

# 开发环境安装-Win10

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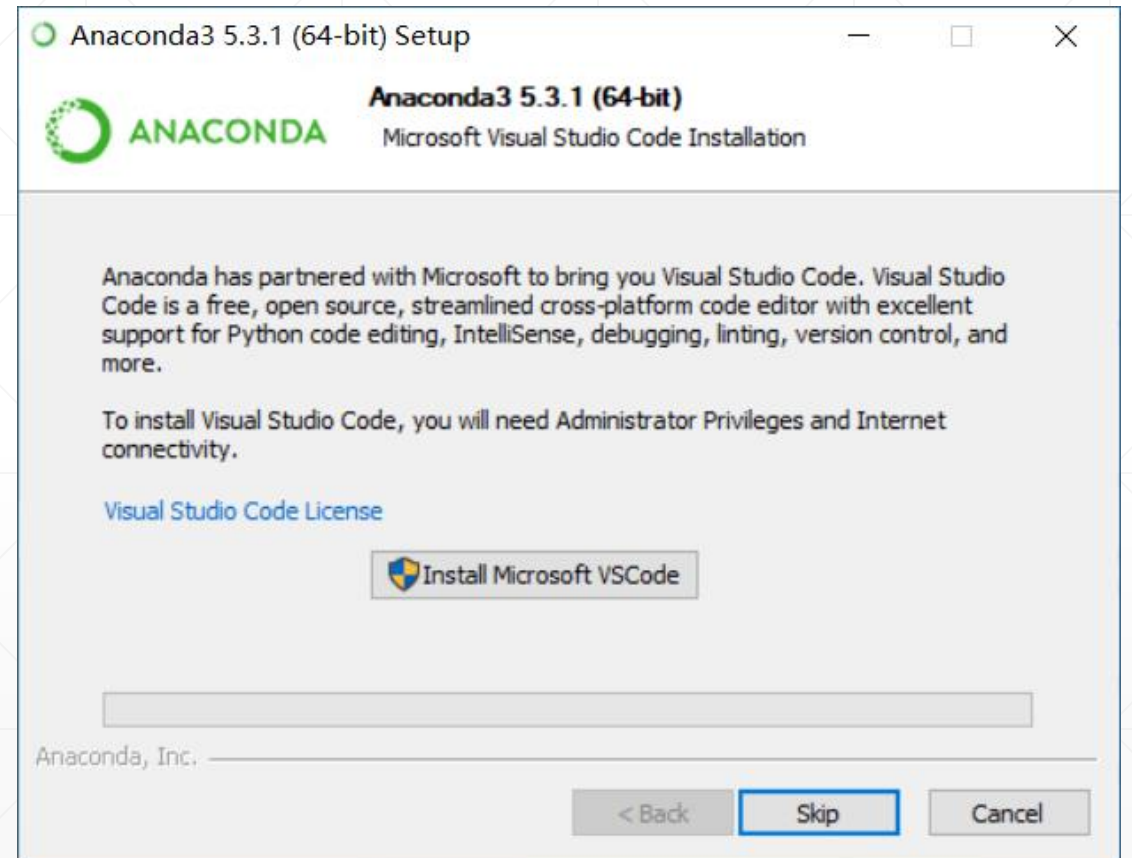
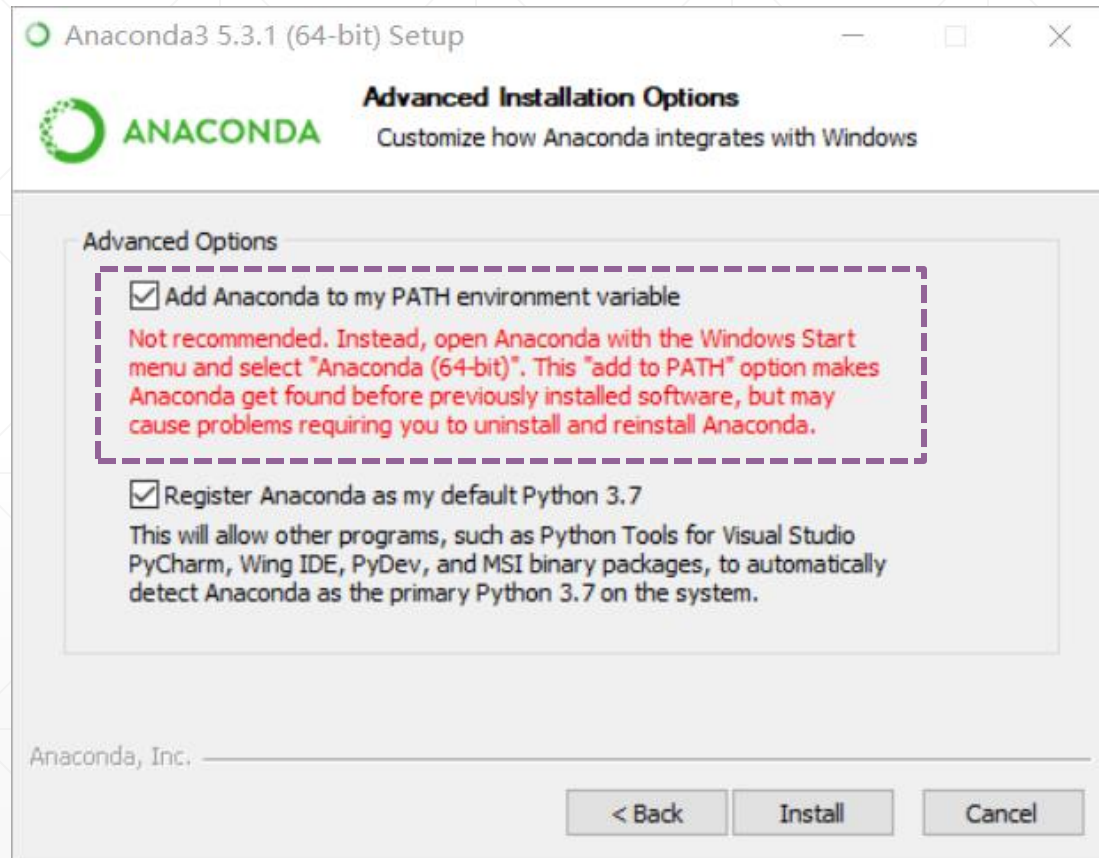
主讲人：龙良曲

# 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



# Step1.Anaconda安装确认

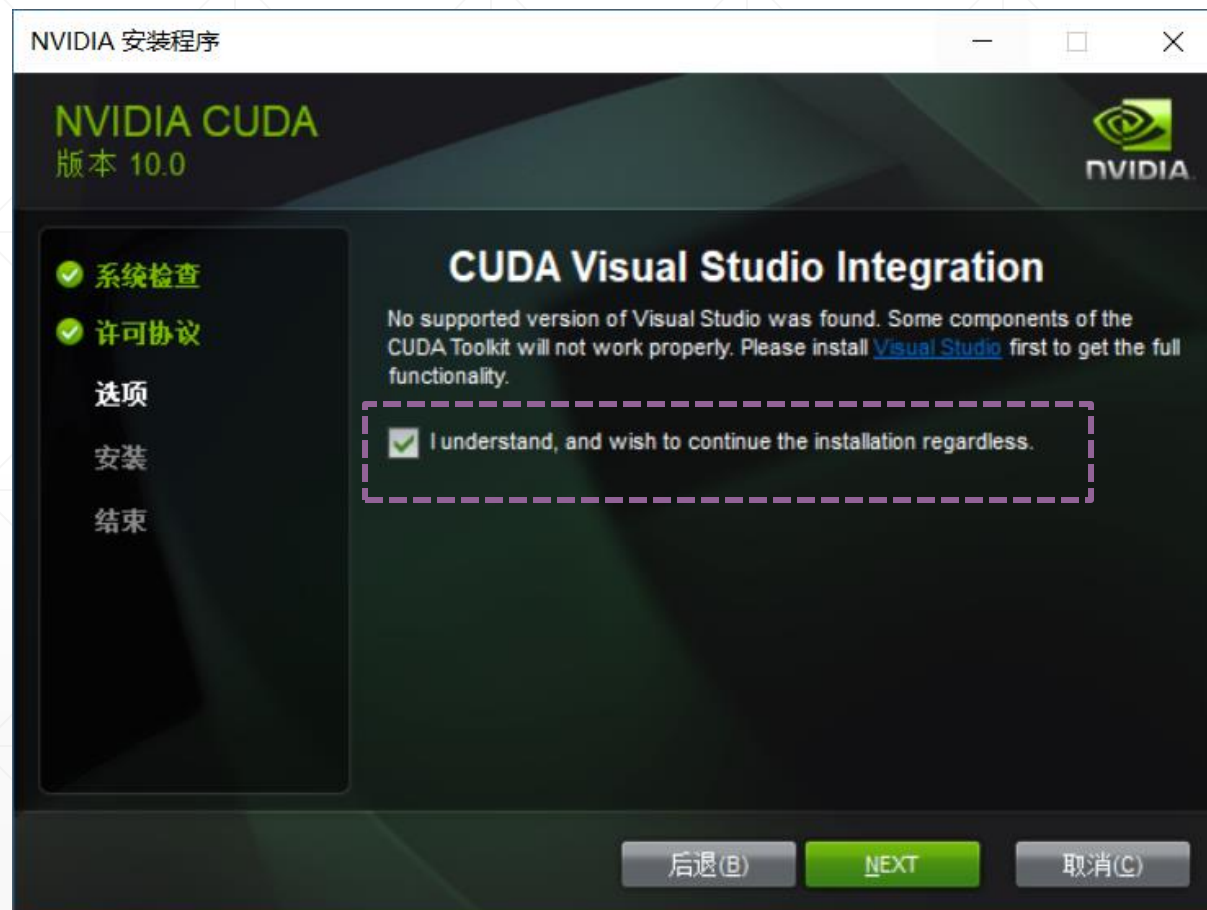
```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.17134.648]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\z68>conda list
# packages in environment at C:\conda:
#
# Name                        Version      Build                Channel
_ipyw_jlab_nb_ext_conf       0.1.0        py37_0
absl-py                       0.7.0        pypi_0              pypi
alabaster                     0.7.12       py37_0
anaconda                      2018.12      py37_0
anaconda-client               1.7.2        py37_0
anaconda-navigator            1.9.6        py37_0
anaconda-project              0.8.2        py37_0
asn1crypto                    0.24.0       py37_0
astor                         0.7.1        pypi_0              pypi
astroid                       2.1.0        py37_0
astropy                       3.1          py37he774522_0
atomicwrites                  1.2.1        py37_0
attrs                         18.2.0       py37h28b3542_0
babel                         2.6.0        py37_0
backcall                      0.1.0        py37_0
backports                     1.0          py37_1
backports.os                  0.1.1        py37_0
backports.shutil_get_terminal_size 1.0.0       py37_2
beautifulsoup4                4.6.3        py37_0
bitarray                      0.8.3        py37hfa6e2cd_0
bkcharts                      0.2          py37_0
blas                          1.0          mkl
blaze                         0.11.3       py37_0
```

## 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
-

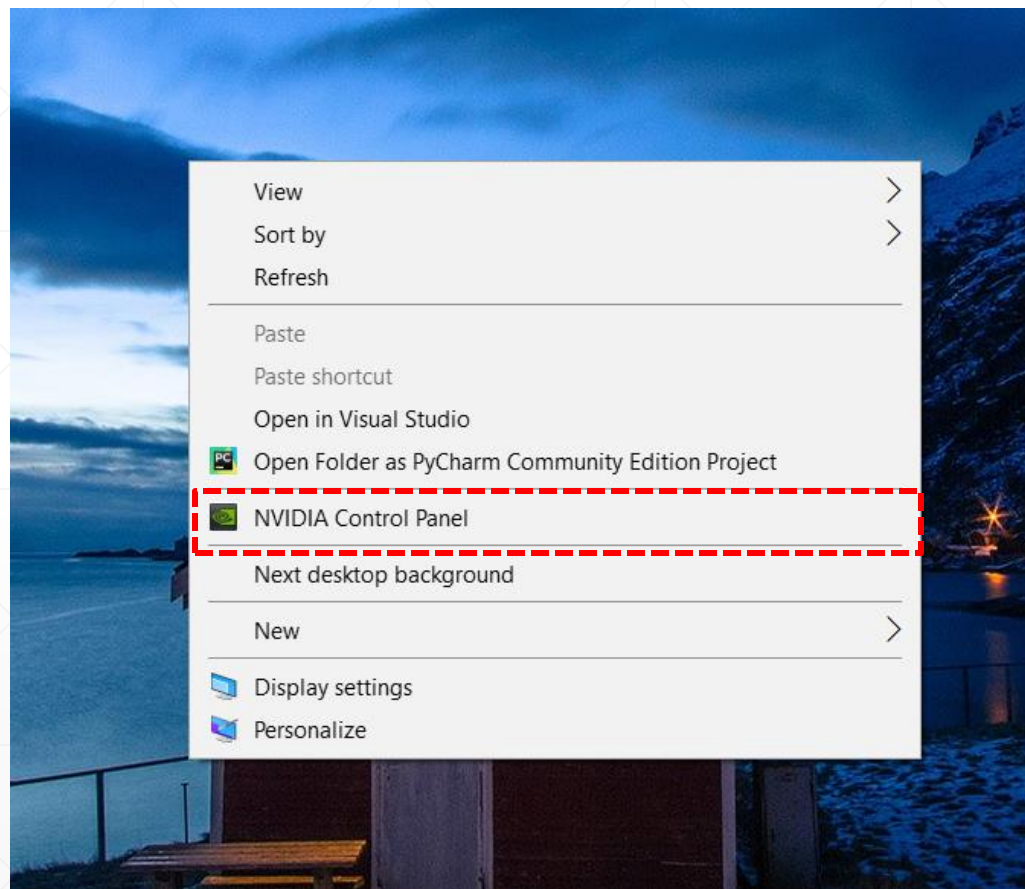
## Step2.1.CUDA安装



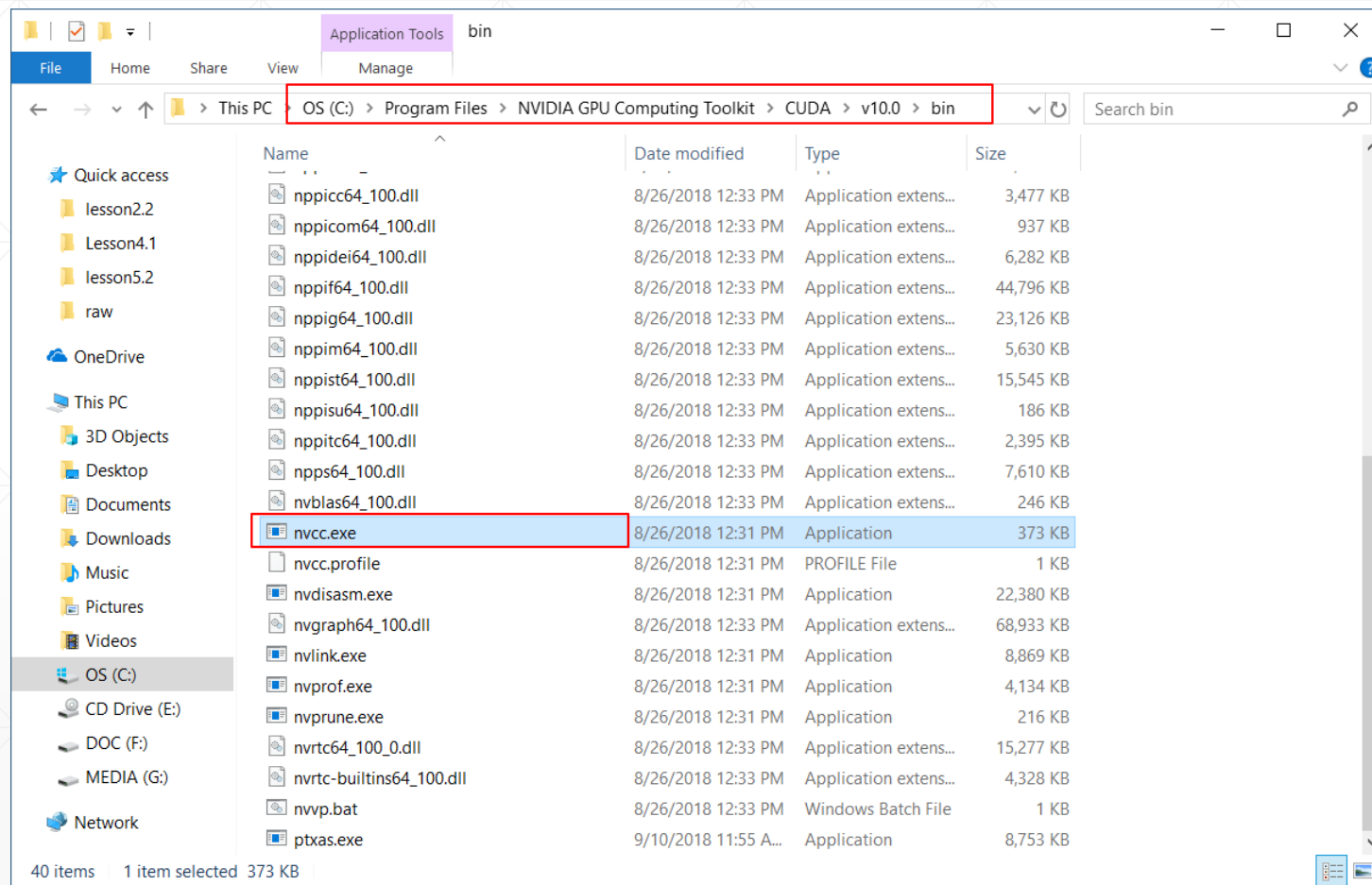
[https://developer.nvidia.com/cuda-10.0-download-archive?target\\_os=Windows&target\\_arch=x86\\_64&target\\_version=10&target\\_type=exelocal](https://developer.nvidia.com/cuda-10.0-download-archive?target_os=Windows&target_arch=x86_64&target_version=10&target_type=exelocal)



## Step2.1. (重启后) 驱动安装确认

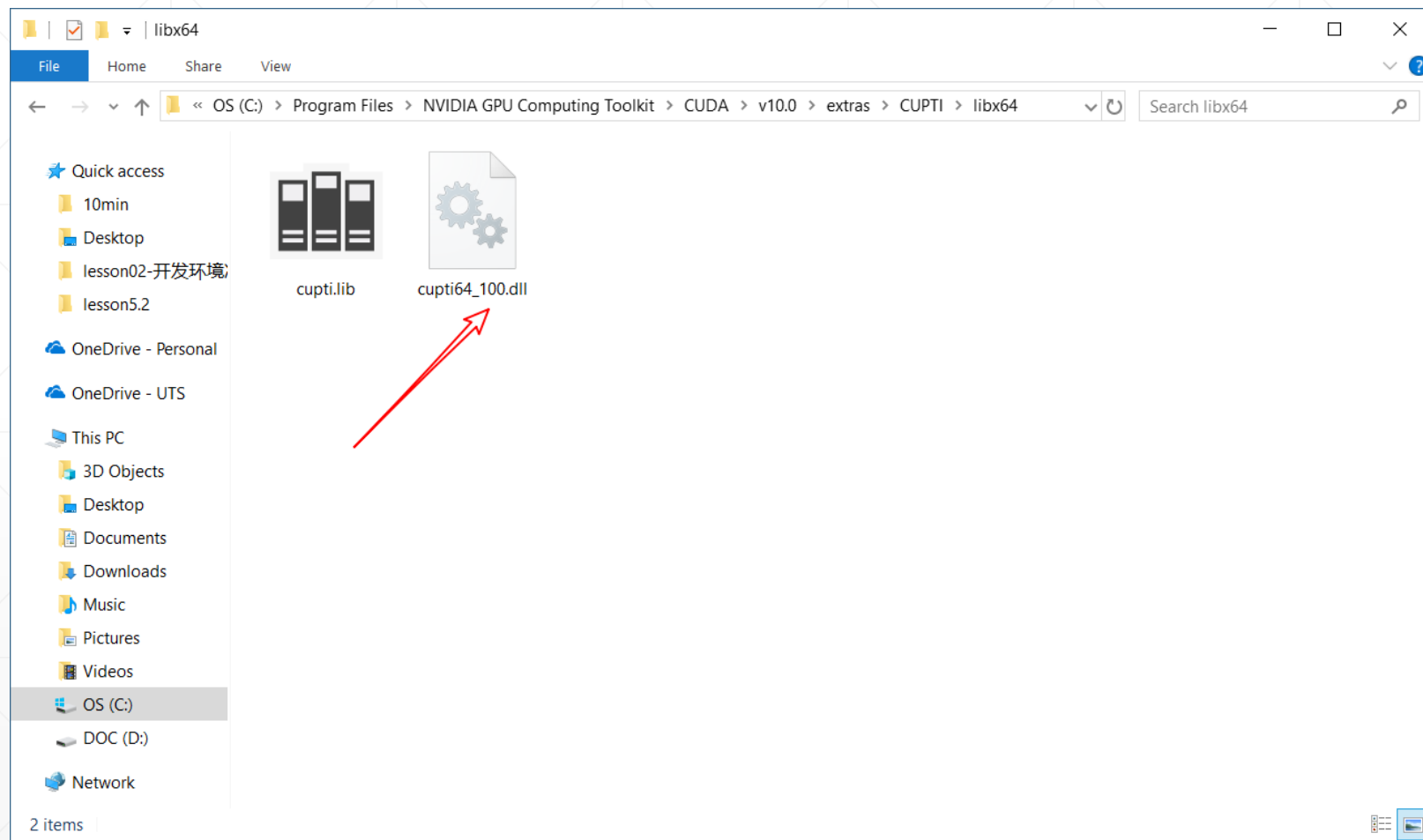


## Step2.1.CUDA 安装确认





## Step2.1.CUPTI确认



## Step2.2.cuDNN下载

- 需要NVIDIA注册

Download cuDNN v7.5.0 (Feb 25, 2019), for CUDA 10.1

Download cuDNN v7.5.0 (Feb 21, 2019), for **CUDA 10.0**

Download cuDNN v7.5.0 (Feb 21, 2019), for CUDA 9.2

Download cuDNN v7.5.0 (Feb 21, 2019), for CUDA 9.0



[Download cuDNN v7.5.0 \(Feb 21, 2019\), for CUDA 10.0](#)

**Library for Windows, Mac, Linux,**

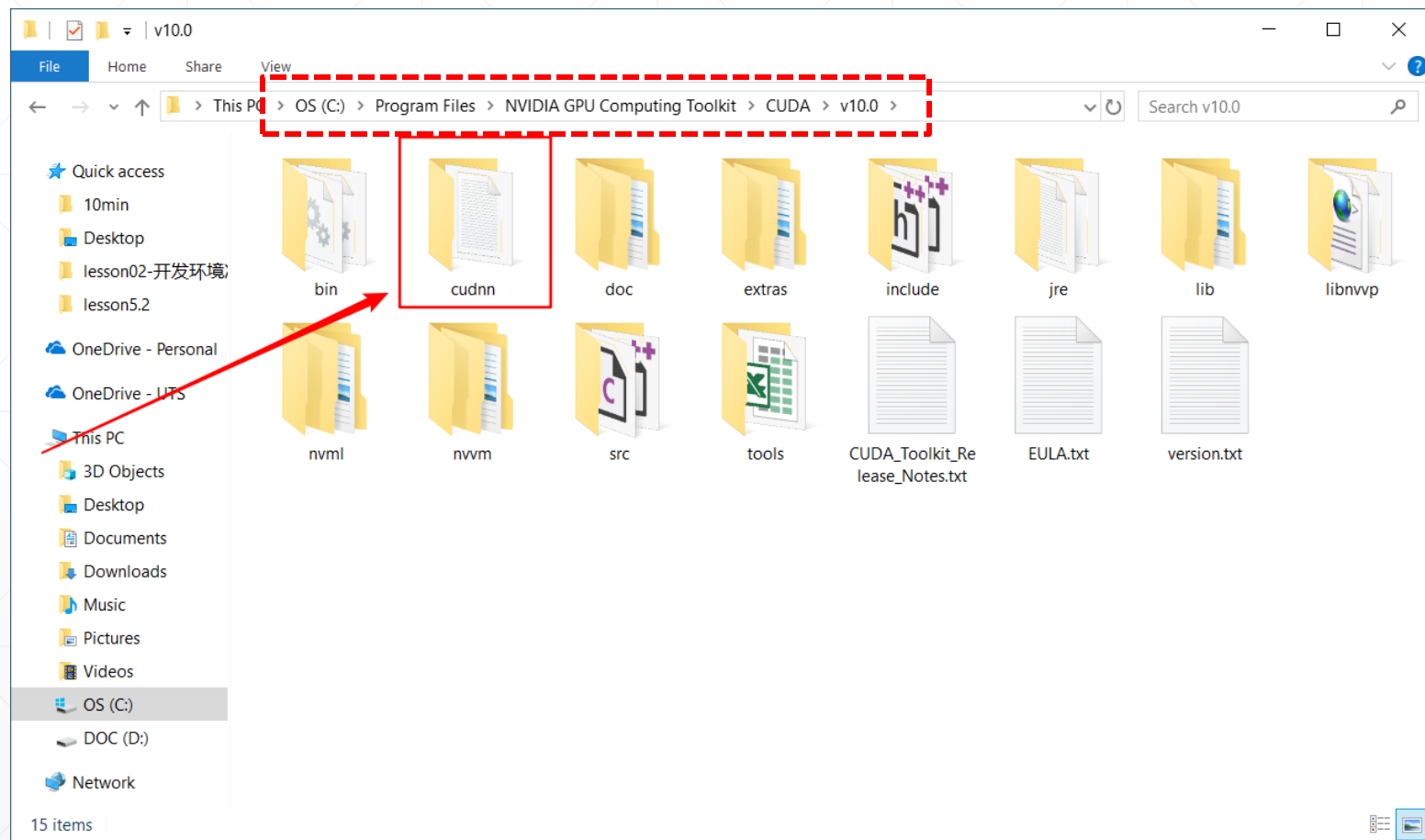
cuDNN Library for Windows 7

cuDNN Library for **Windows 10**

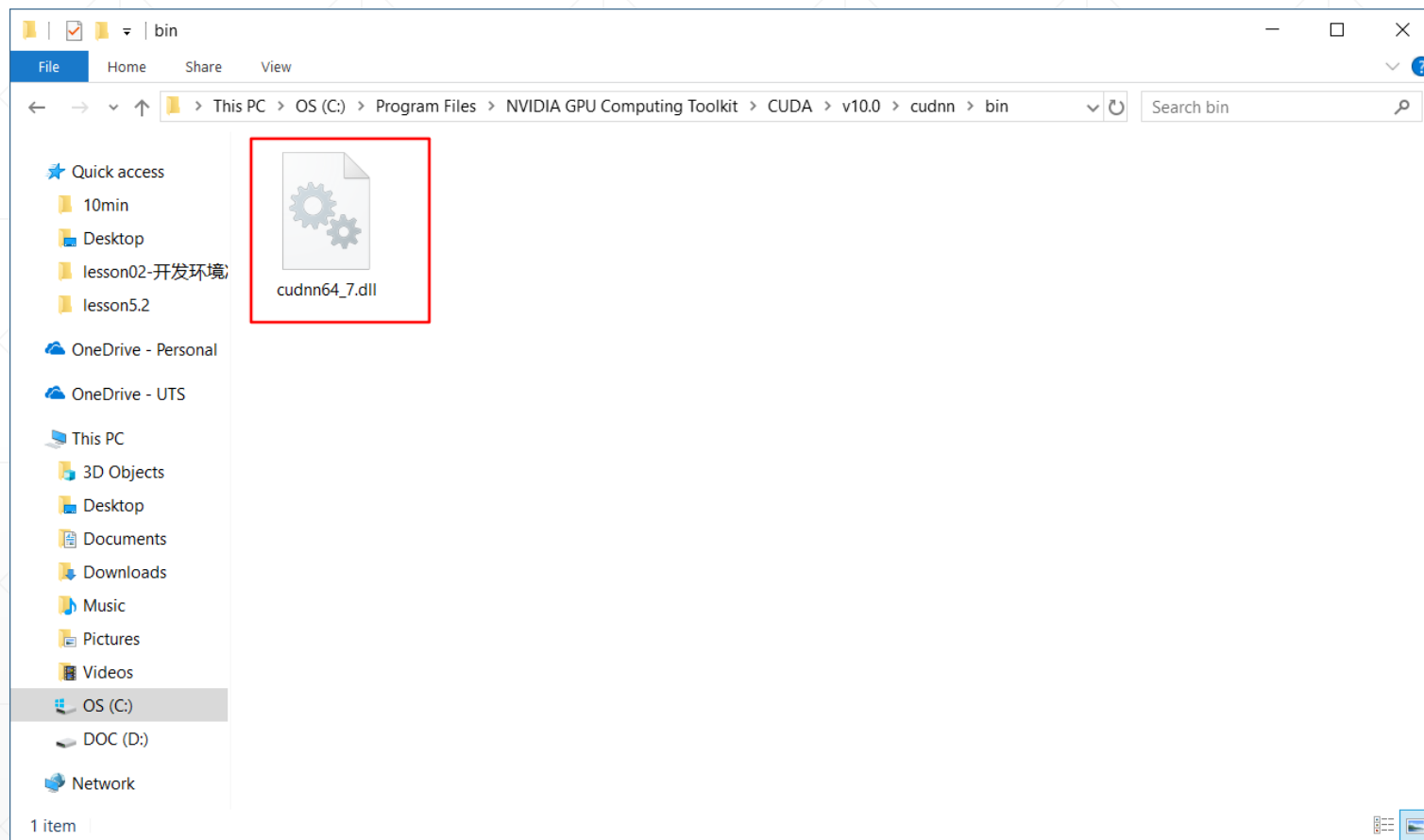
cuDNN Library for Linux

## Step2.2.cuDNN复制

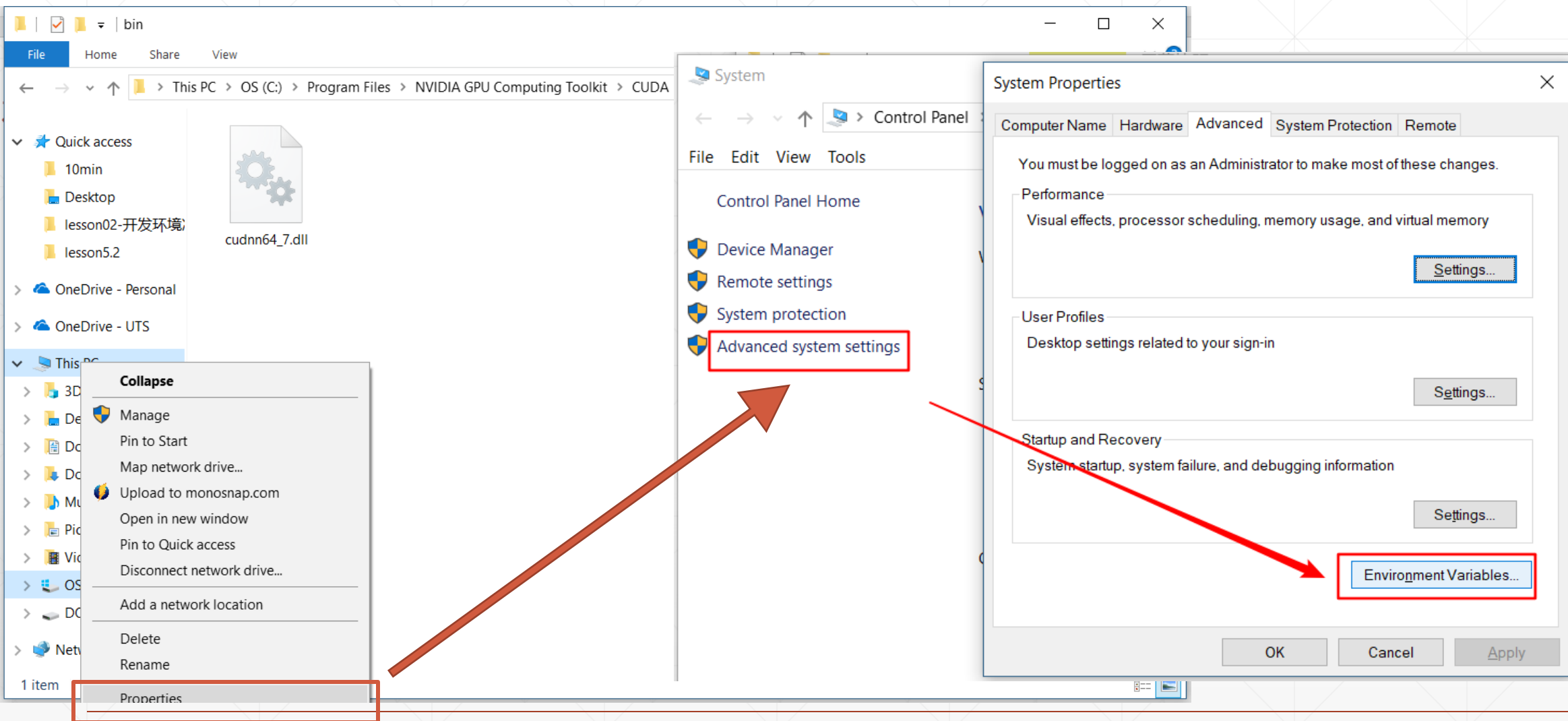
- 解压
- cuda文件夹改名为
  - cudnn
- 复制到:



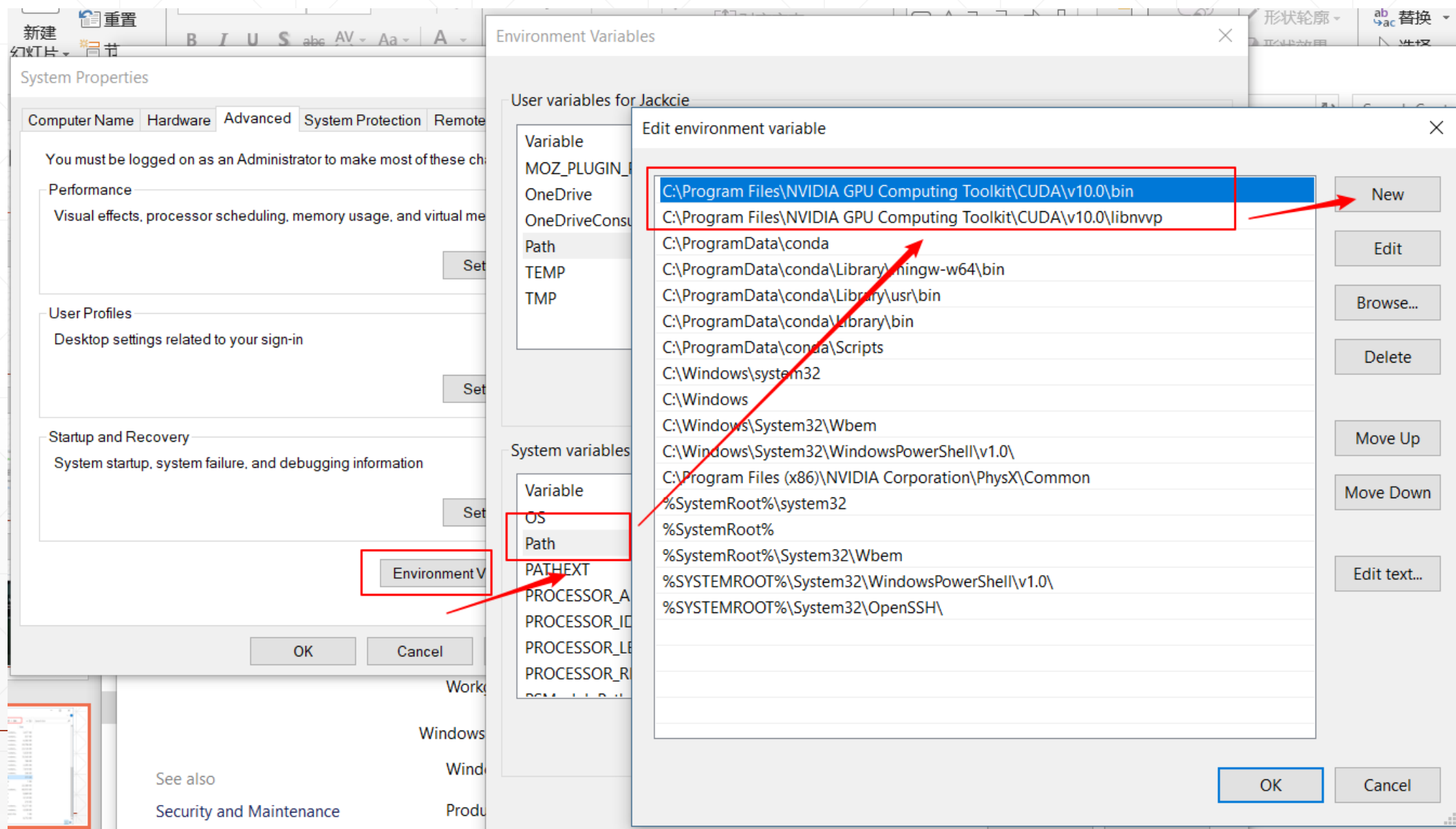
## Step2.2.cuDNN确认



## Step2.3.环境变量配置



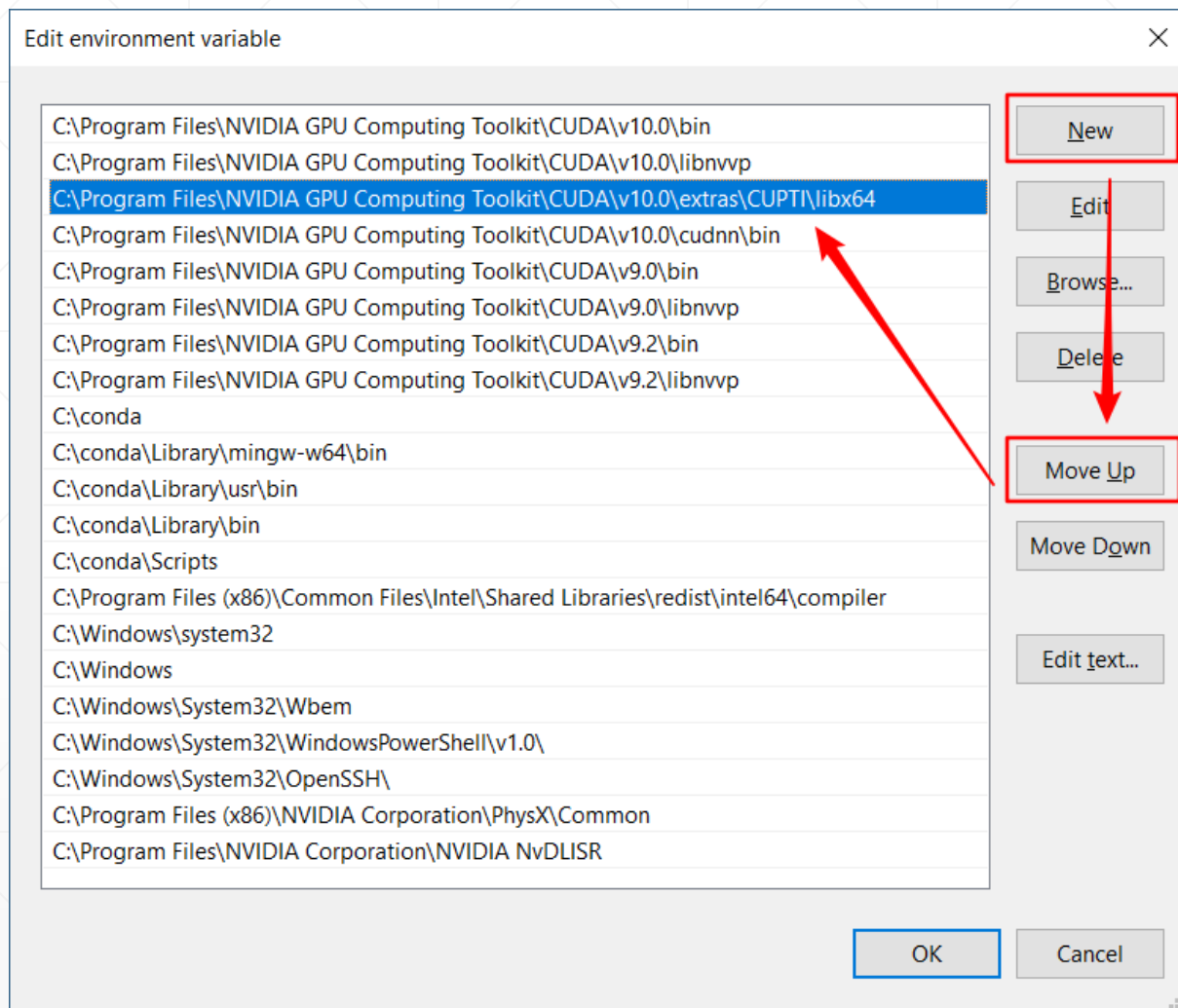
## Step2.3.环境变量配置





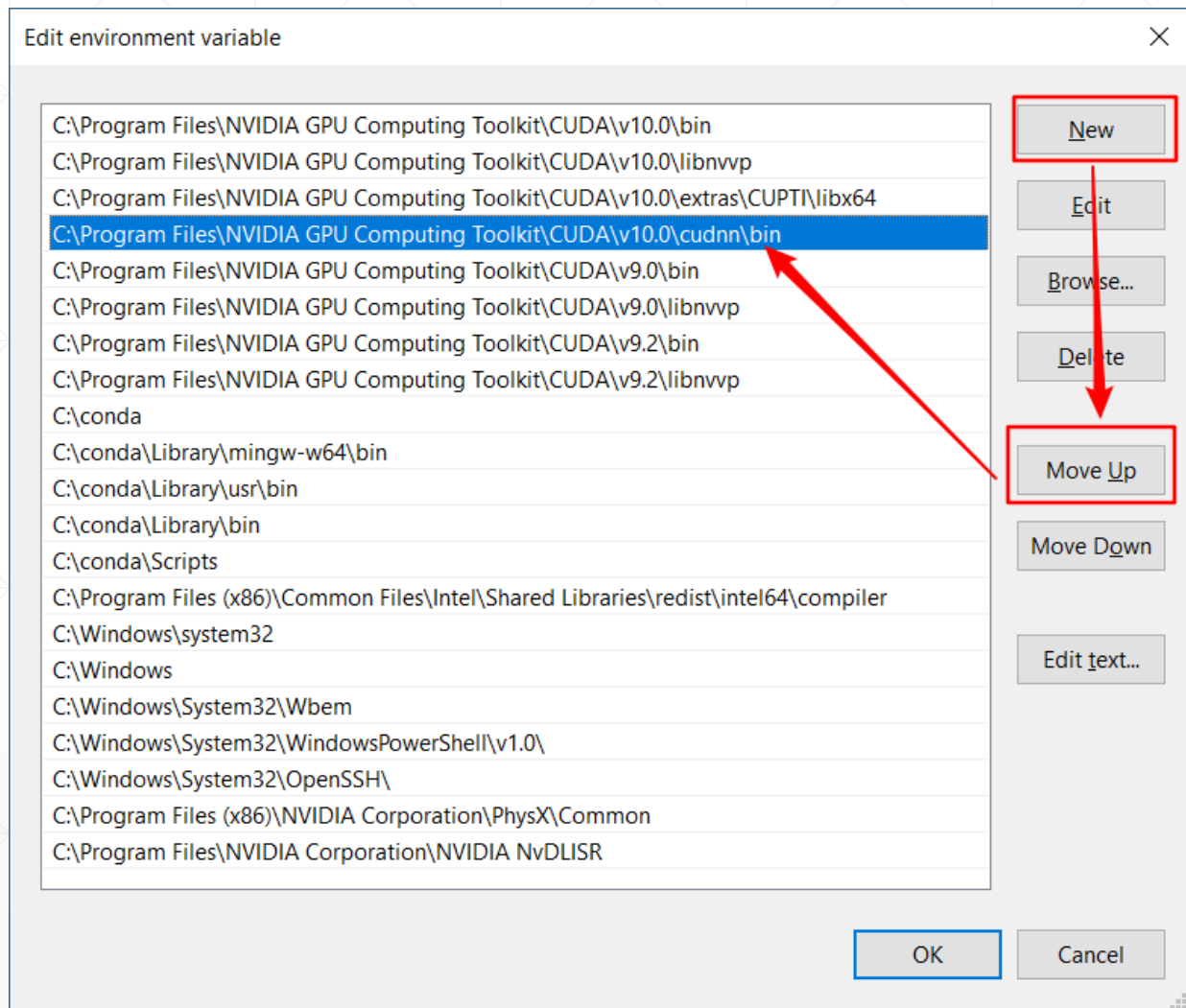
## Step2.3.添加CUPTI路径

- 点击New增加条目
- 点击Move Up可上调行



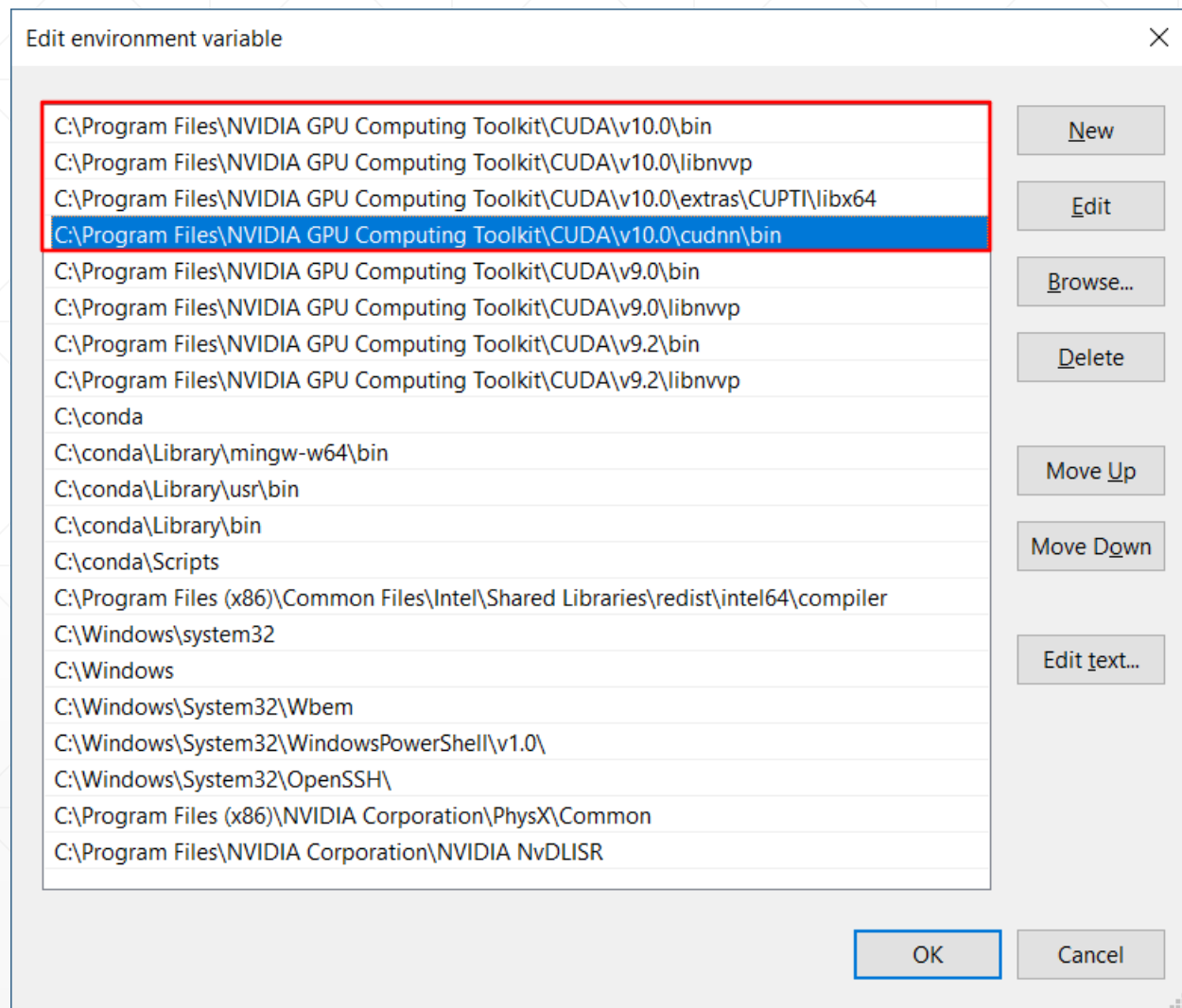
## Step2.3.添加cuDNN路径

- 点击New增加条目
- 点击Move Up可上调行

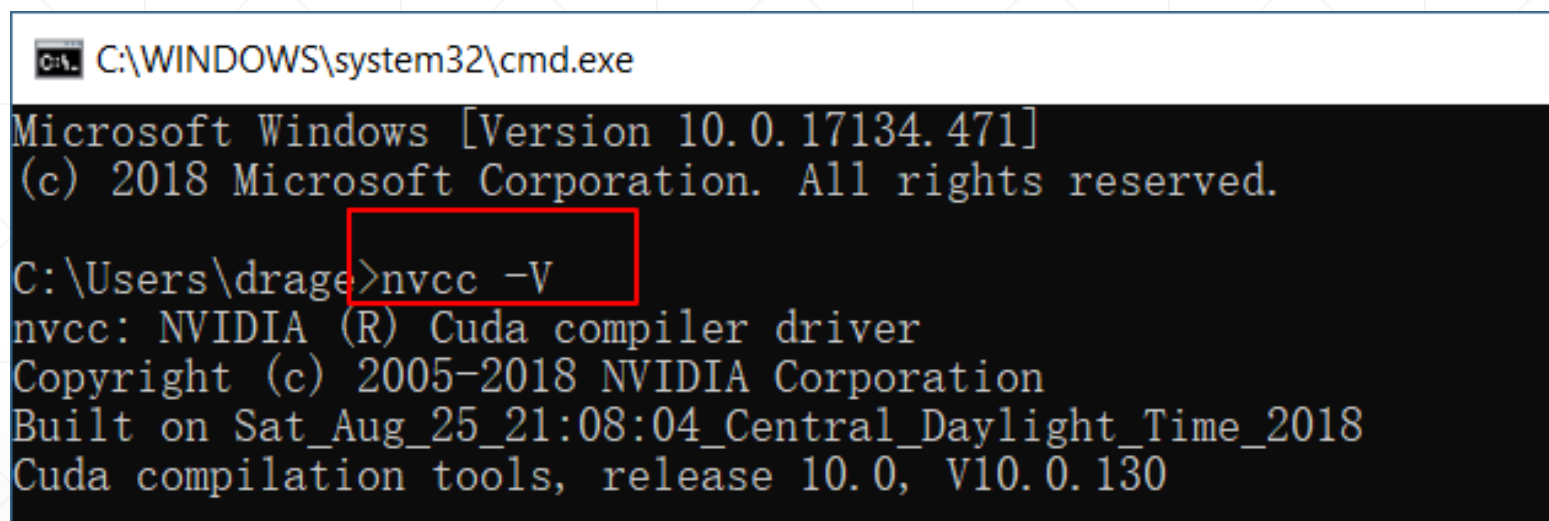


## Step2.3.PATH变量确认

- 4行缺一不可
- 4行必须位于顶部




## Step2.4.CUDA 测试



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.17134.471]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\drage>nvcc -V
nvcc: NVIDIA (R) Cuda compiler driver
Copyright (c) 2005-2018 NVIDIA Corporation
Built on Sat_Aug_25_21:08:04_Central_Daylight_Time_2018
Cuda compilation tools, release 10.0, V10.0.130
```

## 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

Windows

macOS

Linux

## Professional

Full-featured IDE  
for Python & Web  
development

DOWNLOAD

Free trial

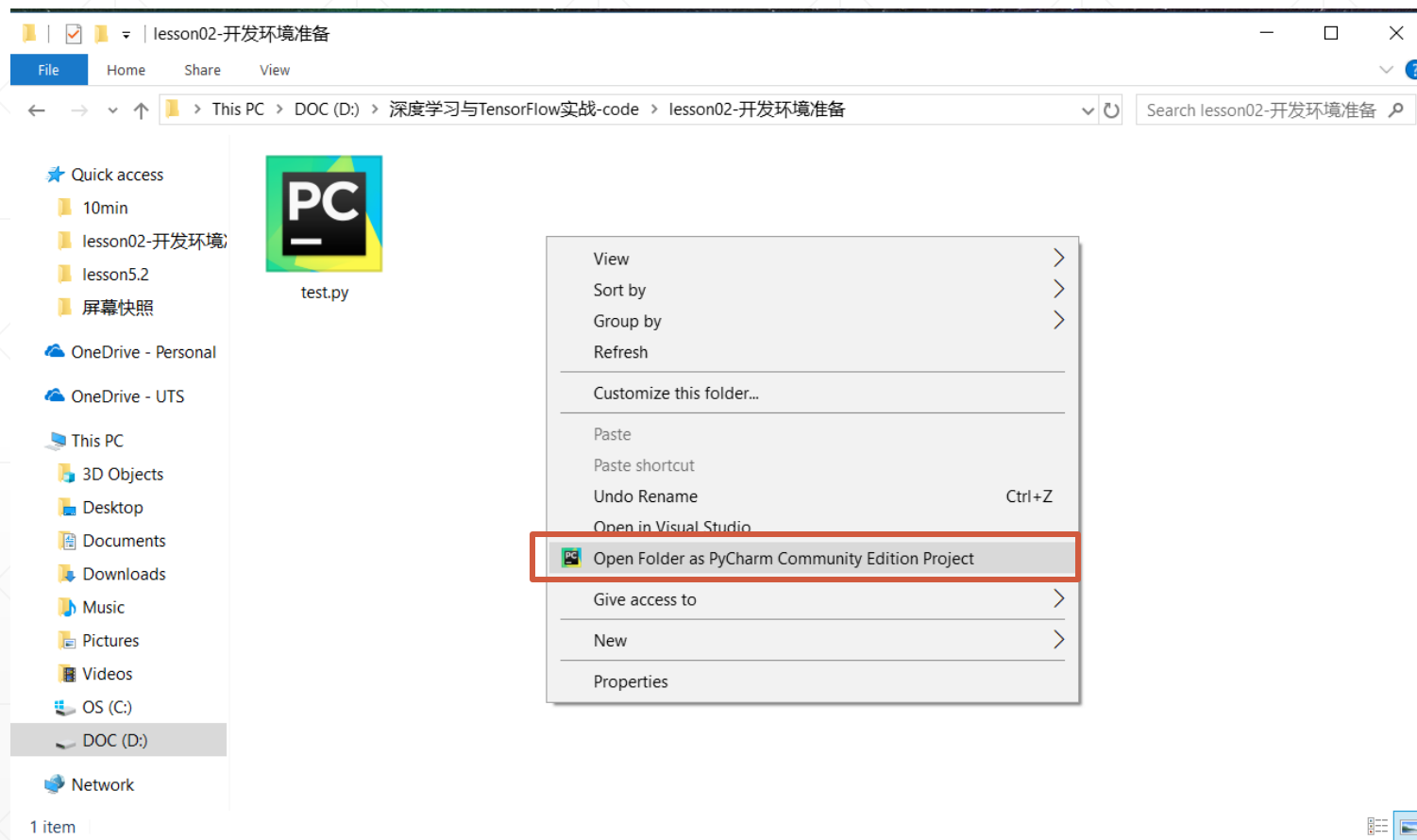
## Community

Lightweight IDE  
for Python & Scientific  
development

DOWNLOAD

Free, open-source

# 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.**

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