake git pkg-config libgtk-3-dev \
libavcodec-dev libavformat-dev libswscale-dev libv4l-dev \
libxvidcore-dev libx264-dev libjpeg-dev libpng-dev libtiff-dev \
gfortran openexr libatlas-base-dev python3-dev python3-numpy \
libtbb2 libtbb-dev libdc1394-22-dev libopenexr-dev \
libgstreamer-plugins-base1.0-dev libgstreamer1.0-dev
```

#### c. Compiled OpenCV source code

```
mkdir ~/opencv_build && cd ~/opencv_build
mv ~/Downloads/opencv-3.4.16.zip ./
unzip opencv-3.4.16.zip
cd ~/opencv_build/opencv-3.4.16
mkdir -p build && cd build
```

```
# Use CMake
cmake -D CMAKE_BUILD_TYPE=RELEASE \
      -D INSTALL_C_EXAMPLES=ON \
      -D INSTALL_PYTHON_EXAMPLES=ON \
      -D OPENCV_GENERATE_PKGCONFIG=ON \
      -D BUILD_EXAMPLES=ON \
      -D CMAKE_INSTALL_PREFIX=/usr/local ..
```

#### d. Install

```
nproc # CPU threads
make -j4 #
sudo make install
```

## 2. Error debug

**error while loading shared libraries: libopencv\_img\*.so.3.4:: cannot open shared object file:**

How to solve :

[https://blog.csdn.net/qg\\_35759574/article/details/90205184](https://blog.csdn.net/qg_35759574/article/details/90205184)