

Nvidia Jetson Nano

- [interesting projects](#)

query

jtop

```
sudo -H pip install -U jetson-stats
```

check CUDA

```
cd /usr/local/cuda-10.0/samples/1_Utilities/deviceQuery
sudo make
./deviceQuery
```

```
cd /usr/local/cuda-10.0/samples/1_Utilities/bandwidthTest/
sudo make
./bandwidthTest
```

```
Device 0: "NVIDIA Tegra X1"
  CUDA Driver Version / Runtime Version      10.0 / 10.0
  CUDA Capability Major/Minor version number: 5.3
  Total amount of global memory:            3957 MBytes (4148756480
bytes)
  ( 1) Multiprocessors, (128) CUDA Cores/MP: 128 CUDA Cores
  GPU Max Clock rate:                       922 MHz (0.92 GHz)
```

python 3.8

```
sudo apt install libssl-dev zlib1g-dev libncurses5-dev libncursesw5-dev
libreadline-dev libsqlite3-dev
sudo apt install libgdbm-dev libdb5.3-dev libbz2-dev libexpat1-dev liblzma-
dev libffi-dev uuid-dev
```

```
wget https://www.python.org/ftp/python/3.8.0/Python-3.8.0b3.tgz
tar zxvf Python-3.8.0b3.tgz
cd Python-3.8.0b3
make -j3
sudo make install
```

opencv 4.1

- http://docs.donkeycar.com/guide/robot_sbc/setup_jetson_nano/

- <https://devtalk.nvidia.com/default/topic/1056594/jetson-nano-opencv-4-1-0/?offset=9>

```
apt remove -y libopencv libopencv-dev libopencv-python libopencv-samples
apt install -y python3.7-dev python3.7-venv curl
apt install -y libv4l-dev v4l-utils qv4l2 v4l2ucp
apt install -y build-essential cmake git libgtk2.0-dev pkg-config
libavcodec-dev libavformat-dev libswscale-dev
apt install -y libgstreamer1.0-dev libgstreamer-plugins-base1.0-dev
```

python 3.7

```
curl https://bootstrap.pypa.io/get-pip.py -o get-pip.py
python3.7 get-pip.py
pip3.7 install -U wheel
pip3.7 install -I numpy
pip3.7 install Cython
```

add swap to compile opencv

```
fallocate -l 6G /mnt/6GB.swap
mkswap /mnt/6GB.swap
swapon /mnt/6GB.swap
swapon -s
```

```
RELEASE=4.1.1
cd ~/
curl -L https://github.com/opencv/opencv/archive/${RELEASE}.zip -o opencv-
${RELEASE}.zip
curl -L https://github.com/opencv/opencv_contrib/archive/${RELEASE}.zip -o
opencv_contrib-${RELEASE}.zip
unzip opencv-${RELEASE}.zip
unzip opencv_contrib-${RELEASE}.zip
cd opencv-${RELEASE}/
mkdir release
cd release/
cmake -D WITH_CUDA=ON -D CUDA_ARCH_BIN="5.3" -D CUDA_ARCH_PTX="" -D
OPENCV_EXTRA_MODULES_PATH=../../opencv_contrib-${RELEASE}/modules -D
WITH_GSTREAMER=ON -D WITH_LIBV4L=ON -D BUILD_opencv_python2=OFF -D
BUILD_opencv_python3=ON -D BUILD_TESTS=OFF -D BUILD_PERF_TESTS=OFF -D
BUILD_EXAMPLES=OFF -D CMAKE_BUILD_TYPE=RELEASE -D
CMAKE_INSTALL_PREFIX=/usr/local -D PYTHON_EXECUTABLE=/usr/bin/python3.7 -D
PYTHON_DEFAULT_EXECUTABLE=/usr/bin/python3.7 -D BUILD_DOCS=OFF -
DENABLE_PRECOMPILED_HEADERS=OFF ..
make -j3
```

install

```
sudo make install
sudo ldconfig
```

da perfezionare...

```
cp /usr/local/lib/python3.7/site-packages/cv2/python-3.7/cv2.cpython-37m-  
aarch64-linux-gnu.so lib/lib/python3.7/site-packages/
```

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

Permanent link:

<https://wiki.csgalileo.org/projects/internetofthings/jetsonnano?rev=1564582714>

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