**CUDA GPU 설정**

1. 필요한 종속성 설치:
2. sudo apt update
3. sudo apt install -y build-essential cmake unzip pkg-config
4. sudo apt install -y libjpeg-dev libpng-dev libtiff-dev
5. sudo apt install -y libavcodec-dev libavformat-dev libswscale-dev libv4l-dev
6. sudo apt install -y libxvidcore-dev libx264-dev
7. sudo apt install -y libgtk-3-dev
8. sudo apt install -y libatlas-base-dev gfortran

sudo apt install -y python3-dev

1. OpenCV 및 OpenCV contrib 저장소 복제:

wget -O opencv.zip https://github.com/opencv/opencv/archive/4.7.0.zip

wget -O opencv\_contrib.zip https://github.com/opencv/opencv\_contrib/archive/4.7.0.zip

unzip opencv.zip

unzip opencv\_contrib.zip

1. 빌드 디렉토리 생성:

cd opencv-4.7.0

1. mkdir build

cd build

1. OpenCV를 CUDA를 사용하여 빌드:

cmake -D CMAKE\_BUILD\_TYPE=RELEASE \

-D CMAKE\_INSTALL\_PREFIX=/usr/local \

-D INSTALL\_PYTHON\_EXAMPLES=ON \

-D INSTALL\_C\_EXAMPLES=ON \

-D OPENCV\_ENABLE\_NONFREE=ON \

-D WITH\_CUDA=ON \

-D WITH\_CUDNN=ON \

-D OPENCV\_DNN\_CUDA=ON \

-D ENABLE\_FAST\_MATH=1 \

-D CUDA\_FAST\_MATH=1 \

-D CUDA\_ARCH\_BIN=7.5 \

-D WITH\_CUBLAS=1 \

-D WITH\_TBB=ON \

-D WITH\_V4L=ON \

-D WITH\_QT=OFF \

-D WITH\_OPENGL=ON \

-D OPENCV\_EXTRA\_MODULES\_PATH=../../opencv\_contrib-4.7.0/modules \

-D BUILD\_EXAMPLES=ON ..

1. OpenCV 빌드 및 설치:

make -j$(nproc)

sudo make install

sudo ldconfig

cd /path/to/your/virtualenv/lib/python3.X/site-packages/

ln -s /usr/local/lib/python3.X/site-packages/cv2/python-3.X/cv2.cpython-3Xm-x86\_64-linux-gnu.so cv2.so