System requirement:

Ubuntu 16.04.x (better a clean ubuntu machine)

Nvidia gtx 10xx

cudnn 5.0 (not 5.1 or 6)

use a special config opencv(opencv-3.1.0\_cql.tar.gz)

g++ 5.0 (the system should not install more than one edition g++)

use a special config dlib(dlib-19.4\_cql.tar.gz)

step1:

setup cuda, reference:

install cuda: <http://www.linuxdiyf.com/linux/28353.html>

add

export PATH=/usr/local/cuda-8.0/bin${PATH:+:${PATH}}

export LD\_LIBRARY\_PATH=/usr/local/cuda-8.0/lib64${LD\_LIBRARY\_PATH:+:${LD\_LIBRARY\_PATH}}

in the file ~/.bashrc and then source ~/.bashrc

step2:

build and install opencv

mkdir build

cd build

cmake -D CMAKE\_BUILD\_TYPE=RELEASE -D CMAKE\_INSTALL\_PREFIX=/usr/local -D WITH\_IPP=ON -D WITH\_WEBP=ON -D WITH\_TBB=ON -D BUILD\_SHARED\_LIBS=ON ..

make -j8

sudo make install -j8

step3:

build and install dlib:

mkdir build

cd build

cmake -D CMAKE\_BUILD\_TYPE=RELEASE -D CMAKE\_INSTALL\_PREFIX=/usr/local -D BUILD\_SHARED\_LIBS=ON ..

make -j8

sudo make install -j8

step4:

OpenPose Setup:

install caffe first

and modify the Makefile.config in openpose:

CAFFE\_DIR := 3rdparty/caffe/distribute ===> CAFFE\_DIR:= yourpathtocaffefolder

then use command:

make -j8

to compile the openpose project.

Go to folder models in openpose, run getModels.sh to download the model.

Then you could run ./build/example/openpose/openpose.bin

Before you build openpose, you can change some parameter in the file examples/openpose/openpose.cpp to adjust the result of openpose.

Step5:

build rtpose:

go in the folder caffe\_rtpose and just build is ok:

make -j8

step6:

build and run Attention\_demo:

Go in the folder Attention\_demo, change some paths in the file called Attention\_Demo.pro:

INCLUDEPATH +=/yourpath/caffe\_rtpose/include

LIBS += -L/yourpath/caffe\_rtpose/.build\_release/lib -lcaffe

Then:

mkdir build

cd build

qmake /home/csuml/qilei\_chen/Attention\_Demo/Attention\_Demo.pro -r -spec linux-g++ CONFIG+=debug CONFIG+=qml\_debug

make -j8

then unzip models.tar.gz and copy all the files into the folder build

use ./Attention\_demo to run it.

Also there are some parameter in the file of mainwindow.h that you can modify:

int h = 480;

int w = 640;

/\* resolution list

\* 1920 1080

\* 1504 832

\* 1280 720

\* 1024 768

\* 960 720

\* 640 480

\* 352 288

\* 320 240

\* 176 144

\* 160 120

\*/

which can control the input camera resolution.

int camera\_id = 0;// the id that you want to use, 0 is the default camera

int num\_faces\_max = 20;// it means that it can detect as many as 20 face’s landmark.

Usefull tips:

add some common lib into the file ~/.bashrc will help to run the project.

export LD\_LIBRARY\_PATH=/home/csuml/Downloads/caffe-master/build/lib${LD\_LIBRARY\_PATH:+:${LD\_LIBRARY\_PATH}}

export LD\_LIBRARY\_PATH=/home/csuml/qilei\_chen/caffe\_rtpose/.build\_release/lib${LD\_LIBRARY\_PATH:+:${LD\_LIBRARY\_PATH}}