

# Nvidia Jetson Xavier NX

[https://github.com/NVIDIA-AI-IOT/jetson\\_benchmarks](https://github.com/NVIDIA-AI-IOT/jetson_benchmarks)

## 1. clone

```
git clone https://github.com/NVIDIA-AI-IOT/jetson_benchmarks.git
cd jetson_benchmarks/
mkdir models
sudo sh install_requirements.sh
```

## 2.

```
python3
yichenliu@cv-nx:~/Documents/jetson_benchmarks$ python3 utils/download_models.py --all --csv_file_path ~/Documents/jetson_benchmarks
/benchmark_csv/nx-benchmarks.csv --save_dir ~/Documents/jetson_benchmarks/models
inception_v4.prototxt      100%[=====>] 118.14K  518KB/s   in 0.2s
vgg19_N2.prototxt         100%[=====>] 5.80K   --KB/s   in 0s
super_resolution_bsd500.zip 100%[=====>] 990.22K 2.34MB/s   in 0.4s
unet-segmentation.uff      100%[=====>] 1.88M   3.47MB/s   in 0.5s
pose_estimation.prototxt   100%[=====>] 44.90K  237KB/s   in 0.2s
yolov3-tiny-416.zip        100%[=====>] 156.92M 3.87MB/s   in 32s
ResNet50_224x224.prototxt  100%[=====>] 34.20K  --KB/s   in 0.03s
ssd-mobilenet-v1.zip       100%[=====>] 171.01M 4.66MB/s   in 39s
yichenliu@cv-nx:~/Documents/jetson_benchmarks$
```

## 3.

```
python3
yichenliu@cv-nx:~/Documents/jetson_benchmarks$ sudo python3 benchmark.py --all --csv_file_path ~/Documents/jetson_benchmarks
/benchmark_csv/nx-benchmarks.csv --model_dir ~/Documents/jetson_benchmarks/models
Please close all other applications and Press Enter to continue...
Setting Jetson xavier-nx in max performance mode
gpu frequency is set from 114750000 Hz --> to 1109250000 Hz
dla frequency is set from 1100800000 Hz --> to 1100800000 Hz
Running all benchmarks.. This will take at least 2 hours...
-----Executing inception_v4-----

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Model Name: inception_v4
FPS:298.26

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Wall Time for running model (secs): 816.8978817462921

-----Executing vgg19_N2-----

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Model Name: vgg19_N2
FPS:64.48

-----

Wall Time for running model (secs): 454.61283898353577

-----Executing super_resolution_bsd500-----
```

```

-----
Model Name: super_resolution_bsd500
FPS:144.30
-----

Wall Time for running model (secs): 266.37724709510803

-----Executing unet-segmentation-----
-----

Model Name: unet-segmentation
FPS:143.06
-----

Wall Time for running model (secs): 464.3231875896454

-----Executing pose_estimation-----
-----

Model Name: pose_estimation
FPS:234.33
-----

Wall Time for running model (secs): 362.400981426239

-----Executing yolov3-tiny-416-----
-----

Model Name: yolov3-tiny-416
FPS:526.26
-----

Wall Time for running model (secs): 437.30262994766235

-----Executing ResNet50_224x224-----
-----

Model Name: ResNet50_224x224
FPS:802.81
-----

Wall Time for running model (secs): 409.25330233573914

-----Executing ssd-mobilenet-v1-----
-----

Model Name: ssd-mobilenet-v1
FPS:852.43
-----

Wall Time for running model (secs): 464.0526418685913

```

	Model Name	FPS
0	inception_v4	298.255410
1	vgg19_N2	64.481108
2	super_resolution_bsd500	144.295003
3	unet-segmentation	143.056564
4	pose_estimation	234.329908
5	yolov3-tiny-416	526.255947
6	ResNet50_224x224	802.809889
7	ssd-mobilenet-v1	852.434596

- [Nvidia Jetson Xavier NX](#)
- [yolo-tensorrt setup tutorial on NX](#)