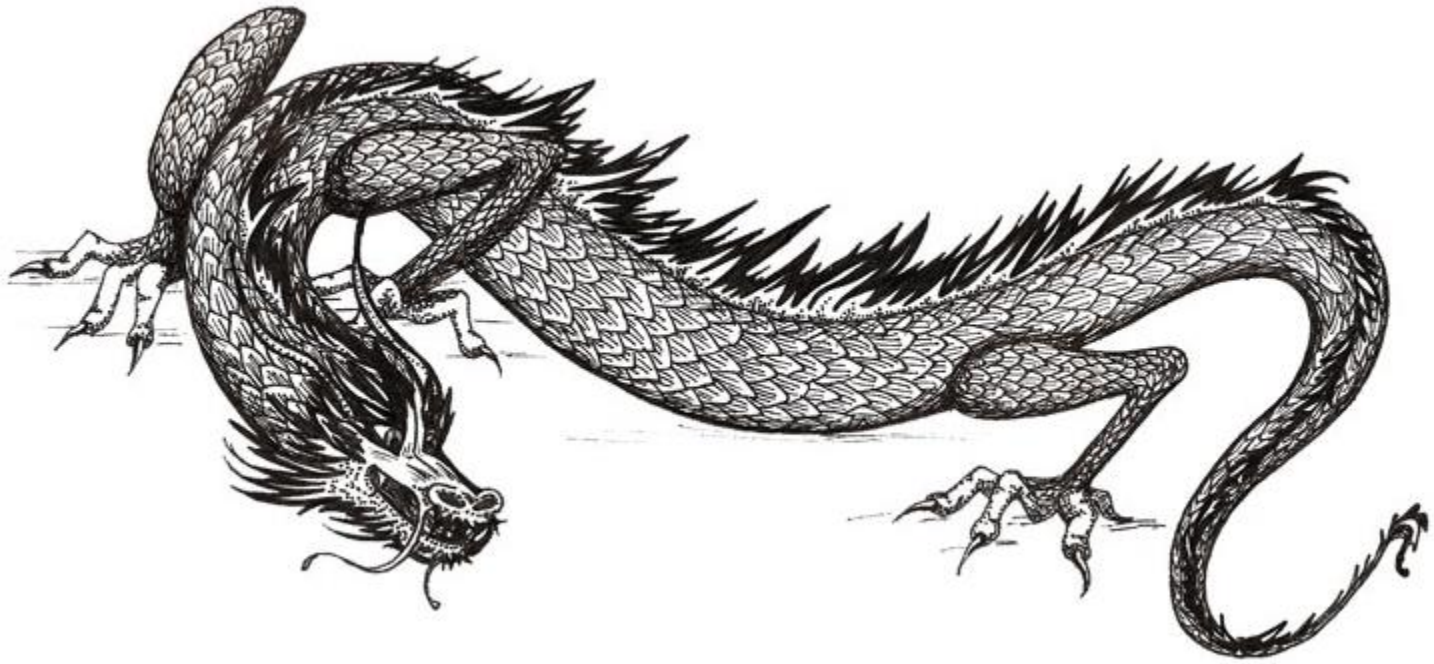


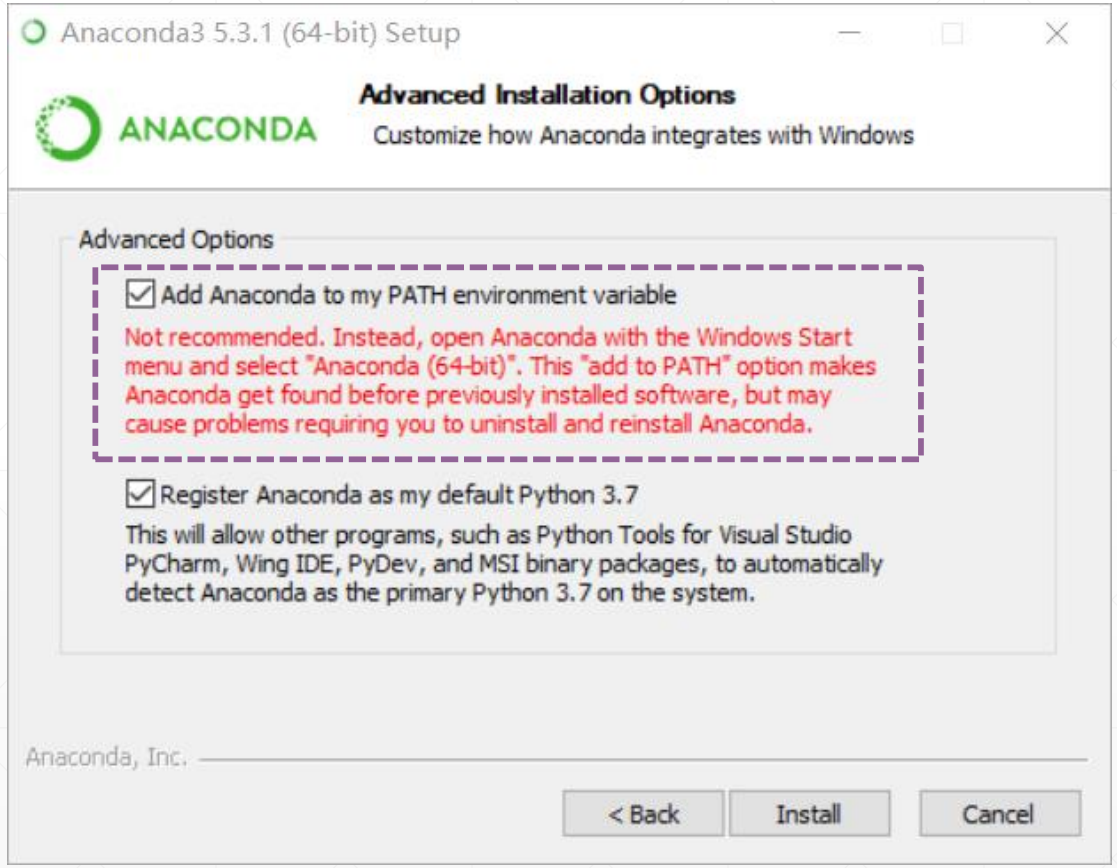
开发环境安装

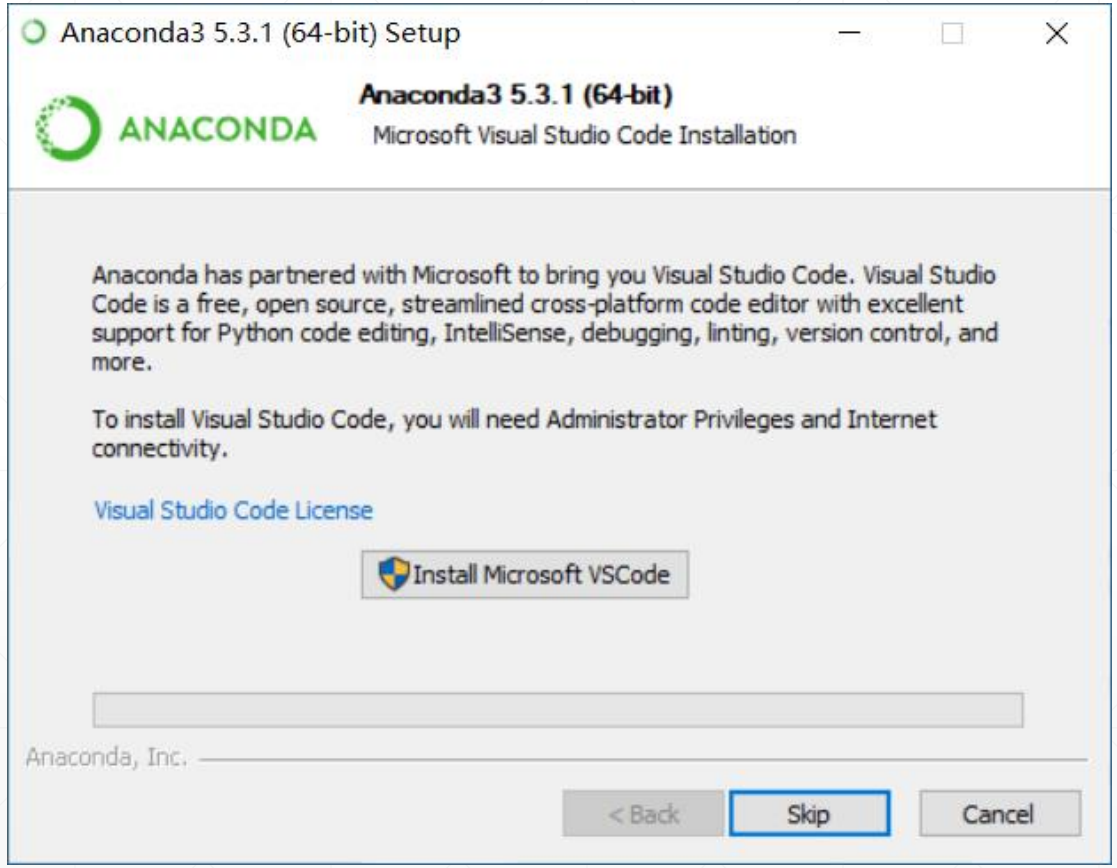
主讲人：龙良曲

Platform

- Windows 10
  - Or Ubuntu 16.04/18.04
- Anaconda, Python 3.7
- CUDA 10.0
  - cuDNN
- TensorFlow 2.0
- PyCharm

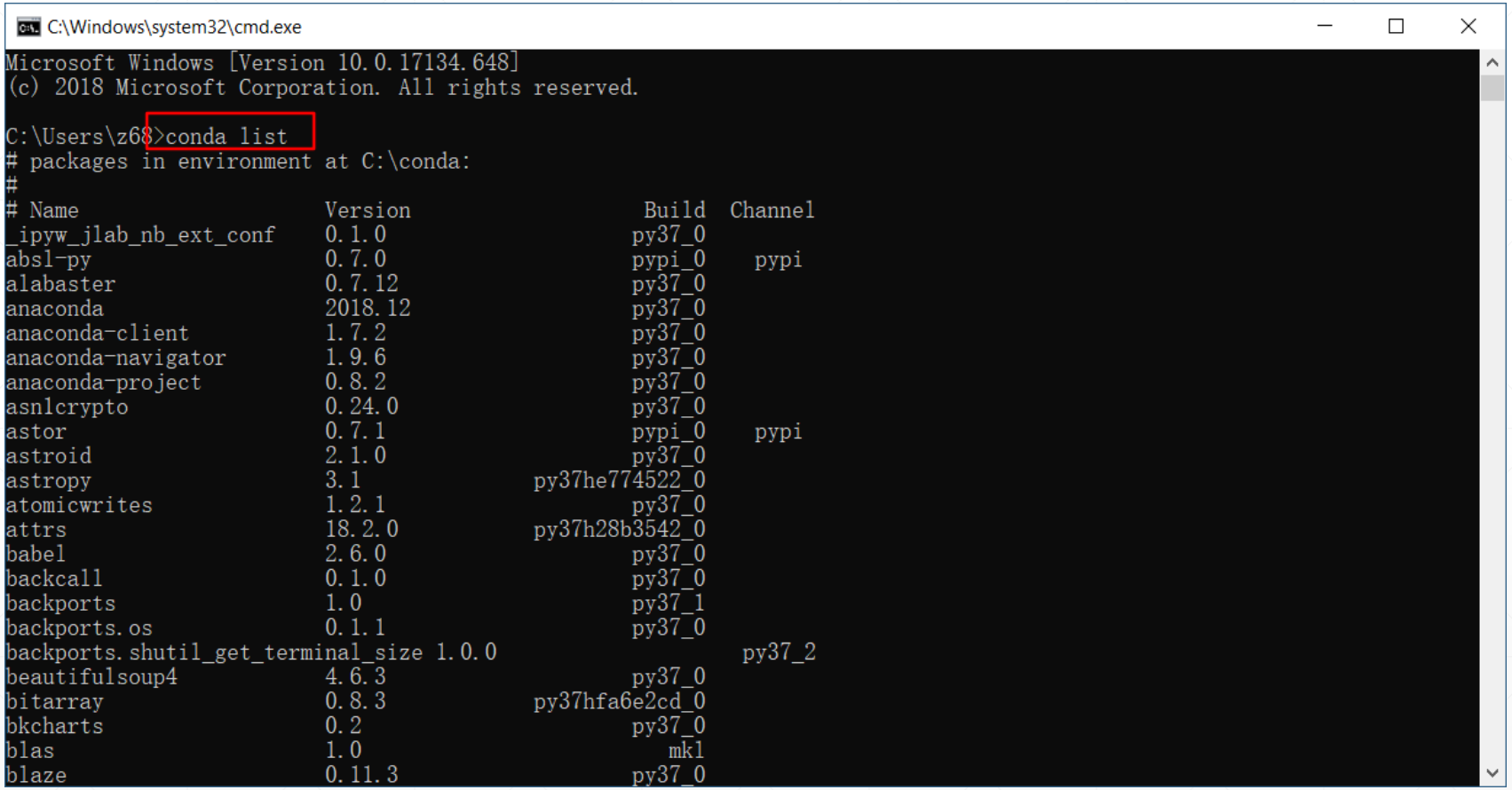
Step1.ANACONDA Python:3.7





https://www.anaconda.com/distribution/#download-section

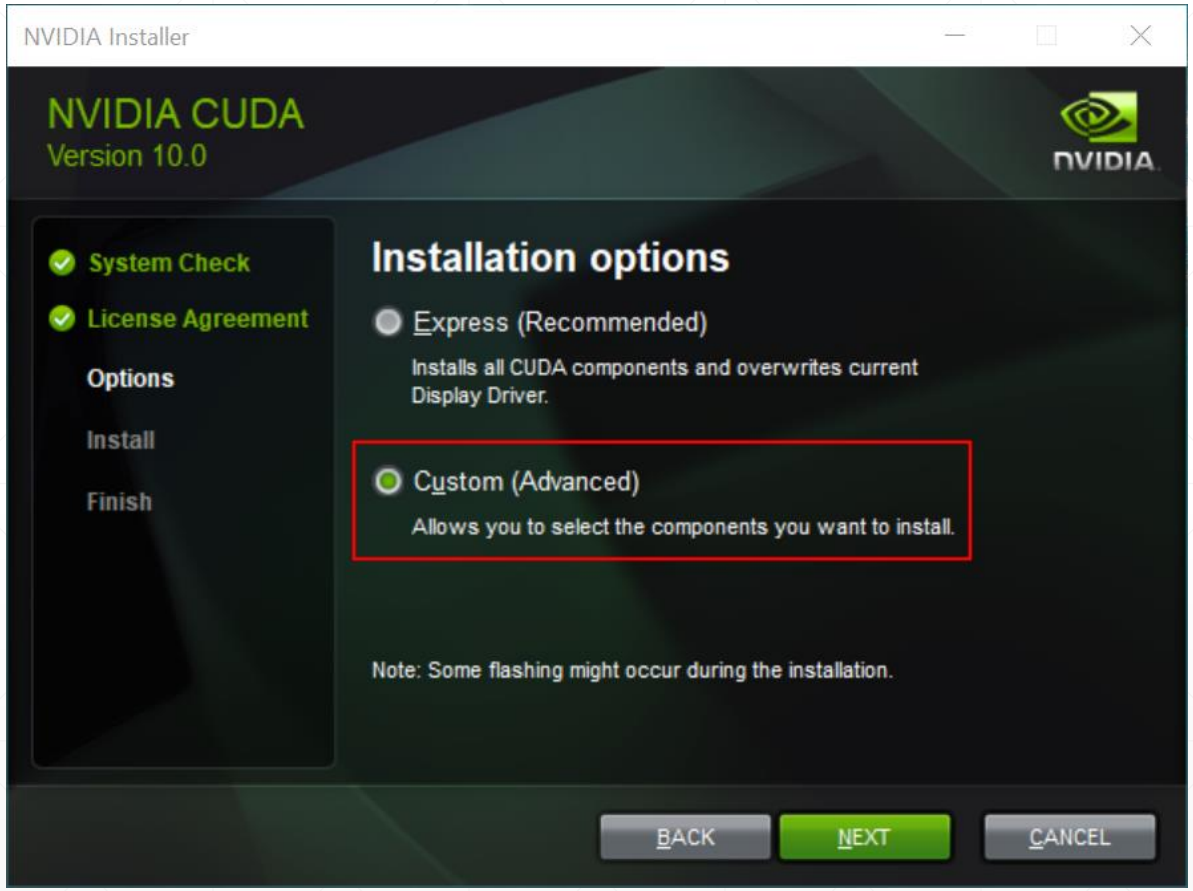
Step1.Anaconda安装确认



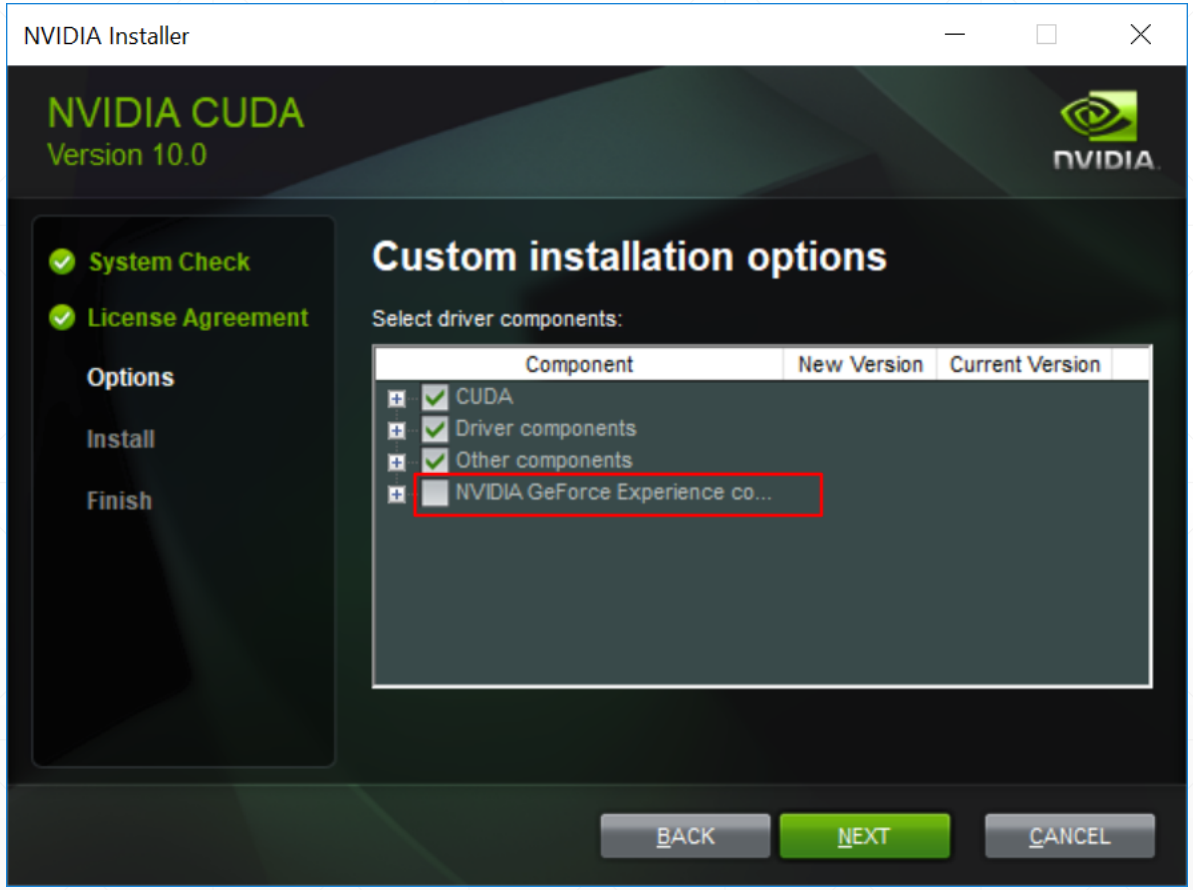
Step2.CUDA 10.0

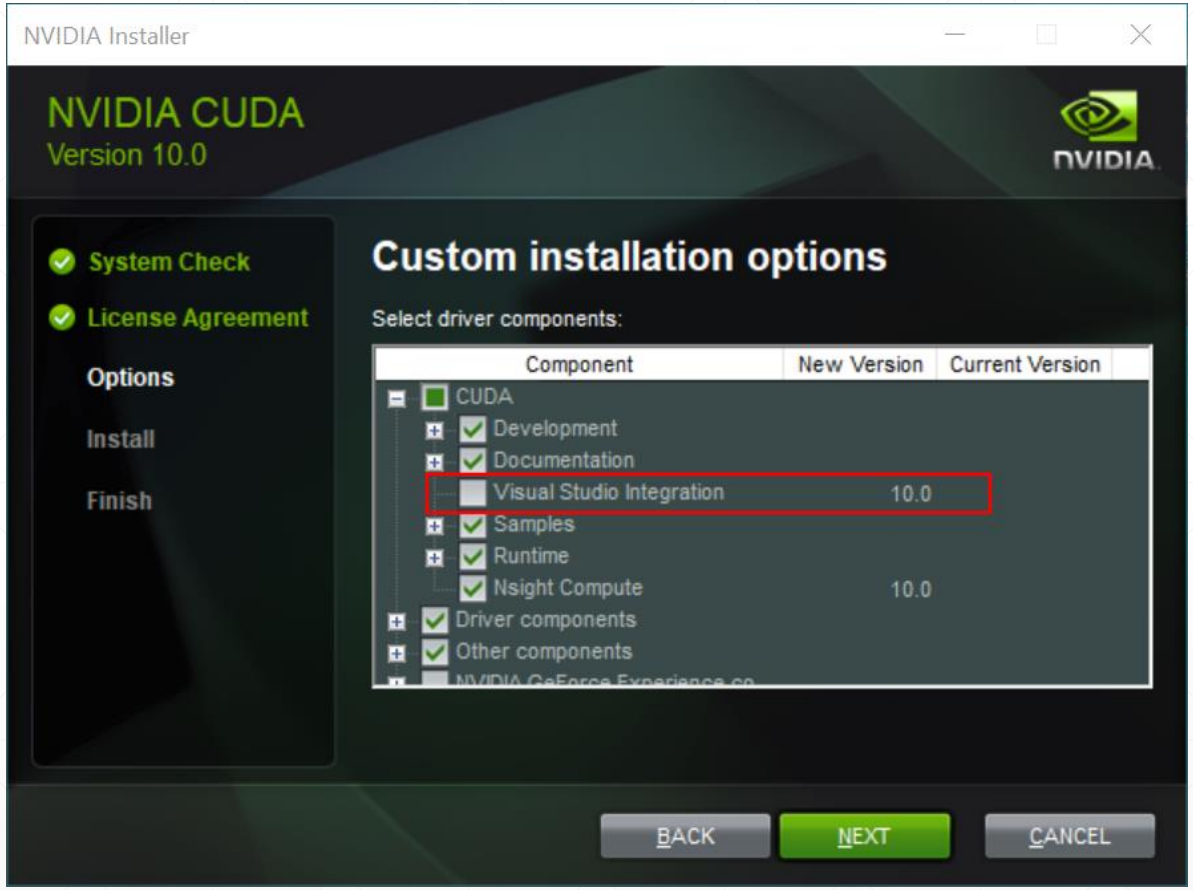
- NVIDIA显卡
  - GTX 1060 6GB
  - GTX 1080Ti 11GB
- CUDA安装
  - 驱动
  - CUPTI
- cuDNN安装
- PATH配置

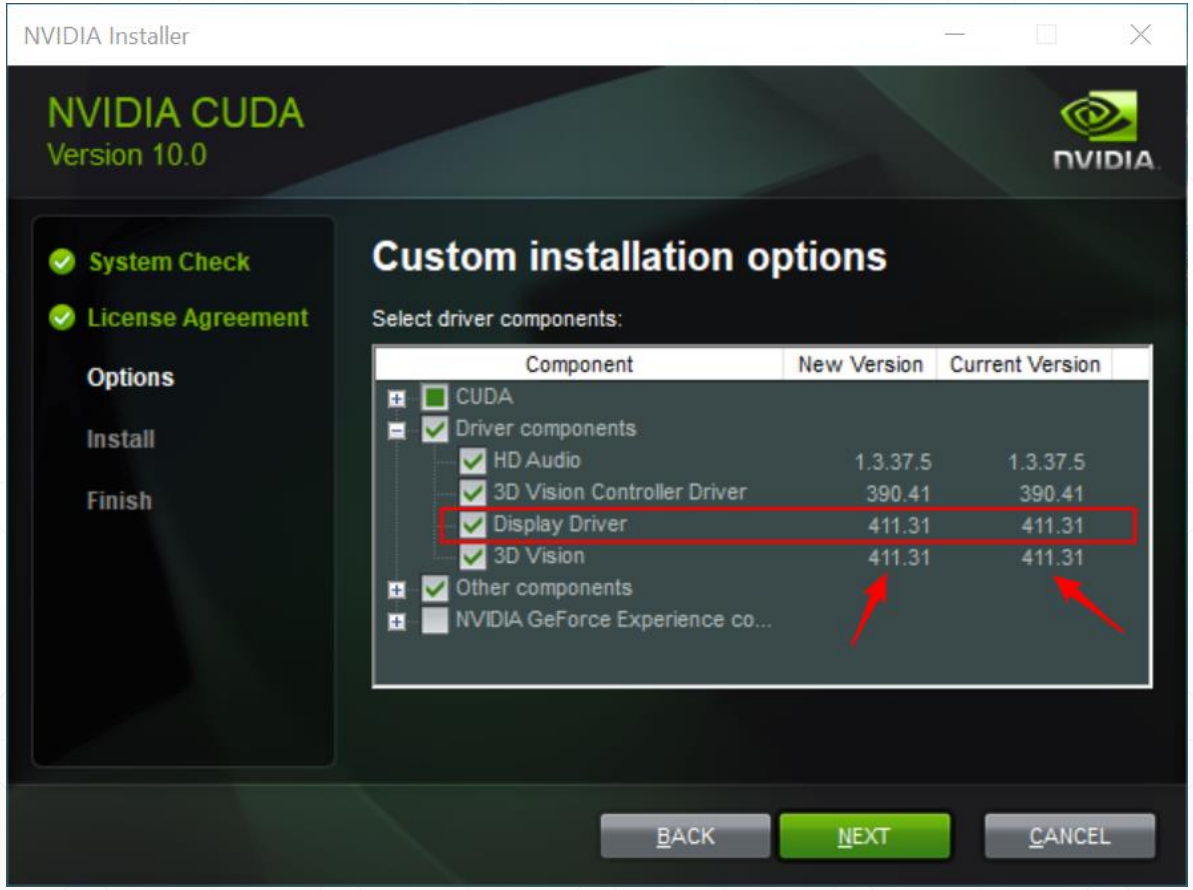
Step2.1.CUDA安装



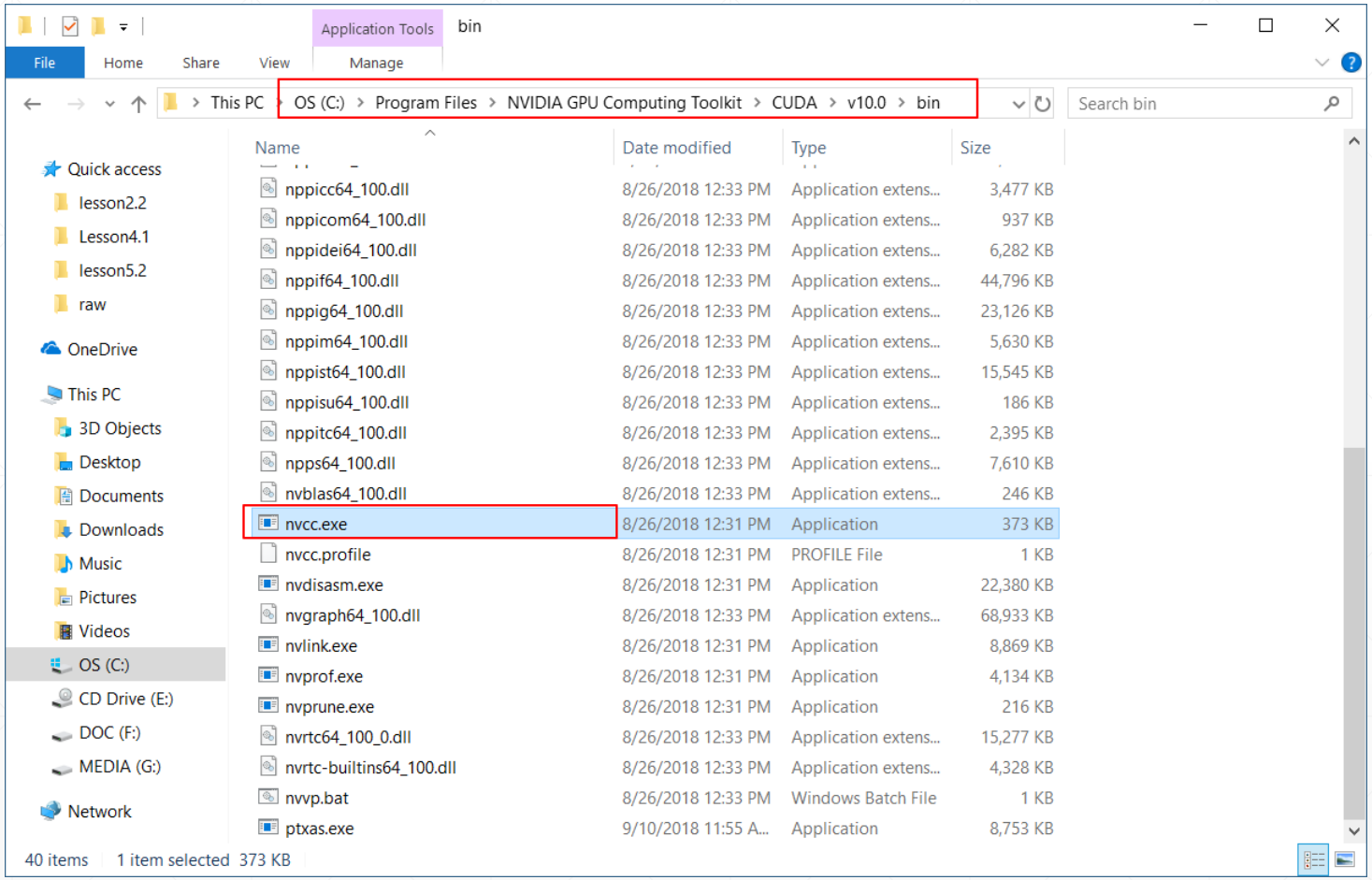
https://developer.nvidia.com/cuda-10.0-download-archive?target_os=Windows&target_arch=x86_64&target_version=10&target_type=exelocal


NVIDIA Installer
NVIDIA CUDA
Version 10.0
NVIDIA
System Check
License Agreement
Options
Install
Finish
Custom installation options
Select driver components:
Component
New Version
Current Version
CUDA
Driver components
Other components
NVIDIA GeForce Experience co...
BACK
NEXT
CANCEL

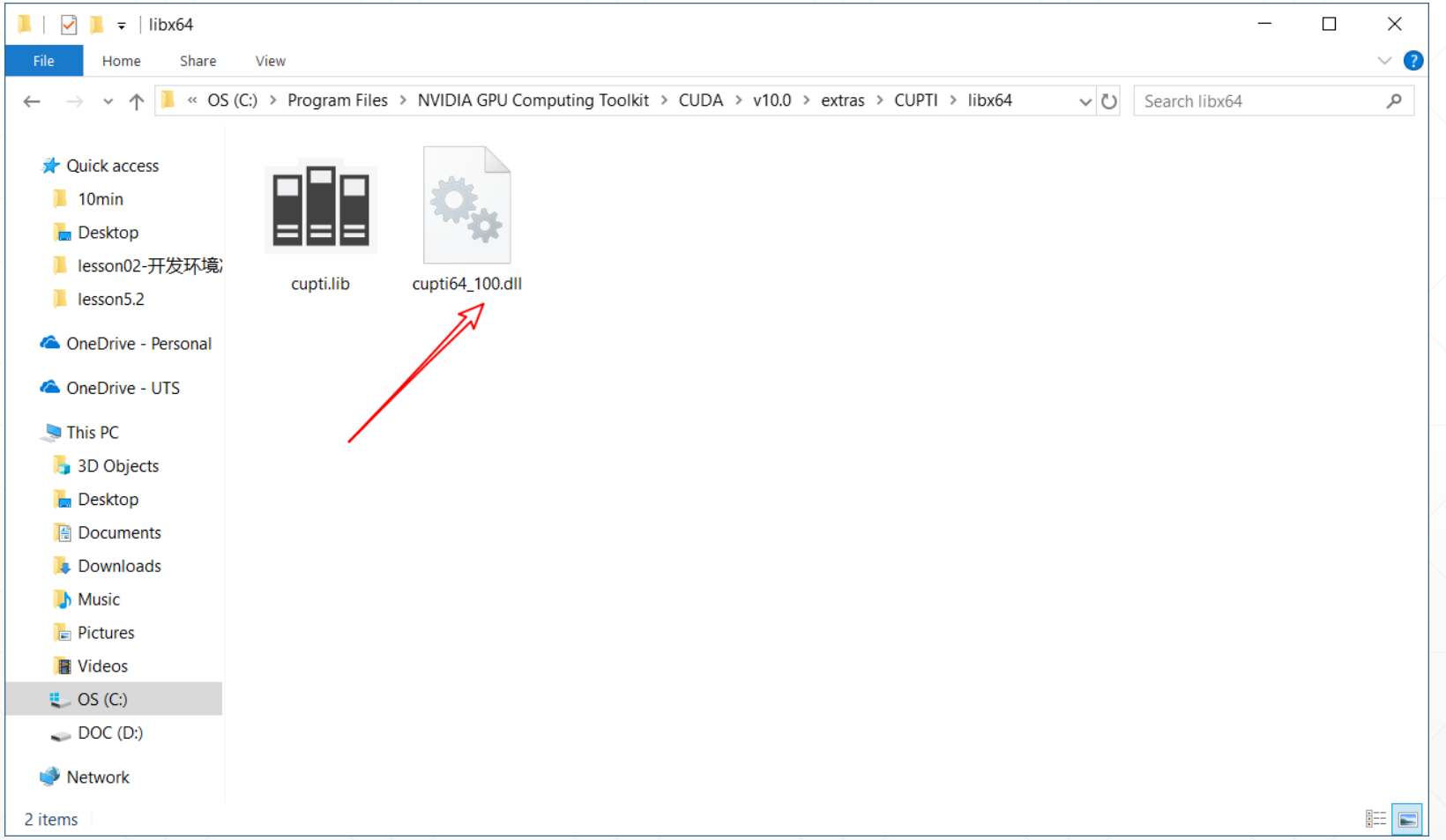

NVIDIA Installer
NVIDIA CUDA
Version 10.0
NVIDIA
System Check
License Agreement
Options
Install
Finish
Custom installation options
Select driver components:
Component
New Version
Current Version
CUDA
Development
Documentation
Visual Studio Integration
10.0
Samples
Runtime
Nsight Compute
10.0
Driver components
Other components
BACK
NEXT
CANCEL


NVIDIA Installer
NVIDIA CUDA
Version 10.0
NVIDIA
System Check
License Agreement
Options
Install
Finish
Custom installation options
Select driver components:
Component
New Version
Current Version
CUDA
Driver components
HD Audio
1.3.37.5
1.3.37.5
3D Vision Controller Driver
390.41
390.41
Display Driver
411.31
411.31
3D Vision
411.31
411.31
Other components
NVIDIA GeForce Experience co...
BACK
NEXT
CANCEL

Step2.1.CUDA 安装确认

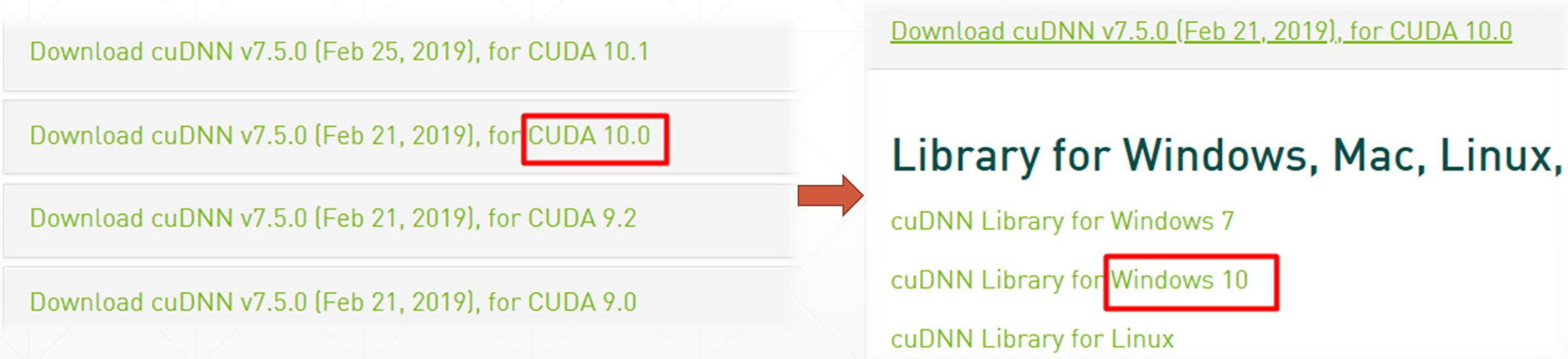


Step2.1.CUPTI确认



Step2.2.cuDNN下载

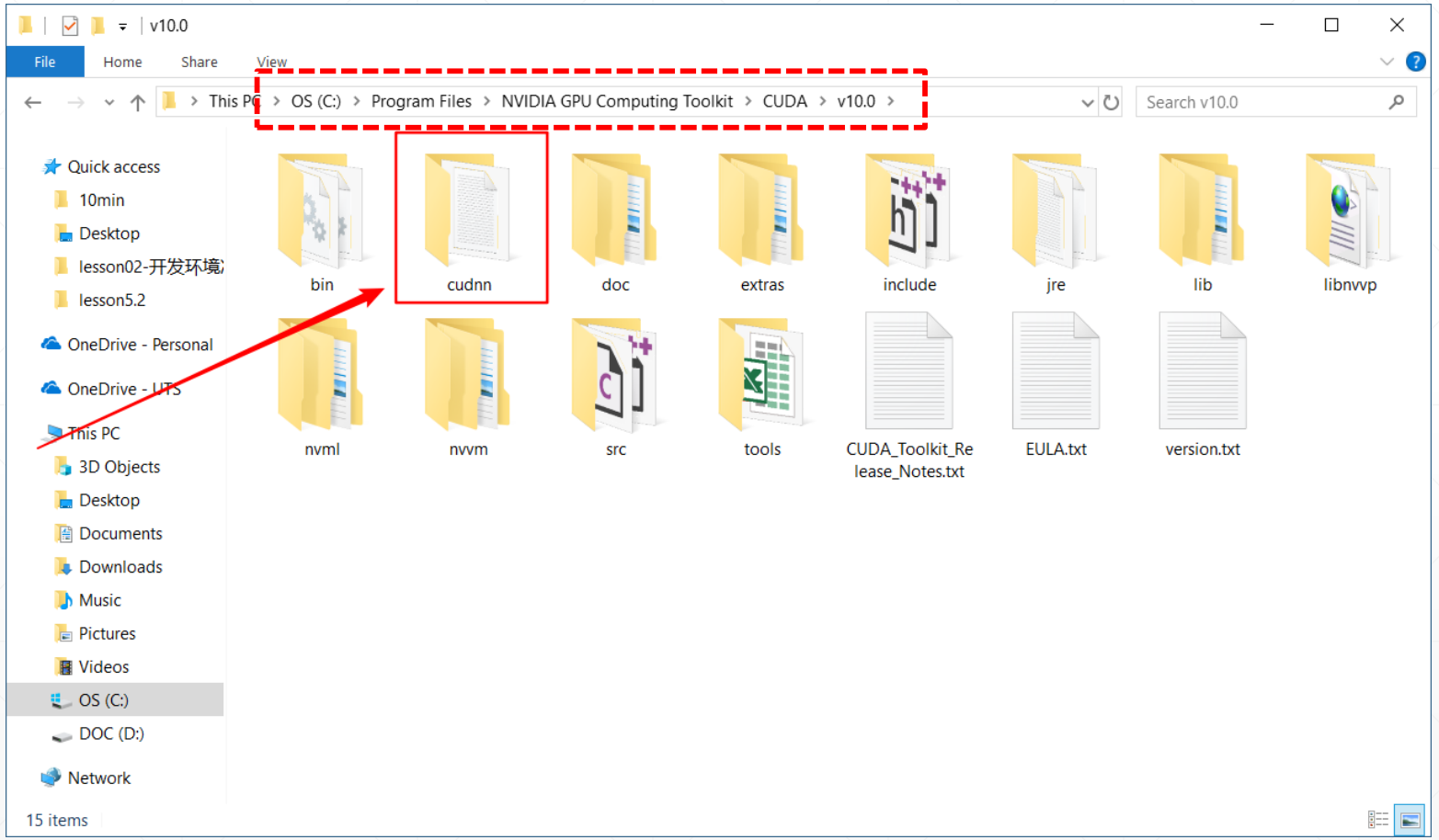
- 需要NVIDIA注册



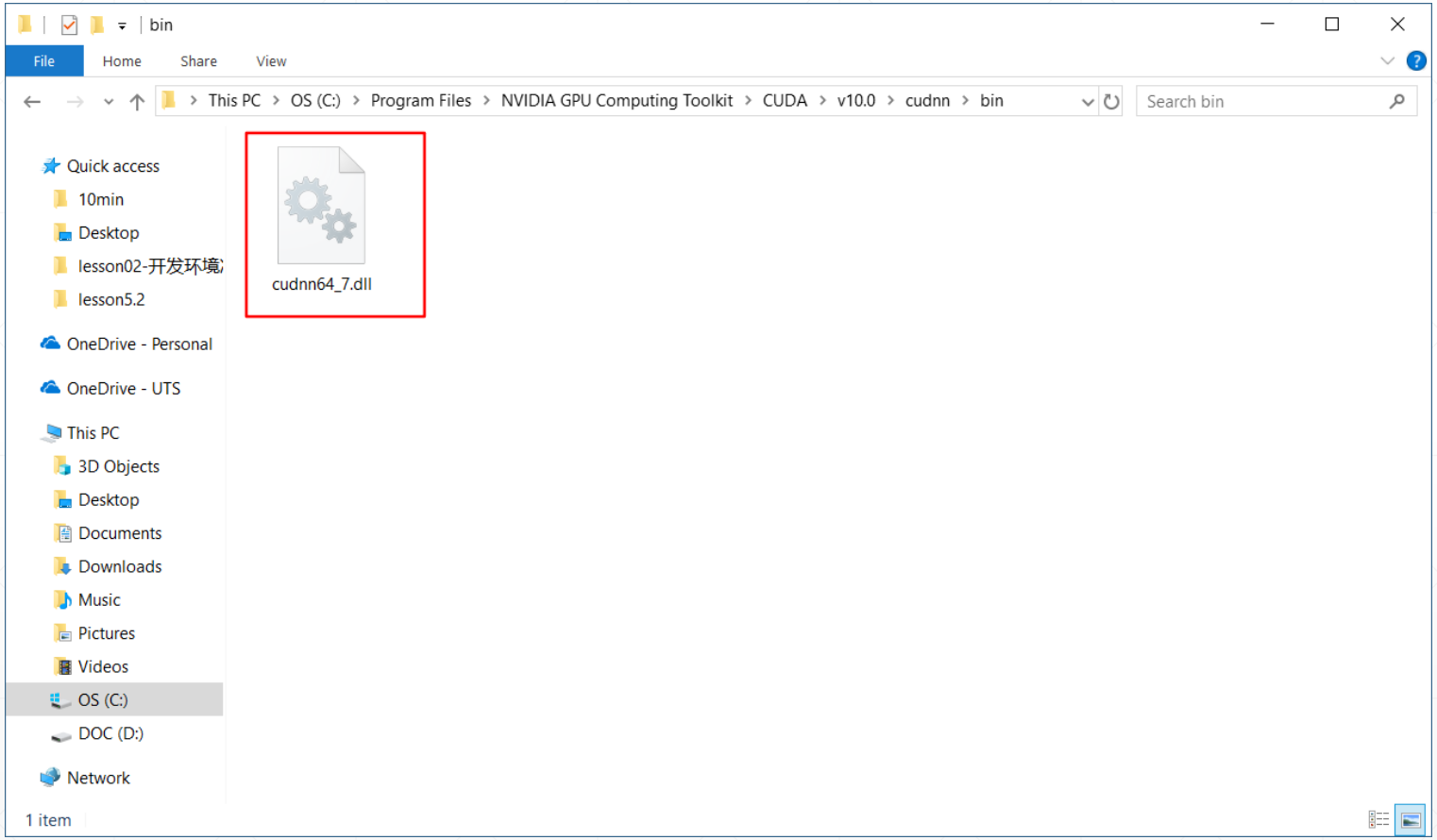
https://developer.nvidia.com/rdp/cudnn-download

Step2.2.cuDNN复制

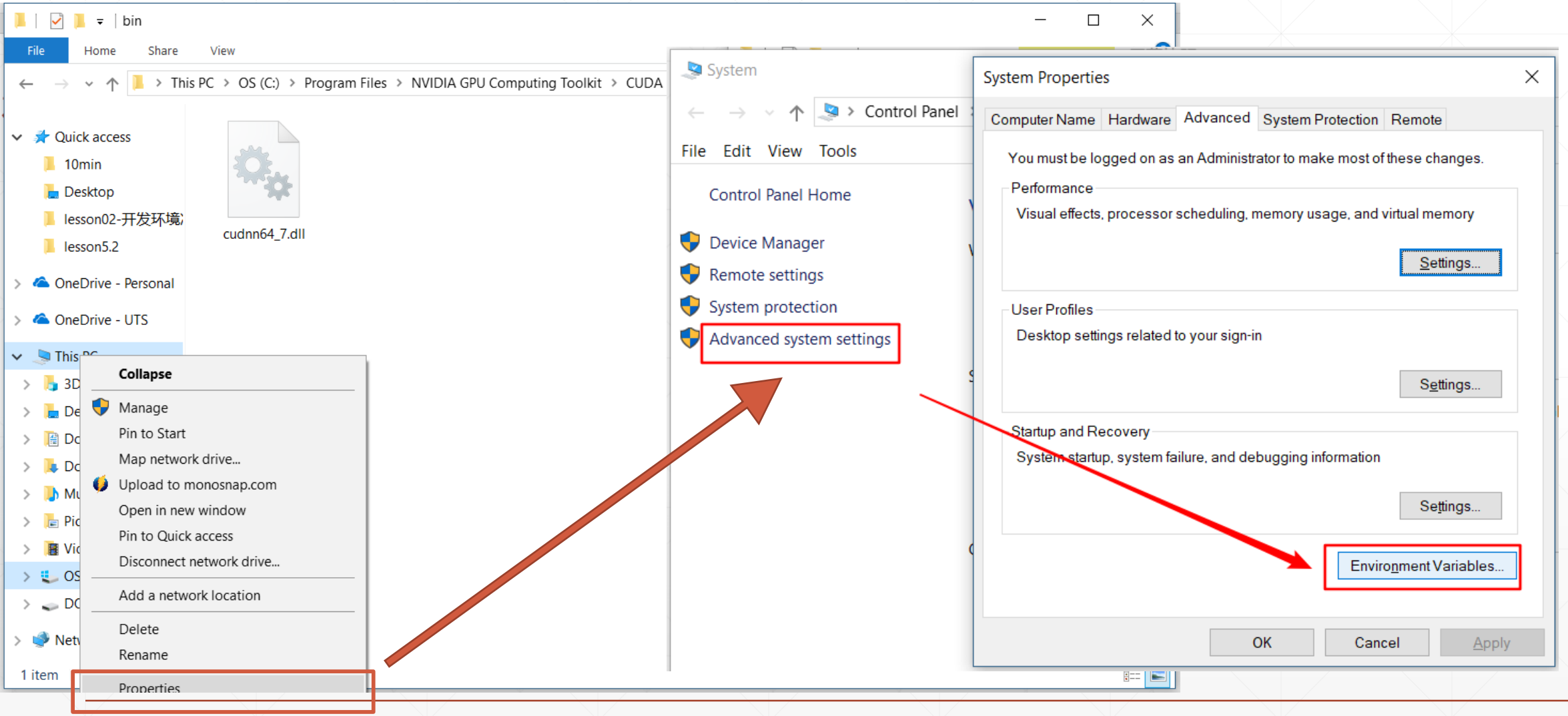
- 解压
- cuda文件夹改名为
  - cudnn
- 复制到：



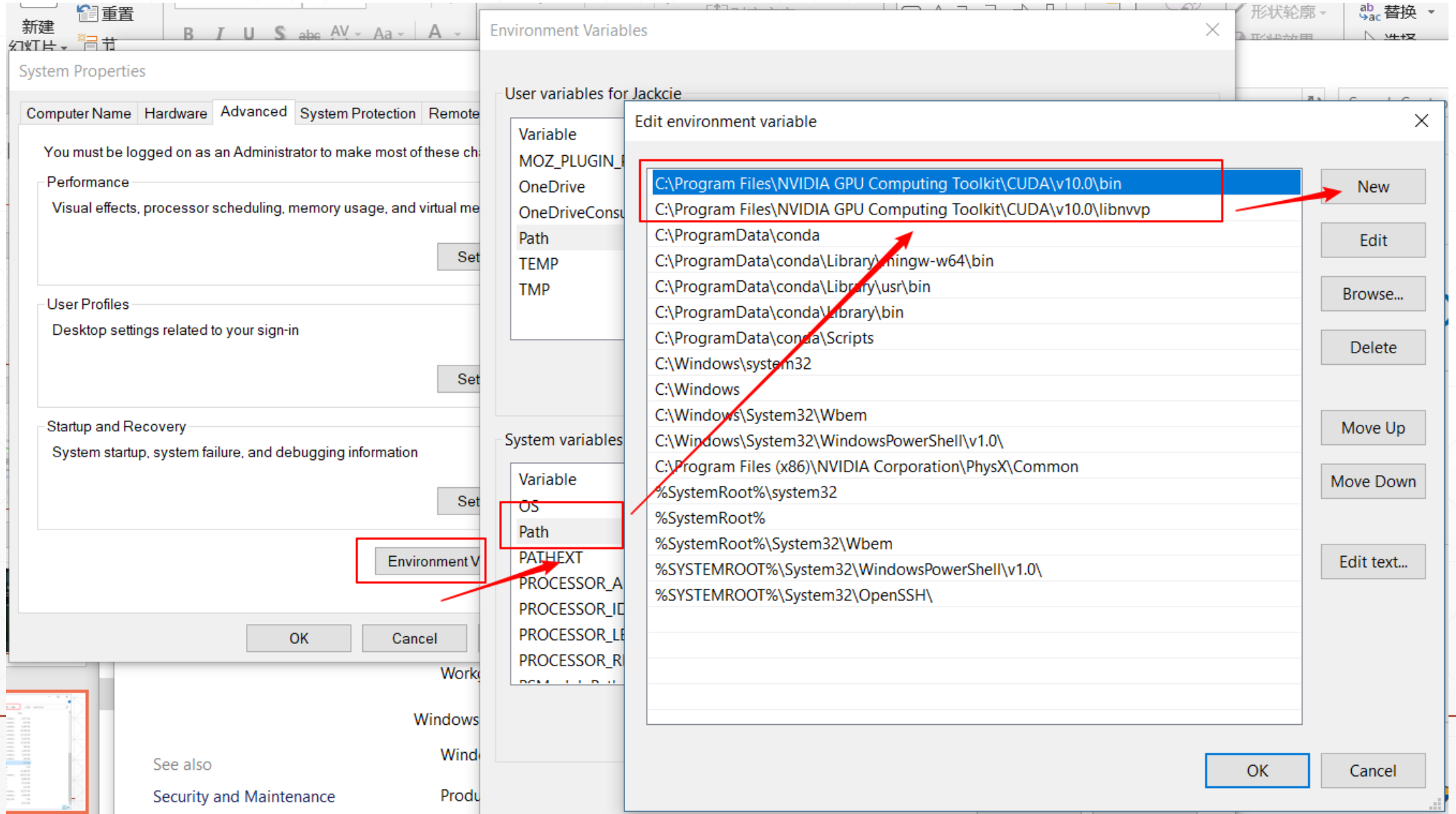
Step2.2.cuDNN确认



Step2.3.环境变量配置

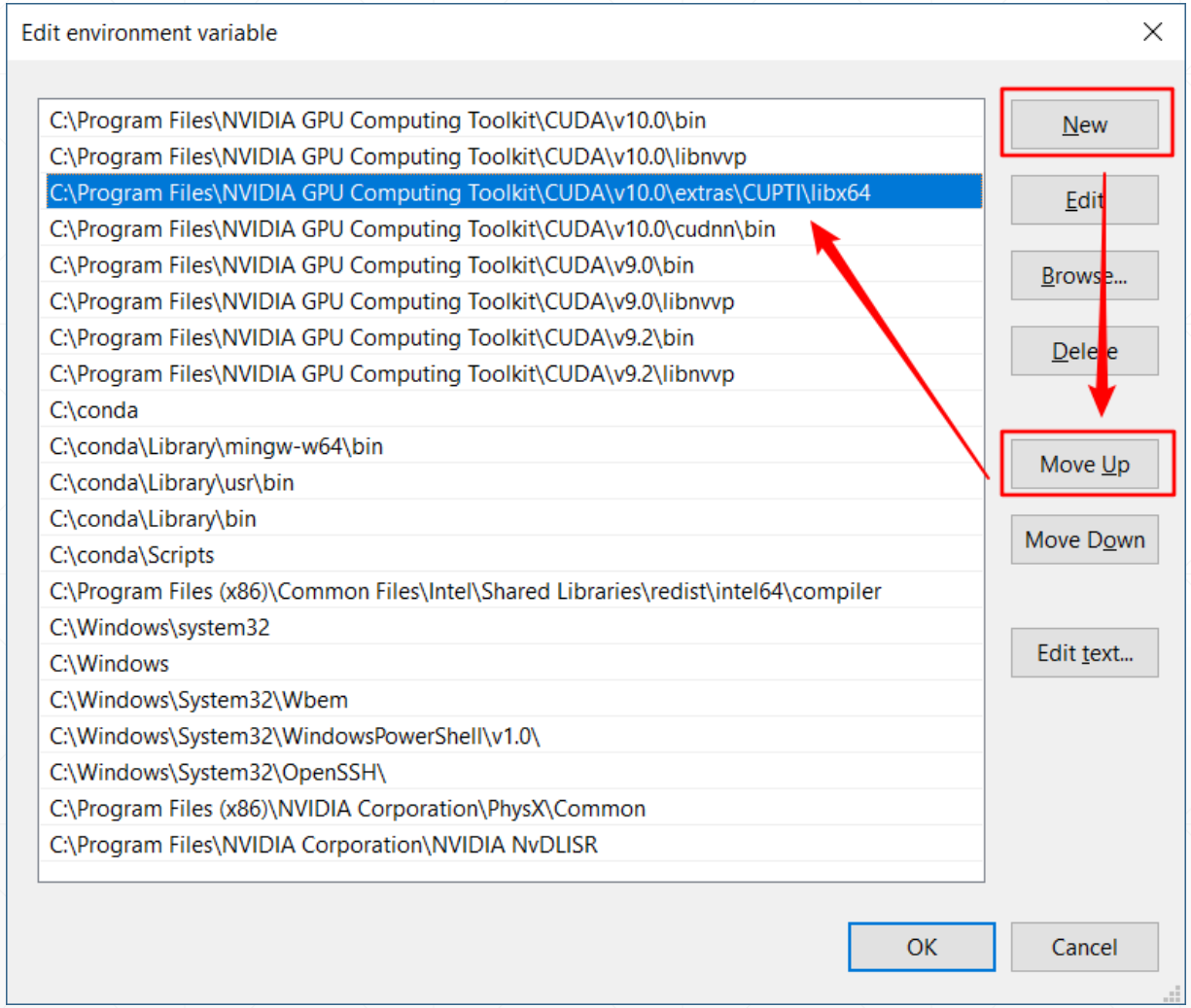


Step2.3.环境变量配置



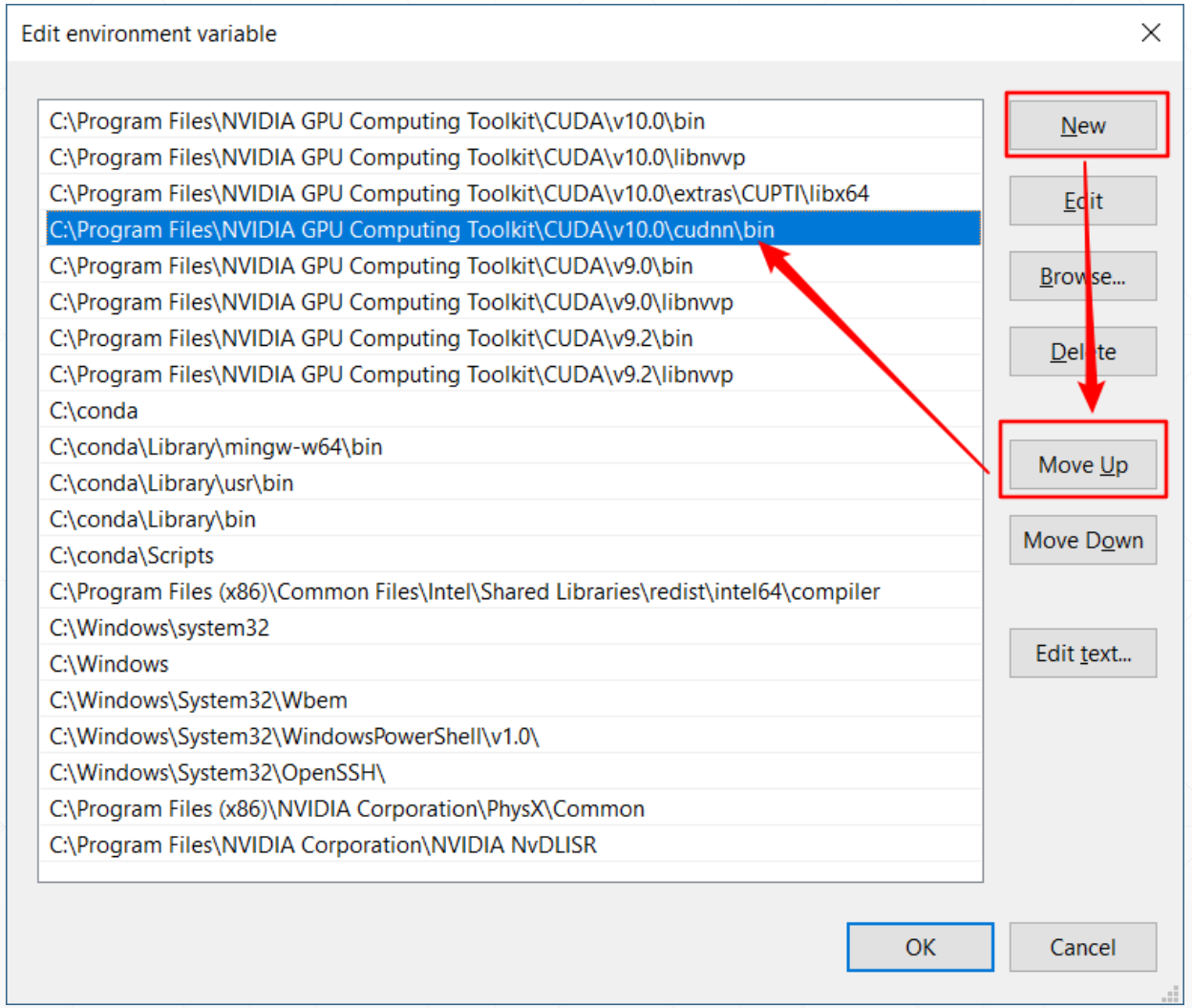
Step2.3.添加CUPTI路径

- 点击New增加条目
- 点击Move Up可上调行



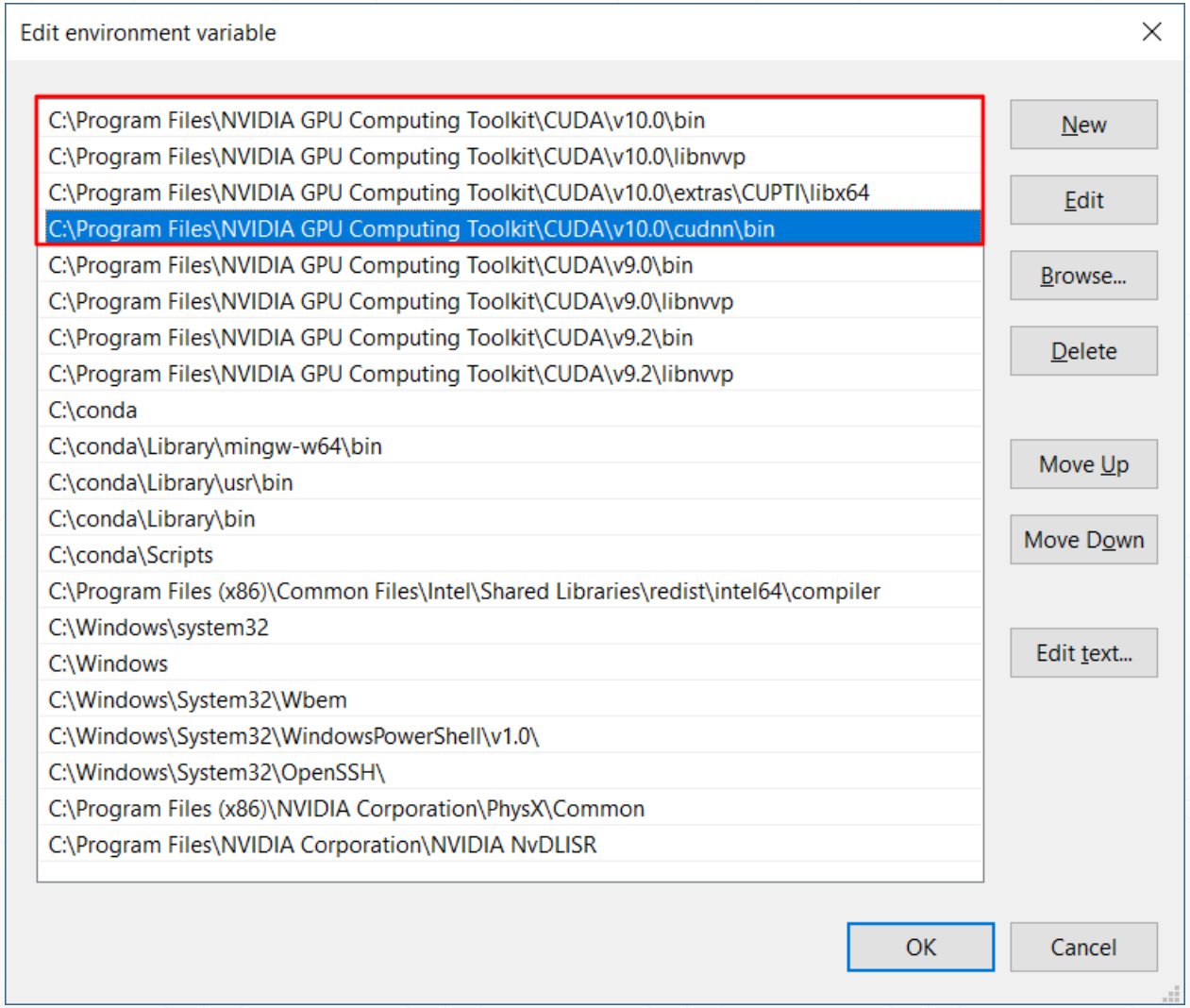
Step2.3.添加cuDNN路径

- 点击New增加条目
- 点击Move Up可上调行

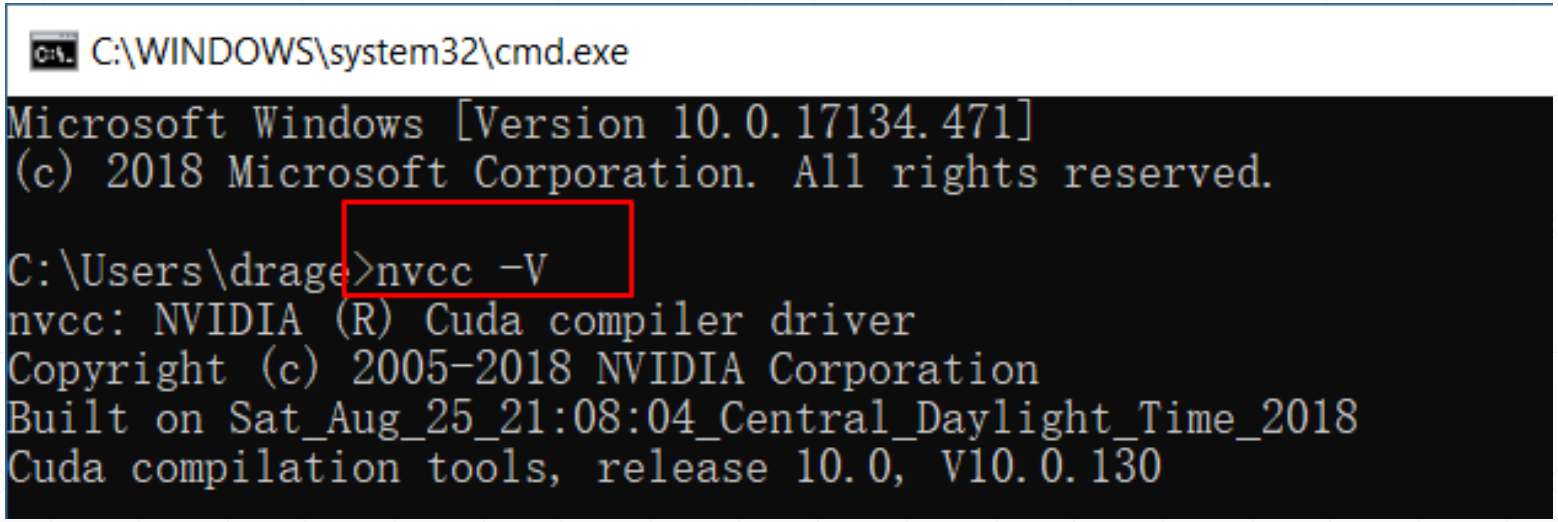


Step2.3.PATH变量确认

- 4行缺一不可
- 4行必须位于顶部



Step2.4.CUDA 测试



Step3.TensorFlow安装

```
# cpu version
pip install --upgrade tensorflow
# gpu version
pip install --upgrade tensorflow-gpu

# or install specific version
# cpu-version
pip install tensorflow==2.0.0-alpha0
# gpu-version
pip install tensorflow-gpu==2.0.0-alpha0
```

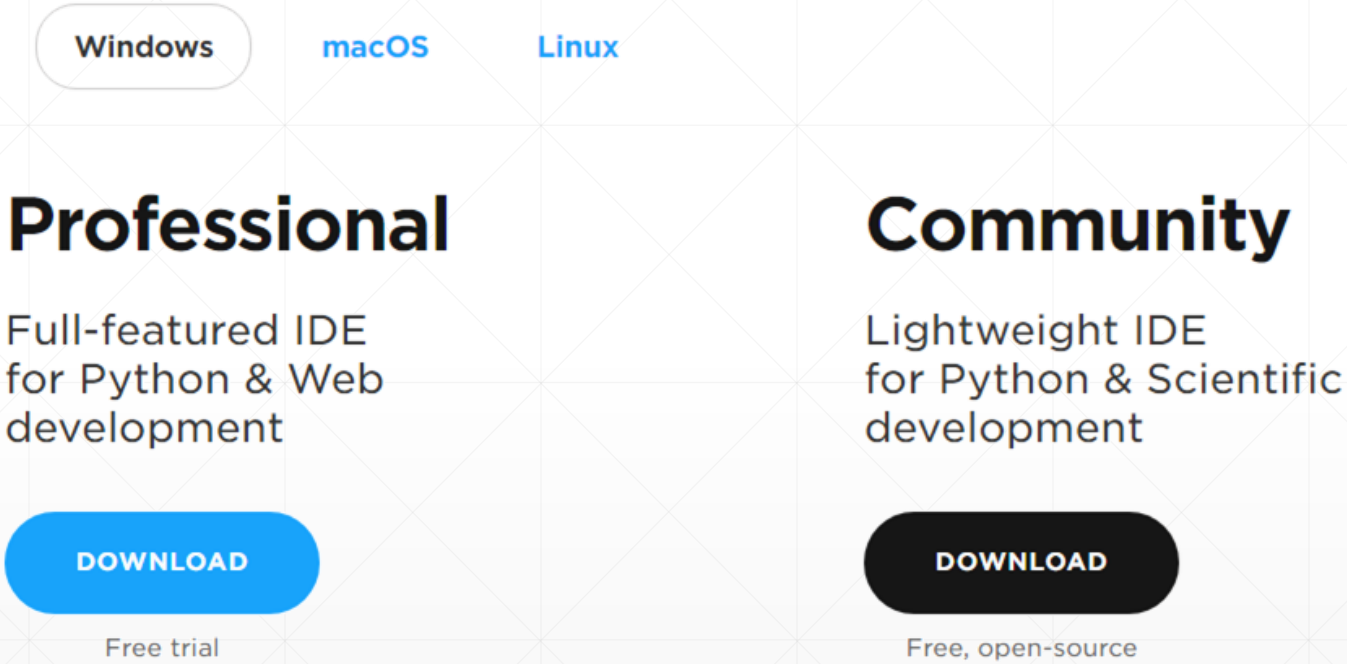
Step3.TensorFlow测试

```
In [1]: import tensorflow as tf

In [2]: tf.constant(1.)+tf.constant(2.)
  ...
tensorflow/stream_executor/platform/default/dso_loader.cc:42] Successfully opened
dynamic library libcuda.so.1
2019-03-14 12:58:04.383277: I
name: GeForce GTX 1070 major: 6 minor: 1 memoryClockRate(GHz): 1.759
pciBusID: 0000:01:00.0
totalMemory: 7.93GiB freeMemory: 7.10GiB
Out[2]: <tf.Tensor: id=2, shape=(), dtype=float32, numpy=3.0>

In [5]: tf.test.is_gpu_available()
...
Out[5]: True
```

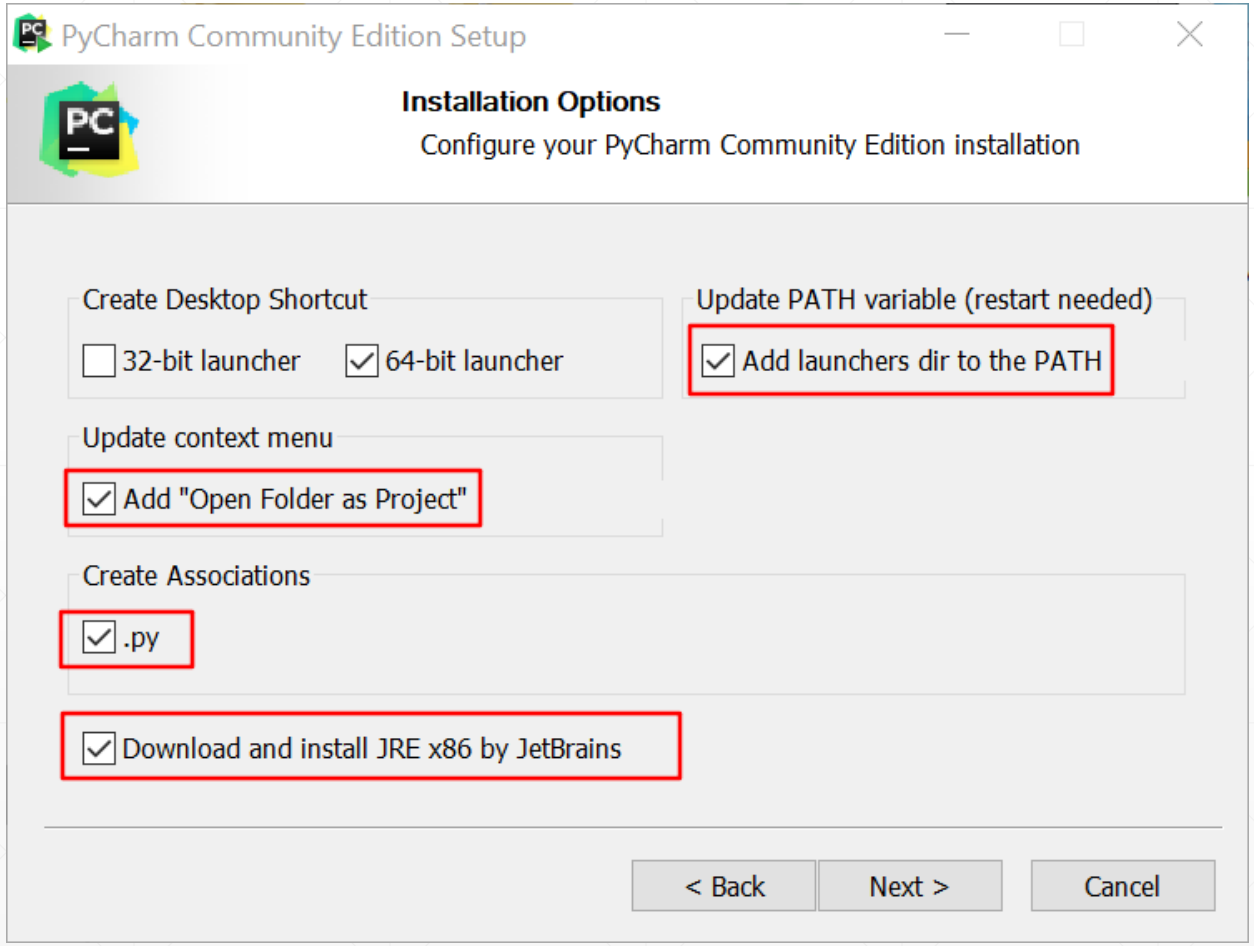
Step4.PyCharm安装



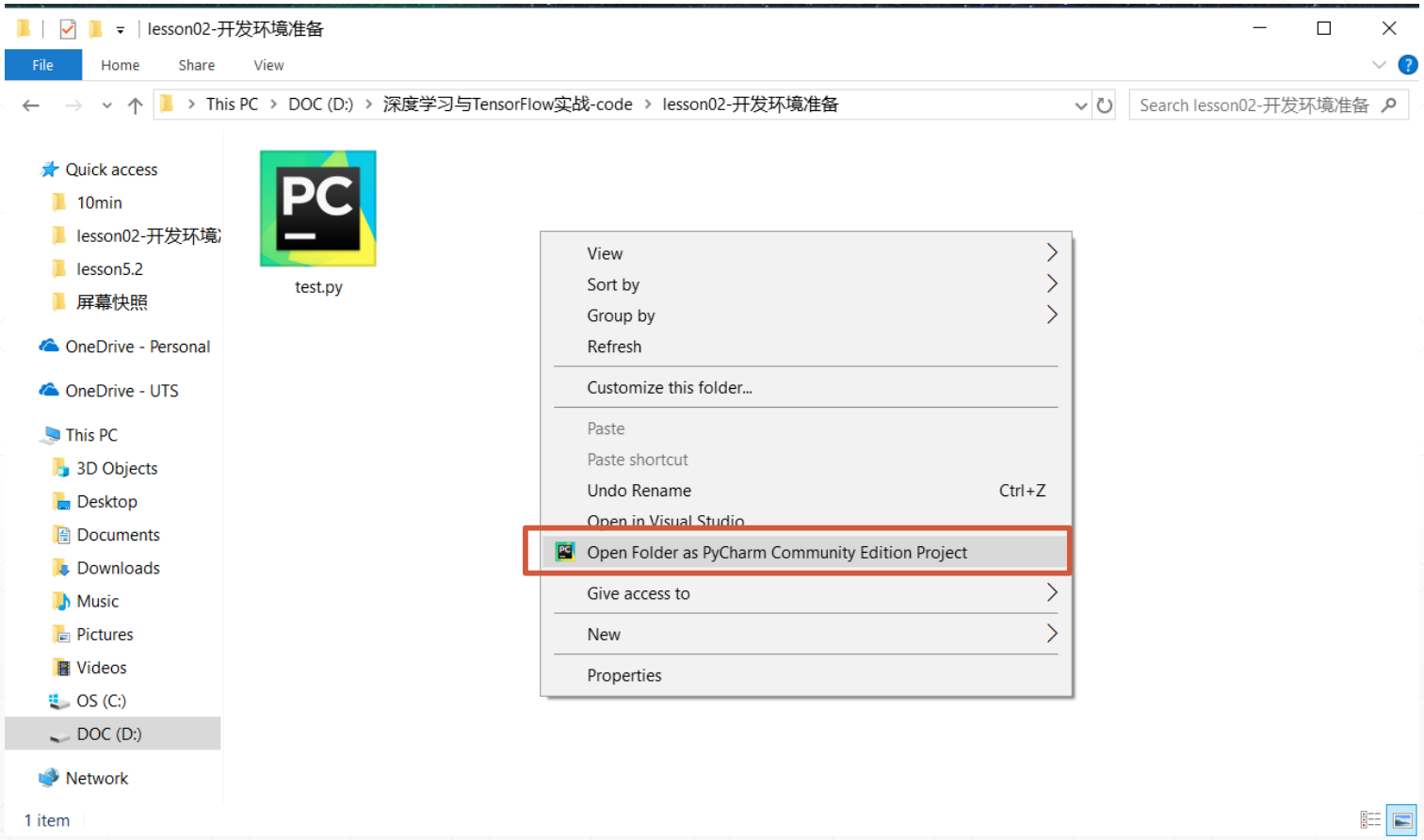
https://www.jetbrains.com/pycharm/download/#section=windows

Step4.PyCharm安装

- And reboot



Step4.PyCharm安装



Step4.PyCharm配置

下一课时

选看1：Win10安装过程手把手指导

选看2：Ubuntu安装过程手把手指导

必看：Lesson03

Thank You.