1. 环境准备（在线安装方法）

1.1 安装CUDA

step1：修改apt源，安装依赖的'libxi-dev'和'libxmu-dev'

（1）打开/etc/apt/sources.list，添加下列源

```
deb http://mirrors.ustc.edu.cn/ubuntu-ports/ bionic-updates main restricted universe multiverse
deb-src http://mirrors.ustc.edu.cn/ubuntu-ports/ bionic-updates main restricted universe multiverse
deb http://mirrors.ustc.edu.cn/ubuntu-ports/ bionic-security main restricted universe multiverse
deb-src http://mirrors.ustc.edu.cn/ubuntu-ports/ bionic-security main restricted universe multiverse
deb http://mirrors.ustc.edu.cn/ubuntu-ports/ bionic-backports main restricted universe multiverse
deb-src http://mirrors.ustc.edu.cn/ubuntu-ports/ bionic-backports main restricted universe multiverse
deb http://mirrors.ustc.edu.cn/ubuntu-ports/ bionic main universe restricted
deb-src http://mirrors.ustc.edu.cn/ubuntu-ports
```

（2）安装'libxi-dev'和'libxmu-dev'

```
apt update
apt-get install libxmu-dev libxi-dev
```

step2：apt 安装cuda

(1)确认NVIDIA安装源打开

```
root@ubuntu:/etc/apt/sources.list.d# ls
nvidia-l4t-apt-source.list  nvidia-l4t-apt-source.list.save
root@ubuntu:/etc/apt/sources.list.d# cat nvidia-l4t-apt-source.list
deb https://repo.download.nvidia.com/jetson/common r32.5 main
deb https://repo.download.nvidia.com/jetson/t194 r32.5 main
```

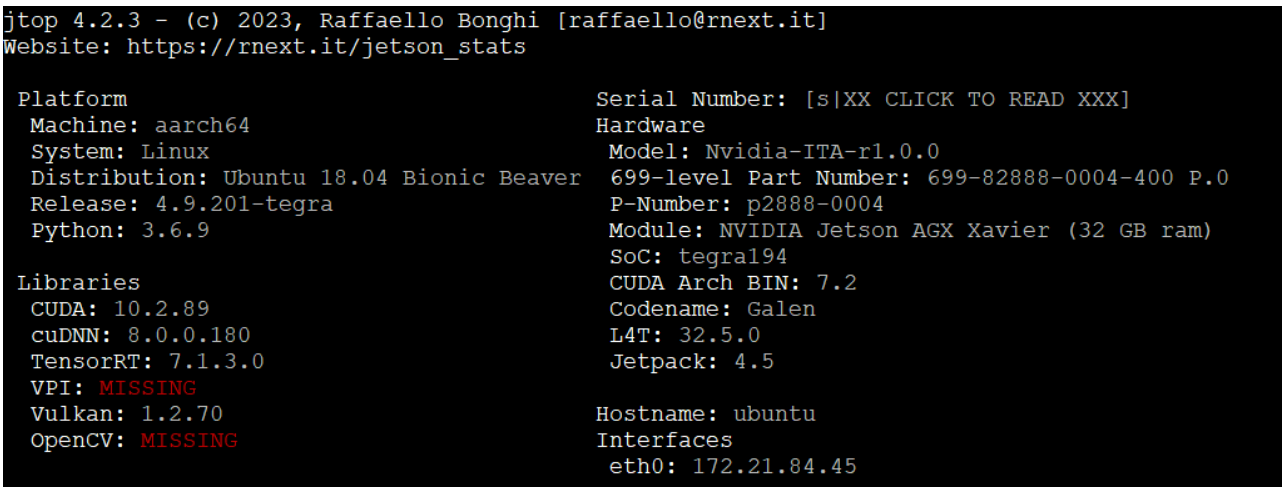
(2) apt安装

```
apt update
apt install cuda-toolkit-10-2
```

1.2 安装tensorrt

```
apt install tensorrt
```

安装完成后，jtop查看相关内容如下



2. jetston benchmark安装与运行

Set up instructions

```
git clone https://github.com/NVIDIA-AI-IOT/jetson_benchmarks.git
cd jetson_benchmarks
mkdir models # Open folder to store models (Optional)
```

Install Requirements

```
 sudo sh install_requirements.sh
```

Note: All libraries will be installed for python3

For Jetson AGX Xavier

Please follow setup and installation requirements.

Download Models

也可以手动下载后保存到models目录下，并将里面的zip解压

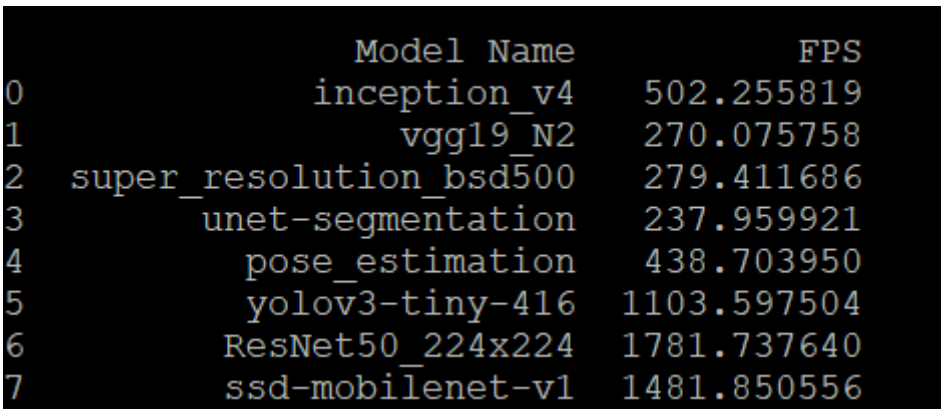
```
 python3 utils/download_models.py --all --csv_file_path <path-to>/benchmark_csv/xavier-benchmarks.csv --save_dir <absolute-path-to-downloaded-models>
```

Running All Benchmark Models at Once on Jetson AGX Xavier

建议用绝对路径

```
sudo python3 benchmark.py --all --csv_file_path <path-to>/benchmark_csv/xavier-benchmarks.csv --model_dir <absolute-path-to-downloaded-models> --jetson_devkit xavier --gpu_freq 1377000000 --dla_freq 1395200000 --power_mode 0 --jetson_clocks
```

运行完后



	Model Name	FPS
0	inception_v4	502.255819
1	vgg19_N2	270.075758
2	super_resolution_bsd500	279.411686
3	unet-segmentation	237.959921
4	pose_estimation	438.703950
5	yolov3-tiny-416	1103.597504
6	ResNet50_224x224	1781.737640
7	ssd-mobilenet-v1	1481.850556

结果统计

model name	FPS	FPS
inception_v4	502.50	502.255819
vgg19_N2	268.93	270.075758
super_resolution_bsd500	/	279.411686
unet-segmentation	237.46	237.959921

pose_estimation	439.44	438.703950
yolov3-tiny-416	/	1103.597504
ResNet50_224x224	1718.49	1781.737640
ssd-mobilenet-v1	/	1481.850556

PS:第一次models里面zip没解压导致没有结果