

- 一、安装NVIDIA显卡驱动
- 二、安装CUDA
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# 一、安装NVIDIA显卡驱动

去英伟达的官网下载驱动，找到自己对应的型号搜索驱动：[英伟达官网驱动下载](#)，如果是笔记本的话注意选Notebooks版本的。





以本文使用的Nvidia GeForce GTX1650为例

# GeForce Game Ready 驱动程序

版本: 552.22 WHQL  
发布日期: 2024.4.16  
操作系统: Windows 10 64-bit, Windows 11  
语言: Chinese (Simplified)  
文件大小: 634.6 MB

下载

发布重点	产品支持列表	其他信息
<h3>Game Ready for Manor Lords</h3> <p>This new Game Ready Driver provides the best gaming experience for the latest new games supporting DLSS technology including Manor Lords which features support for DLSS Super Resolution. Further support for new titles includes the launch of No Rest for the Wicked.</p> <h4>Fixed Gaming Bugs</h4> <ul style="list-style-type: none"><li>PUBG: Game stability issues over extended gameplay on Intel 12th Gen platforms [4030936]</li></ul> <h4>Fixed General Bugs</h4> <ul style="list-style-type: none"><li>GeForce GTX 10/RTX 20 series: PC may randomly freeze when Windows Hardware-Accelerated GPU Scheduling and NVIDIA SLI are both enabled [4009884]</li><li>HTC Vive Pro 2: System crash with bugcheck after enabling VR HMD with multi-displays [4119187]</li></ul> <p><a href="#">Learn more in our Game Ready Driver article here.</a></p> <div><div><h3>Game Ready Drivers</h3><p>Download now.</p></div><div></div></div>		

搜索出之后点击下载，执行默认安装即可。

安装完成后运行以下代码：

```
nvidia-smi
```

```
管理员: C:\Windows\system32\cmd.exe
(c) Microsoft Corporation. 保留所有权利。
C:\Users\Administrator>nvidia-smi
Wed May 8 09:45:19 2024

+-----+
| NVIDIA-SMI 552.22                Driver Version: 552.22      CUDA Version: 12.4   |
+-----+-----+
| GPU Name                               TCC/WDDM      Bus-Id      Disp.A   Volatile Uncorr. ECC |
| Fan  Temp  Perf              Pwr:Usage/Cap      Memory-Usage  GPU-Util  Compute M. |
|=====+=====+
| 0  NVIDIA GeForce GTX 1650      28W / 75W    00000000:01:00:00    On          2%          Default |
| 46%   49C   P0                      698MiB / 4096MiB                                     MIG M. |
|=====+=====+
|                                     N/A                                     N/A |
+-----+-----+

Processes:
+-----+
| GPU  GI  CI      PID  Type  Process name                      GPU Memory |
| ID   ID  ID                                     Usage   |
+-----+
| 0  N/A  N/A     1656   C+G   ...9\extracted\runtime\WeChatAppEx.exe  N/A      |
| 0  N/A  N/A     2244   C+G   ...Search_cw5nlh2txywy\SearchApp.exe   N/A      |
| 0  N/A  N/A     2588   C+G   ...Programs\Microsoft VS Code\Code.exe  N/A      |
| 0  N/A  N/A     2748   C+G   C:\Windows\explorer.exe                 N/A      |
| 0  N/A  N/A     2996   C+G   D:\Program Files\Typora\Typora.exe       N/A      |
| 0  N/A  N/A     8640   C+G   ...h2txywy\InputApp\TextInputHost.exe   N/A      |
| 0  N/A  N/A     9572   C+G   ...crosoft\Edge\Application\msedge.exe  N/A      |
| 0  N/A  N/A     9592   C+G   ...GeForce Experience\NVIDIA Share.exe  N/A      |
| 0  N/A  N/A    11768   C+G   ...6729\office6\promocetpluginhost.exe  N/A      |
| 0  N/A  N/A    12624   C+G   ...91.0_x64__8wekyb3d8bbwe\GameBar.exe  N/A      |
| 0  N/A  N/A    16868   C+G   ...a\Local\Programs\bab\Tgfish 飞鱼.exe N/A      |
+-----+
```

如果可以出现以上输出结果，则说明你的电脑已正常安装Nvidia驱动，并非说明已安装cuda。此处的CUDA Version为当前驱动版本支持的最高CUDA版本。

## 二、安装CUDA

### 1. 下载CUDA

去[英伟达开发者网站](#)下载CUDA，根据上面步骤显示的最高版本，选择合适的版本。这里我以11.3为例。

注意：显卡驱动尽量安装最新的，CUDA不是越新越好。一般要根据显卡型号/所跑的网络要求的pytorch环境等来安装。

[CUDA Toolkit 12.4.1 \(April 2024\), Versioned Online Documentation](#)

## Archived Releases

[CUDA Toolkit 12.4.0 \(March 2024\), Versioned Online Documentation](#)

[CUDA Toolkit 12.3.2 \(January 2024\), Versioned Online Documentation](#)

[CUDA Toolkit 12.3.1 \(November 2023\), Versioned Online Documentation](#)

[CUDA Toolkit 12.3.0 \(October 2023\), Versioned Online Documentation](#)

[CUDA Toolkit 12.2.2 \(August 2023\), Versioned Online Documentation](#)

[CUDA Toolkit 12.2.1 \(July 2023\), Versioned Online Documentation](#)

[CUDA Toolkit 12.2.0 \(June 2023\), Versioned Online Documentation](#)

[CUDA Toolkit 12.1.1 \(April 2023\), Versioned Online Documentation](#)

[CUDA Toolkit 12.1.0 \(February 2023\), Versioned Online Documentation](#)

[CUDA Toolkit 12.0.1 \(January 2023\), Versioned Online Documentation](#)

[CUDA Toolkit 12.0.0 \(December 2022\), Versioned Online Documentation](#)

[CUDA Toolkit 11.8.0 \(October 2022\), Versioned Online Documentation](#)

[CUDA Toolkit 11.7.1 \(August 2022\), Versioned Online Documentation](#)

[CUDA Toolkit 11.7.0 \(May 2022\), Versioned Online Documentation](#)

[CUDA Toolkit 11.6.2 \(March 2022\), Versioned Online Documentation](#)

[CUDA Toolkit 11.6.1 \(February 2022\), Versioned Online Documentation](#)

[CUDA Toolkit 11.6.0 \(January 2022\), Versioned Online Documentation](#)

[CUDA Toolkit 11.5.2 \(February 2022\), Versioned Online Documentation](#)

[CUDA Toolkit 11.5.1 \(November 2021\), Versioned Online Documentation](#)

[CUDA Toolkit 11.5.0 \(October 2021\), Versioned Online Documentation](#)

[CUDA Toolkit 11.4.4 \(February 2022\), Versioned Online Documentation](#)

[CUDA Toolkit 11.4.3 \(November 2021\), Versioned Online Documentation](#)

[CUDA Toolkit 11.4.2 \(September 2021\), Versioned Online Documentation](#)

[CUDA Toolkit 11.4.1 \(August 2021\), Versioned Online Documentation](#)

[CUDA Toolkit 11.4.0 \(June 2021\), Versioned Online Documentation](#)

[CUDA Toolkit 11.3.1 \(May 2021\), Versioned Online Documentation](#)

[CUDA Toolkit 11.3.0 \(April 2021\), Versioned Online Documentation](#)

[CUDA Toolkit 11.2.2 \(March 2021\), Versioned Online Documentation](#)

[CUDA Toolkit 11.2.1 \(February 2021\), Versioned Online Documentation](#)

[CUDA Toolkit 11.2.0 \(December 2020\), Versioned Online Documentation](#)

[CUDA Toolkit 11.1.1 \(October 2020\), Versioned Online Documentation](#)

[CUDA Toolkit 11.1.0 \(September 2020\), Versioned Online Documentation](#)

[CUDA Toolkit 11.0.3 \(August 2020\), Versioned Online Documentation](#)

[CUDA Toolkit 11.0.2 \(July 2020\), Versioned Online Documentation](#)

[CUDA Toolkit 11.0.1 \(June 2020\), Versioned Online Documentation](#)

依次点选下面几项，即可开始下载。

# CUDA Toolkit 11.3 Downloads

## Select Target Platform

Click on the green buttons that describe your target platform. Only supported platforms will be shown. By downloading and using the software, you agree to fully comply with the terms and conditions of the [CUDA EULA](#).

### Operating System

[Linux](#)[Windows](#)

### Architecture

[x86\\_64](#)

### Version

[10](#)[Server 2016](#)[Server 2019](#)

### Installer Type

[exe \(local\)](#)[exe \(network\)](#)

## Download Installer for Windows 10 x86\_64

The base installer is available for download below.

[> Base Installer](#)[Download \(2.7 GB\)](#)

#### Installation Instructions:

1. Double click cuda\_11.3.0\_465.89\_win10.exe
2. Follow on-screen prompts

The checksums for the installer and patches can be found in [Installer Checksums](#).

For further information, see the [Installation Guide for Microsoft Windows](#) and the [CUDA Quick Start Guide](#).

下载完成后执行默认安装即可。

## 2.验证安装

在命令行中输入

```
nvcc -V
```

```
C:\Users\Administrator>nvcc -V
nvcc: NVIDIA (R) Cuda compiler driver
Copyright (c) 2005-2021 NVIDIA Corporation
Built on Sun_Mar_21_19:24:09_Pacific_Daylight_Time_2021
Cuda compilation tools, release 11.3, V11.3.58
Build cuda_11.3.r11.3/compiler.29745058_0

C:\Users\Administrator>
```

出现以上结果表示CUDA已被安装，当前使用的CUDA版本为11.3

## 3.配置环境变量

如果上述命令无法正确输出，则是没有自动配置好环境变量，请重启再次输入上述命令。

若重启仍无法解决，则需要手动配置环境变量。

此电脑（右键）->属性->高级系统设置->环境变量，点击Path->编辑->新建，分别输入CUDA安装目录下\lib\x64的路径。

CUDA默认安装在C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v11.3

将以下路径添加到环境变量：

```
C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v11.3  
C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v11.3\lib\x64  
C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v11.3\bin
```

最后确定保存。重启再次运行

```
nvcc -V
```

来验证。

### 三、安装cuDNN

1.去[cuDNN的官网](#)下载cuDNN文件，这个稍微麻烦些，需要注册英伟达的开发者账号才能下载，不知道咋注册就baidu一下注册步骤吧。一定要注意，cuDNN的版本和CUDA的版本是需要对应的，不然不能用。

Download cuDNN v8.3.2 (January 10th, 2022), for CUDA 11.5
Download cuDNN v8.3.2 (January 10th, 2022), for CUDA 10.2
Download cuDNN v8.3.1 (November 22nd, 2021), for CUDA 11.5
Download cuDNN v8.3.1 (November 22nd, 2021), for CUDA 10.2
Download cuDNN v8.3.0 (November 3rd, 2021), for CUDA 11.5
Download cuDNN v8.3.0 (November 3rd, 2021), for CUDA 10.2
Download cuDNN v8.2.4 (September 2nd, 2021), for CUDA 11.4
Download cuDNN v8.2.4 (September 2nd, 2021), for CUDA 10.2
Download cuDNN v8.2.2 (July 6th, 2021), for CUDA 11.4
Download cuDNN v8.2.2 (July 6th, 2021), for CUDA 10.2
Download cuDNN v8.2.1 (June 7th, 2021), for CUDA 11.x
Download cuDNN v8.2.1 (June 7th, 2021), for CUDA 10.2
Download cuDNN v8.2.0 (April 23rd, 2021), for CUDA 11.x
Download cuDNN v8.2.0 (April 23rd, 2021), for CUDA 10.2
Download cuDNN v8.1.1 (February 26th, 2021), for CUDA 11.0, 11.1 and 11.2
Download cuDNN v8.1.1 (February 26th, 2021), for CUDA 10.2
Download cuDNN v8.1.0 (January 26th, 2021), for CUDA 11.0, 11.1 and 11.2
Download cuDNN v8.1.0 (January 26th, 2021), for CUDA 10.2
Download cuDNN v8.0.5 (November 9th, 2020), for CUDA 11.1

选择和你安装的CUDA版本对应的cuDNN。

# Library for Windows and Linux, Ubuntu(x86\_64, armsbsa, PPC architecture)

[cuDNN Library for Linux \(aarch64sbsa\)](#)

[cuDNN Library for Linux \(x86\\_64\)](#)

[cuDNN Library for Linux \(PPC\)](#)

[cuDNN Library for Windows \(x86\)](#)

[cuDNN Runtime Library for Ubuntu20.04 x86\\_64 \(Deb\)](#)

[cuDNN Developer Library for Ubuntu20.04 x86\\_64 \(Deb\)](#)

[cuDNN Code Samples and User Guide for Ubuntu20.04 x86\\_64 \(Deb\)](#)

[cuDNN Runtime Library for Ubuntu20.04 aarch64sbsa \(Deb\)](#)

[cuDNN Developer Library for Ubuntu20.04 aarch64sbsa \(Deb\)](#)

[cuDNN Code Samples and User Guide for Ubuntu20.04 aarch64sbsa \(Deb\)](#)

[cuDNN Cross-compile Library for Ubuntu20.04 aarch64sbsa \(Deb\)](#)

[cuDNN Developer Cross-compile Library for Ubuntu20.04 aarch64sbsa \(Deb\)](#)

[cuDNN Runtime Library for Ubuntu18.04 x86\\_64 \(Deb\)](#)

[cuDNN Developer Library for Ubuntu18.04 x86\\_64 \(Deb\)](#)

[cuDNN Code Samples and User Guide for Ubuntu18.04 x86\\_64 \(Deb\)](#)

[cuDNN Runtime Library for Ubuntu16.04 x86\\_64 \(Deb\)](#)

[cuDNN Developer Library for Ubuntu16.04 x86\\_64 \(Deb\)](#)

[cuDNN Code Samples and User Guide for Ubuntu16.04 x86\\_64 \(Deb\)](#)

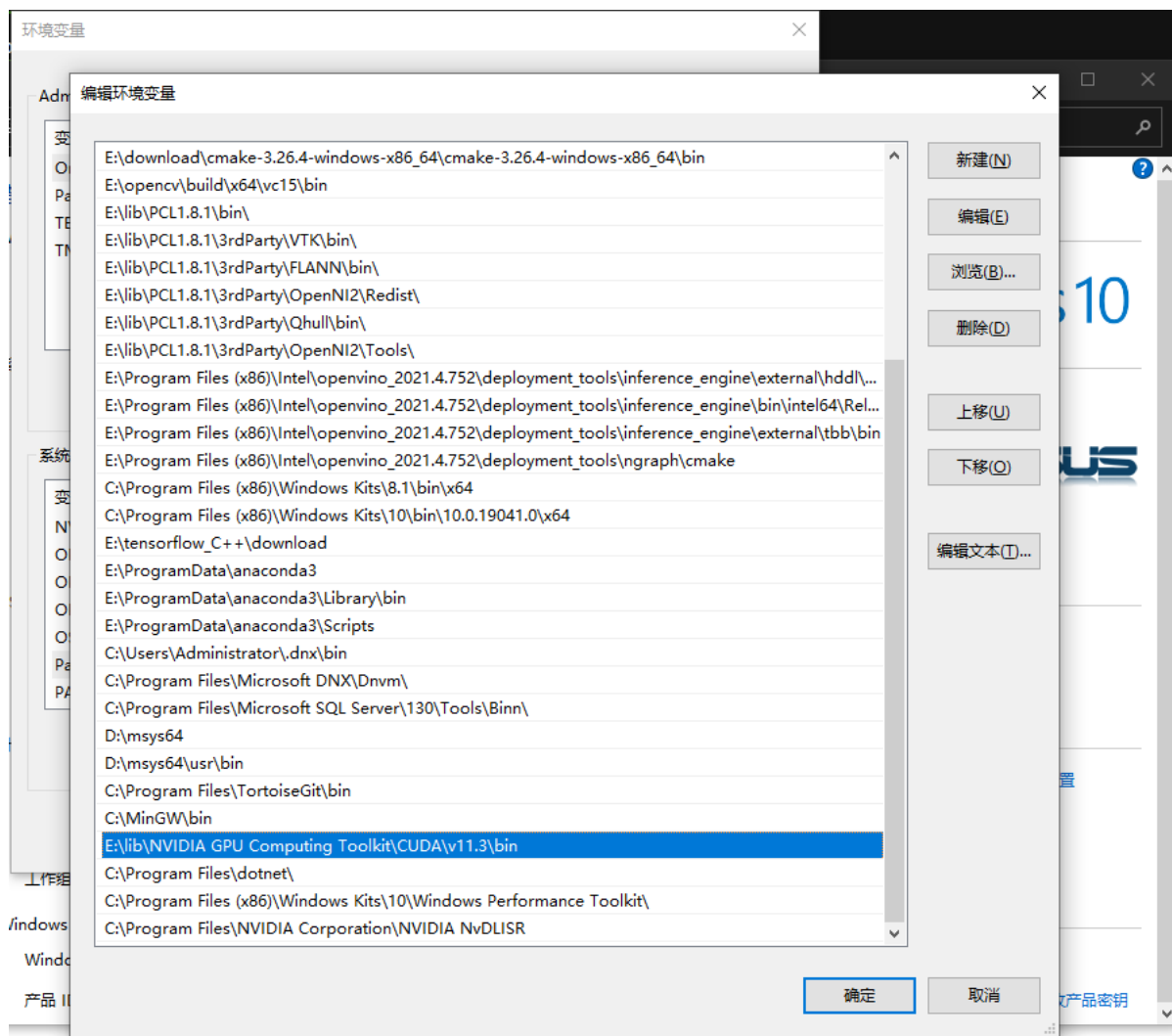
选择Windows版本的。

2.下载完是一个压缩包，解压后文件目录如下：

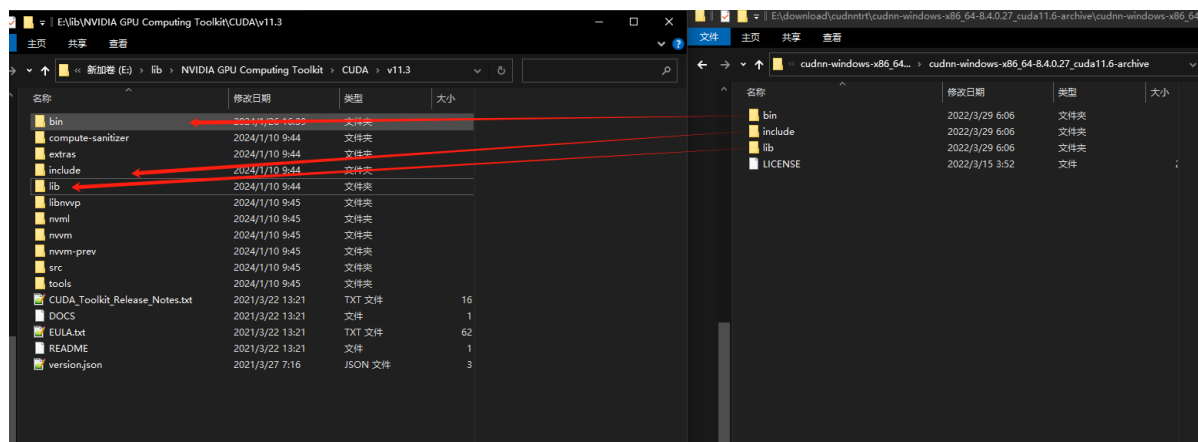
名称	修改日期	类型	大小
bin	2022/3/29 6:06	文件夹	
include	2022/3/29 6:06	文件夹	
lib	2022/3/29 6:06	文件夹	
LICENSE	2022/3/15 3:52	文件	29 KB

3.进入CUDA的安装目录：如果是默认安装的话是：C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v11.3，如果你修改过CUDA的安装目录，可以在系统的环境变量里找到安装位置：





4.把下载的cuDNN里bin、lib、include文件夹里面的内容复制到安装目录下的bin、lib、include目录下面，注意是文件夹里面的内容，不是复制整个文件夹。



## 四、Anaconda3安装

1.去[官网下载](#)Anaconda3，输入邮箱会自动将下载连接发送到你的邮箱。

## Provide email to download Distribution

Don't miss out! Get access to: Cloud Notebooks, Anaconda Assistant, easy application deployment, learning resources, and updates from Anaconda.

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Submit >

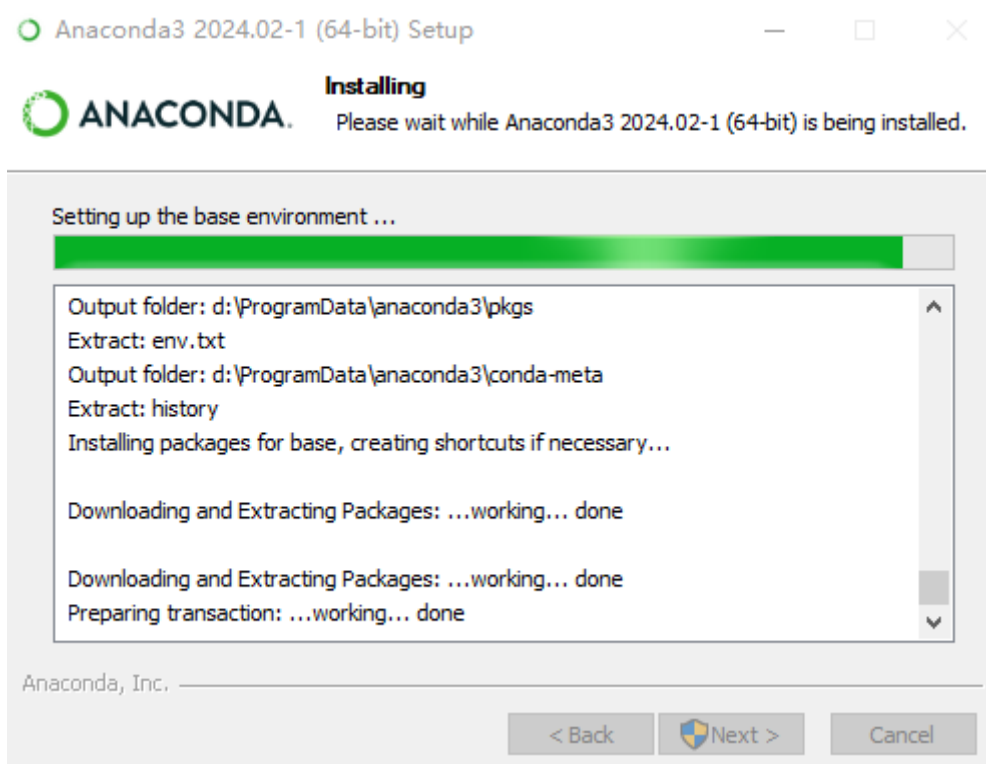
Skip registration

或者使用网盘下载：

链接：<https://pan.baidu.com/s/1DnM5C9AvyfA0CwPzOZtzKg>

提取码：ro3f

2.安装，选择自己的安装目录，一路点击next。

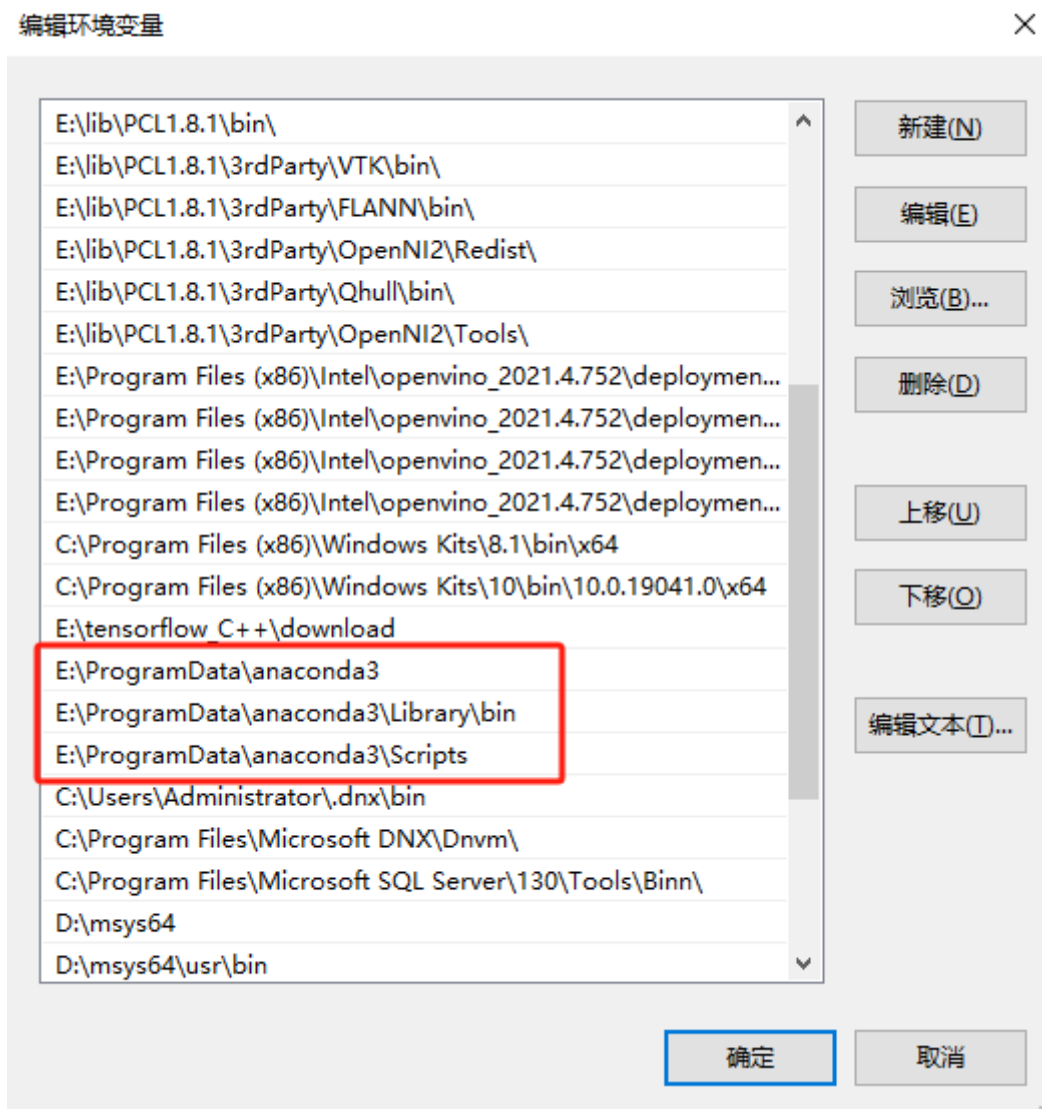


3.安装完后，命令行执行 `conda --version`，输出如下则安装成功：

```
管理员: C:\Windows\system32\cmd.exe
Microsoft Windows [版本 10.0.19044.1288]
(c) Microsoft Corporation。保留所有权利。

C:\Users\Administrator>conda --version
conda 23.9.0
```

4.如果没有成功，重启一下电脑再试一下，还是不行的话就手动添加环境变量：先找到Anaconda3的安装目录，把这3个路径加入Path环境变量，步骤如同上面CUDA添加环境变量：



注意要改成你的安装位置。

5.再执行一下命令，可以了。现在可以使用conda来创建虚拟环境了。