Mac:

Download anaconda with the following link and install it by running the bash script under the terminal:

Intel: https://repo.anaconda.com/archive/Anaconda3-2022.10-MacOSX-x86_64.sh

M1/M2: https://repo.anaconda.com/archive/Anaconda3-2022.10-MacOSX-arm64.sh

TensorFlow:

conda create -n <ENV_NME> python==3.7

conda activate <ENV_NME>

pip install tensorflow==1.14.0

Pytorch:

conda create -n <ENV_NME> python

conda activate <ENV_NME>

conda install pytorch torchvision torchaudio -c pytorch

Colab:

Open the website https://colab.research.google.com/ and then click the icon on the top left '+code' to create a Colab. Once the Colab is created, you can type Python code in it.

GPU support: Runtime -> Change runtime type -> Hardware accelerator -> GPU

TensorFlow: The default environment of Colab contains tensorflow, so you can import tensorflow directly. It is noted that TensorFlow 1.x is not supported in Colab.

Pytorch: The default environment of Colab contains Pytorch, so that you can import Pytorch directly.

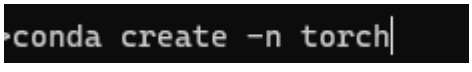
Windows:

Pytorch

1. Install anaconda on your Windows.

Finishing the installation, you can execute the command "conda --version" on the cmd. It will return the version of anaconda you installed if the installation is successful.

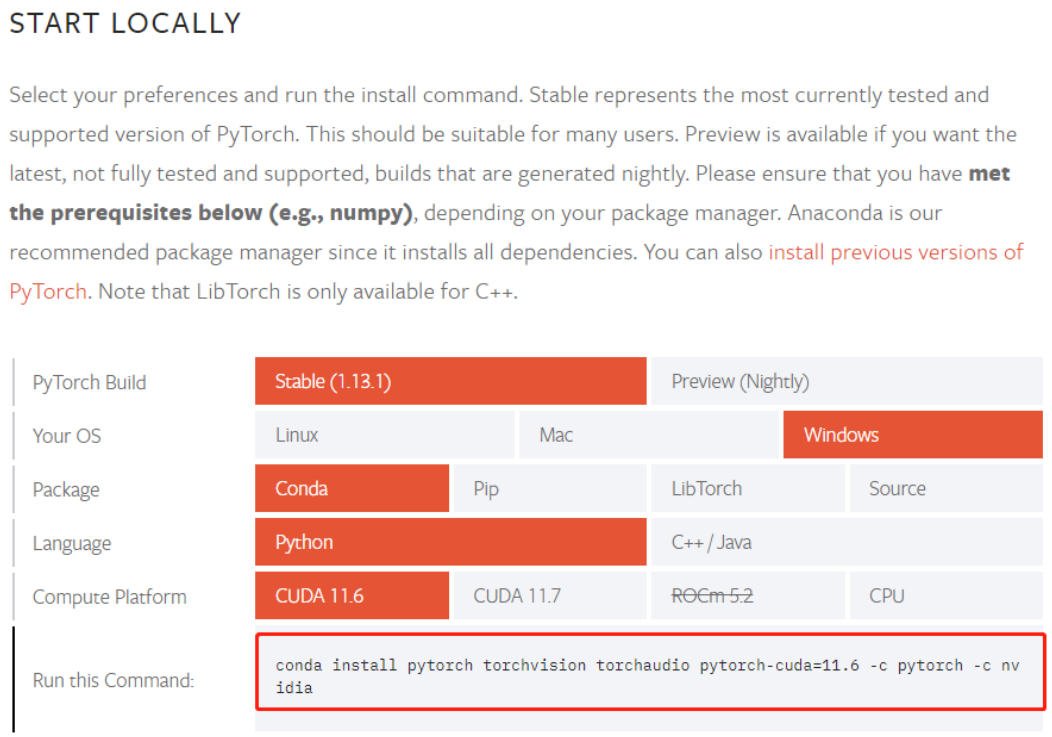
2. Create a virtual environment for pytorch: conda create -n [environmment_name]. For example:



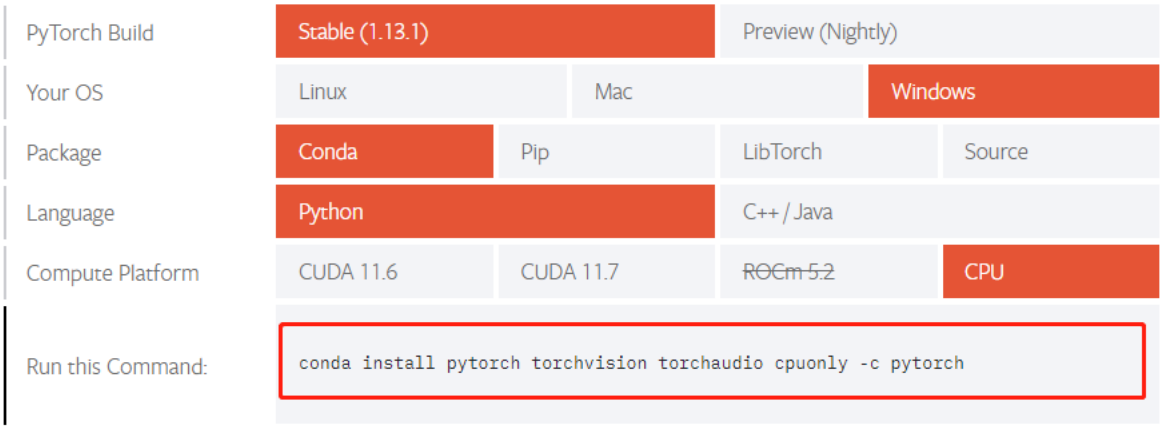
And then activate the environment:

Keep in this environment to execute the following installation command.

2. Install PyTorch under the guidance of its official website: https://pytorch.org/get-started/locally/. If your PC have GPUs and you hope to use them for your program, you can choose to install the pytorch with cuda support:



If your PC doesn't have a GPU or you don't want to use your GPU to run the program, you can also install the pytorch only for CPU:



If the installation is successful, you can "import torch" in the python interpreter.

```
C:\Users\[redacted]>python
Python 3.9.12 (main, Apr  4 2022, 05:22:27) [MSC v.1916 64 bit (AMD64)] :: Anaconda, Inc. on win32

Warning:
This Python interpreter is in a conda environment, but the environment has
not been activated.  Libraries may fail to load.  To activate this environment
please see https://conda.io/activation

Type "help", "copyright", "credits" or "license" for more information.
>>> import torch
>>> torch.__version__
'1.10.2'
>>>
```

Some video guidance:
https://youtu.be/EMXfZB8FVUA

tensorflow

1. Create a virtual environment for tensorflow:

```
conda create -n tf
```

And then activate the environment:

```
conda activate tf
```

Keep in this environment to execute the following installation command.

2. If you install the tesnorflow only for CPU (recommend), you can directly execute

```
conda install tensorflow
```

If the installation is successful, you can “import tensorflow” in the python interpreter.

```
(tf) C:\Users\[redacted]>python
Python 3.10.9 | packaged by conda-forge | (main, Jan 11 2023, 15:15:40) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> import tensorflow as tf
>>> tf.__version__
'2.10.0'
>>>
```

3. Usually, we do not recommend using tensorflow on GPU in Windows PC. It’s complicated to set up and there could be some intractable problems. But if you hope to use it, you can follow this guidance to set up: https://towardsdatascience.com/how-to-finally-install-tensorflow-gpu-on-windows-10-63527910f255

Ubuntu:

1.Pytorch Installation

1.1 Installation with Anaconda

1.1.1 Anaconda Installation

Head over to Anaconda official website and download the installer after selecting your OS correctly.

official website address: https://www.anaconda.com/

Run the installer. You can do that by going into the directory where you downloaded Anaconda or by providing the absolute path:

```
bash /path/to/installer
```

1.1.2 Pytorch Installation

To install PyTorch with Anaconda, you will need to open an Anaconda prompt and run the command.

You can find the command in this website: https://pytorch.org/get-started/locally/

CPU: conda install pytorch torchvision torchaudio cpuonly -c pytorch

Cuda11.7: conda install pytorch torchvision torchaudio pytorch-cuda=11.7 -c pytorch -c nvidia

Cuda11.6: conda install pytorch torchvision torchaudio pytorch-cuda=11.6 -c pytorch -c nvidia

For example, if your Cuda version is 11.7, you should choose OS: Linux, Package: Conda, Language: Python and Compute Platform: Cuda11.7 in the selector and run the command "conda install pytorch torchvision torchaudio pytorch-cuda=11.7 -c pytorch -c nvidia" in Anaconda prompt.

1.2 Installation with pip

1.2.1 pip Installation

pip can be downloaded and installed using the terminal in Linux by going through the following command:

```
sudo apt install python-pip (for python2)
sudo apt install python3-pip (for python3)
```

1.2.2 Pytorch Installation

To install PyTorch with pip, you will need to open Terminal and run the command.

You can find the command in this website: https://pytorch.org/get-started/locally/

CPU: pip3 install torch torchvision torchaudio --extra-index-url https://download.pytorch.org/whl/cpu

Cuda11.7: pip3 install torch torchvision torchaudio

Cuda11.6: pip3 install torch torchvision torchaudio --extra-index-url https://download.pytorch.org/whl/cu116

2.Tensorflow Installation

2.1 pip Installation

pip can be downloaded and installed using the terminal in Linux by going through the following command:

```
sudo apt install python-pip (for python2)
sudo apt install python3-pip (for python3)
```

2.2 Tensorflow Installation

To install PyTorch with pip, you will need to open Terminal and run following the command:

```
pip install tensorflow
```