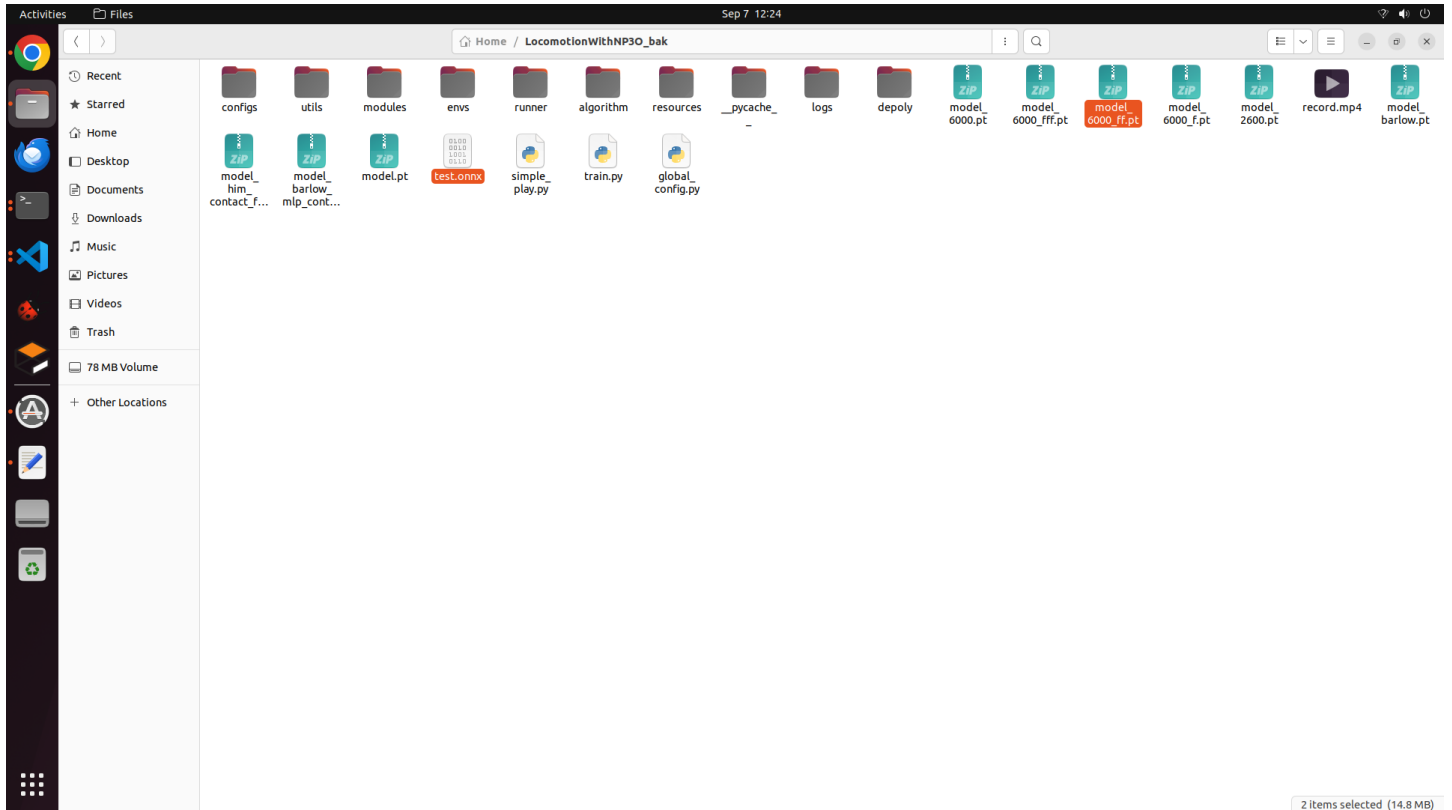


四足强化学习仿真部署

0.onnx文件使用(可以忽略)

0.1 onnx文件做一次推理，给出输入看输出




缺少numpy和onnx，利用pip安装，将test.onnx和如下脚本放在一个路径下

```
pip install onnx
```

```
pip install onnxruntime
```

```
pip install numpy
```



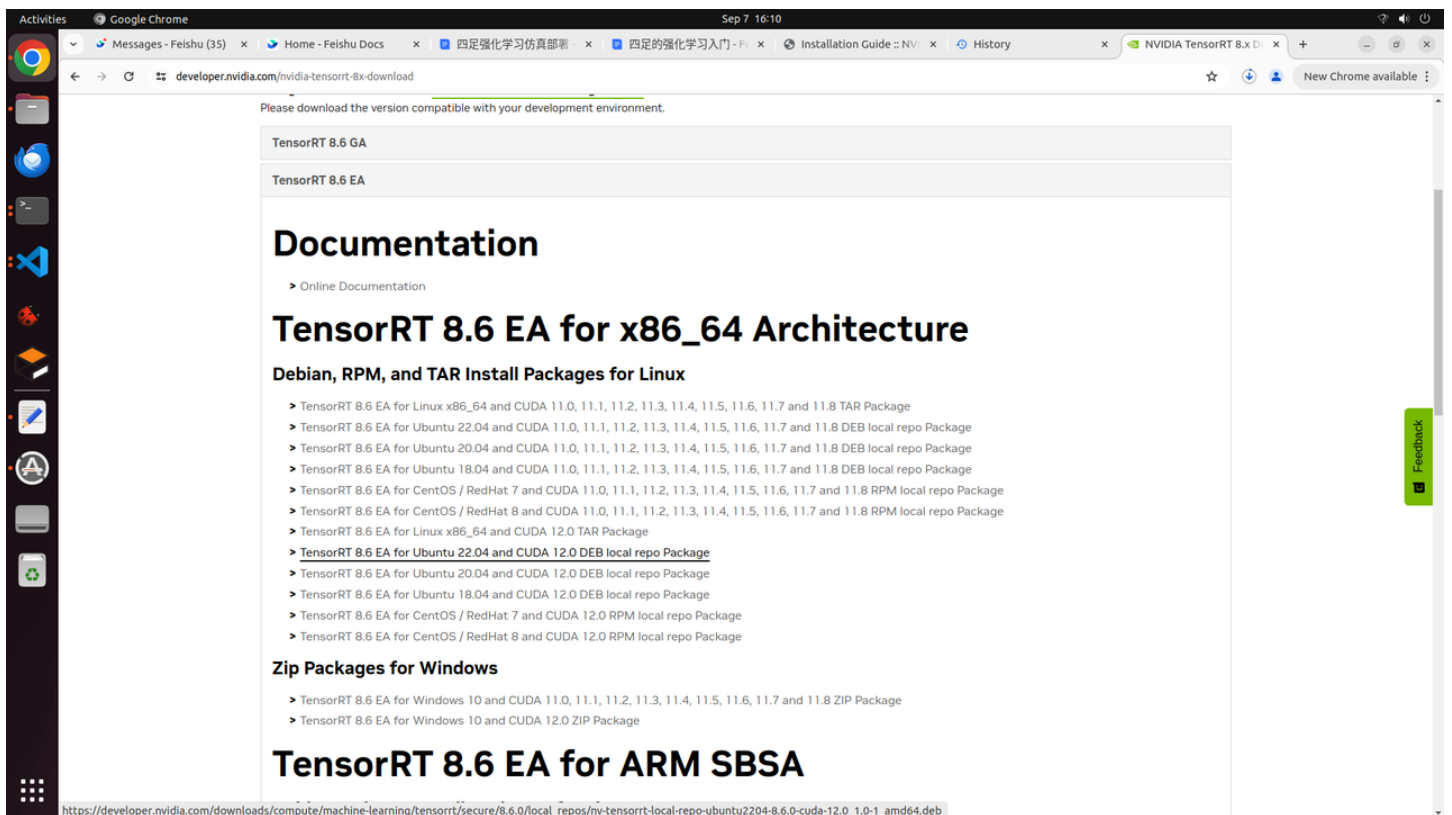
 onnx_test.py

1. Tensorrt

1.1我的cuda版本是12.0,所以我安装tensorrt8.6.0

软件

<https://developer.nvidia.com/nvidia-tensorrt-8x-download>



Activities Google Chrome Sep 7 16:10

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developer.nvidia.com/nvidia-tensorrt-8x-download

Please download the version compatible with your development environment.

TensorRT 8.6 GA

TensorRT 8.6 EA

Documentation

► Online Documentation

TensorRT 8.6 EA for x86_64 Architecture

Debian, RPM, and TAR Install Packages for Linux

- TensorRT 8.6 EA for Linux x86_64 and CUDA 11.0, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7 and 11.8 TAR Package
- TensorRT 8.6 EA for Ubuntu 22.04 and CUDA 11.0, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7 and 11.8 DEB local repo Package
- TensorRT 8.6 EA for Ubuntu 20.04 and CUDA 11.0, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7 and 11.8 DEB local repo Package
- TensorRT 8.6 EA for Ubuntu 18.04 and CUDA 11.0, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7 and 11.8 DEB local repo Package
- TensorRT 8.6 EA for CentOS / RedHat 7 and CUDA 11.0, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7 and 11.8 RPM local repo Package
- TensorRT 8.6 EA for CentOS / RedHat 8 and CUDA 11.0, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7 and 11.8 RPM local repo Package
- TensorRT 8.6 EA for Linux x86_64 and CUDA 12.0 TAR Package
- TensorRT 8.6 EA for Ubuntu 22.04 and CUDA 12.0 DEB local repo Package
- TensorRT 8.6 EA for Ubuntu 20.04 and CUDA 12.0 DEB local repo Package
- TensorRT 8.6 EA for Ubuntu 18.04 and CUDA 12.0 DEB local repo Package
- TensorRT 8.6 EA for CentOS / RedHat 7 and CUDA 12.0 RPM local repo Package
- TensorRT 8.6 EA for CentOS / RedHat 8 and CUDA 12.0 RPM local repo Package

Zip Packages for Windows

- TensorRT 8.6 EA for Windows 10 and CUDA 11.0, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7 and 11.8 ZIP Package
- TensorRT 8.6 EA for Windows 10 and CUDA 12.0 ZIP Package

TensorRT 8.6 EA for ARM SBSA

https://developer.nvidia.com/downloads/compute/machine-learning/tensorrt/secure/8.6.0/local_repos/nv-tensorrt-local-repo-ubuntu2204-8.6.0-cuda-12.0_1.0-1_amd64.deb

Feedback

安装

<https://docs.nvidia.com/deeplearning/tensorrt/install-guide/index.html>

1. Install CUDA according to the [CUDA installation](#) instructions.
2. [Download](#) the TensorRT local repo file that matches the Ubuntu version and CPU architecture that you are using.
3. Install TensorRT from the Debian local repo package. Replace `ubuntuxx04`, `10.x.x`, and `cuda-x.x` with your specific OS, TensorRT version, and CUDA version. JetPack users also need to replace `nv-tensorrt-local-repo` with `nv-tensorrt-local-tegra-repo`.

```
os="ubuntuxx04"
tag="10.x.x-cuda-x.x"
sudo dpkg -i nv-tensorrt-local-repo-${os}-${tag}_1.0-1_amd64.deb
sudo cp /var/nv-tensorrt-local-repo-${os}-${tag}/*-keyring.gpg /usr/share/keyrings/
sudo apt-get update
```

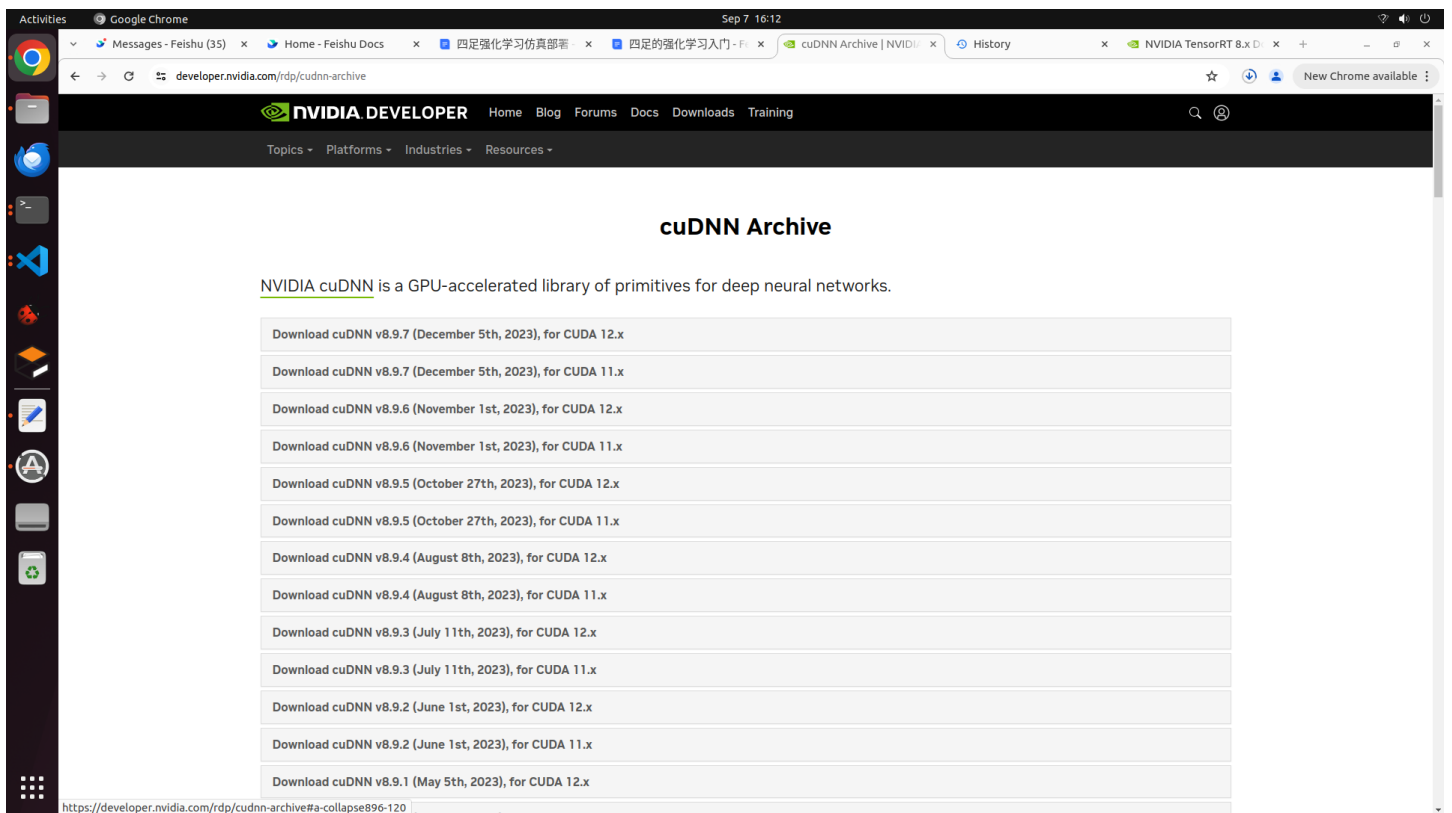
For the full C++ and Python runtimes

```
sudo apt-get install tensorrt
```

1.2报错缺少libcudnn，按照下面

软件，我安装的是8.9.0

<https://developer.nvidia.com/rdp/cudnn-archive>



安装<https://docs.nvidia.com/deeplearning/cudnn/archives/cudnn-891/install-guide/index.html>

```
$ sudo chmod a+r /usr/local/cuda/include/cudnn*.h /usr/local/cuda/lib64/libcudnn*
```

1.3.2. Debian Local Installation

Download the Debian local repository installation package. Before issuing the following commands, you must replace `X.Y` and `8.x.x.x`.

1. Navigate to your `<cudnnpath>` directory containing the cuDNN Debian local installer file.

2. Enable the local repository.

```
sudo dpkg -i cudnn-local-repo-${OS}-8.x.x.x 1.0-1 amd64.deb
```

or

```
sudo dpkg -i cudnn-local-repo-${OS}-8.x.x.x 1.0-1 arm64.deb
```

3. Import the CUDA GPG key.

```
sudo cp /var/cudnn-local-repo-*/cudnn-local-*-keyring.gpg /usr/share/keyrings/
```

4. Refresh the repository metadata.

```
sudo apt-get update
```

5. Install the runtime library.

```
sudo apt-get install libcudnn8=8.x.x.x-1+cudaX.Y
```

6. Install the developer library.

```
sudo apt-get install libcudnn8-dev=8.x.x.x-1+cudaX.Y
```

7. Install the code samples.

```
sudo apt-get install libcudnn8-samples=8.x.x.x-1+cudaX.Y
```

1.3.3. RPM Local Installation

Download the RPM local repository installation package. Before issuing the following commands, you must replace `X.Y` and `8.x.x.x`.

1.3 安装完成后，可以执行如下命令

```
/usr/src/tensorrt/bin/trtexec --onnx=test.onnx --saveEngine=model_gn.engine
```

1.4 c++完成一次推理的实例



tensorrt_cuda_cpp.tar.xz

1.77MB



解压

```
cd tensor_cuda_cpp
```

```
mkdir build
```

```
cmake ..
```

```
make -j8
```

```
./cuda_test
```

2 titati_webots dev_rl_tensorrt

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