

1. windows terminal + ubuntu

<https://ubuntu.com/tutorials/install-ubuntu-on-wsl2-on-windows-11-with-gui-support#1-overview>

```
#cmd in admin mode

wsl --install
# restart

wsl --list --online
wsl --install -d Ubuntu-20.04
# restart

wsl cat /proc/version
wsl --update
wsl -l -v
```

wsl versions management

<https://pureinfotech.com/upgrade-wsl2-wsl1-windows-10/>

<https://pureinfotech.com/install-windows-subsystem-linux-2-windows-10/>

2. NVIDIA driver

Quadro - P620

3. CUDA 11.6(For NVIDIA Quadro P620)

https://developer.nvidia.com/cuda-11-6-0-download-archive?target_os=Linux&target_arch=x86_64&Distribution=WSL-Ubuntu&target_version=2.0&target_type=deb_local

3.1 ignore wsl - ubuntu

```
sudo apt-key del 7fa2af80

# wget
https://developer.download.nvidia.com/compute/cuda/repos/ubuntu2004/x86_64/cuda-ubuntu2004.pin
sudo mv cuda-ubuntu2004.pin /etc/apt/preferences.d/cuda-repository-pin-600
# wget
https://developer.download.nvidia.com/compute/cuda/11.6.0/local_installers/cuda-repo-ubuntu2004-11-6-local_11.6.0-510.39.01-1_amd64.deb
sudo dpkg -i cuda-repo-ubuntu2004-11-6-local_11.6.0-510.39.01-1_amd64.deb
sudo apt-key add /var/cuda-repo-ubuntu2004-11-6-local/7fa2af80.pub
sudo apt-get update
sudo apt-get -y install cuda

export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/local/cuda-11.6/lib64
export PATH=$PATH:/usr/local/cuda-11.6/bin
export CUDA_HOME=$CUDA_HOME:/usr/local/cuda-11.6
```

3.2 Ensure wsl2

```
wget https://developer.download.nvidia.com/compute/cuda/repos/wsl-ubuntu/x86_64/cuda-wsl-ubuntu.pin
sudo mv cuda-wsl-ubuntu.pin /etc/apt/preferences.d/cuda-repository-pin-600
wget
https://developer.download.nvidia.com/compute/cuda/11.6.0/local_installers/cuda-repo-wsl-ubuntu-11-6-local_11.6.0-1_amd64.deb
sudo dpkg -i cuda-repo-wsl-ubuntu-11-6-local_11.6.0-1_amd64.deb
sudo apt-key add /var/cuda-repo-wsl-ubuntu-11-6-local/7fa2af80.pub
sudo apt-get update
sudo apt-get -y install cuda

export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/local/cuda-11.6/lib64
export PATH=$PATH:/usr/local/cuda-11.6/bin
export CUDA_HOME=$CUDA_HOME:/usr/local/cuda-11.6
```

4. Linux Terminal envs

```
sudo apt install build-essential
sudo apt install python3.x
```

5.Miniconda

```
bash miniconda - python3.x  
bash
```

```
conda install pytorch torchvision torchaudio pytorch-cuda=11.6 -c pytorch -c  
nvidia  
pip install jupyter d2l rise  
pip install torch==1.12.1+cu116 torchvision==0.13.1+cu116 torchaudio==0.12.1 --  
extra-index-url https://download.pytorch.org/whl/cu116
```