
PyTorch Installation Guide

Release 0.1

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INSTALLING PYTORCH ON WINDOWS

1.1 Prerequisites

- *Supported Windows Distributions*
- *Python*
- *Package Manager*

1.1.1 Supported Windows Distributions

PyTorch is supported on the following Windows distributions:

- Windows 7 and greater
Windows 10 or greater is recommended.
- Windows Server 2008 r2 and greater

1.1.2 Python

Currently, PyTorch on Windows only supports Python 3.x; Python 2.x is not supported.

As Python is not installed by default on Windows, there are multiple ways to install Python:

- [Chocolatey](#)
- [Python website](#)
- [Anaconda](#)

1.1.3 Package Manager

To install the PyTorch binaries, use at least one of the following two supported package managers:

- *Anaconda*
- *pip*

1.1.3.1 Anaconda

Anaconda is the recommended package manager, because it provides all of the PyTorch dependencies in one, sand-boxed install, including Python and pip.

To install Anaconda, use the [64-bit graphical installer](#) for PyTorch 3.x. Click the installer link and select Run. Anaconda will be downloaded and the installer prompt will be presented to you. The default options are generally sane.

1.1.3.2 pip

If you installed Python by any of the recommended ways mentioned in [Python](#), pip will have already been installed for you.

1.2 Installing PyTorch

1.2.1 Installing PyTorch through Anaconda

To install PyTorch with Anaconda, follow these steps:

1. Open an Anaconda prompt via Start | Anaconda3 | Anaconda Prompt.
2. Run the command to install the desired PyTorch.
 - If you do not have a CUDA-capable system or do not require CUDA, run the following command:

```
conda install pytorch torchvision cpuonly -c pytorch
```

- If you have a CUDA-capable system, choose to run the command that suits you:

- For CUDA 9.2:

```
conda install pytorch torchvision cudatoolkit=9.2 -c pytorch -c defaults -  
↪c numba/label/dev
```

- For CUDA 10.1

```
conda install pytorch torchvision cudatoolkit=10.1 -c pytorch
```

If you get an HTTP error like shown in [Fig. 11](#), you may retry running the command. Optionally, use Tsinghua Tuna mirrors by following these steps:

- (a) In the Anaconda Prompt, run the following commands:

```
conda config --add channels http://mirrors.tuna.tsinghua.edu.cn/anaconda/pkgs/  
↪free/  
conda config --add channels http://mirrors.tuna.tsinghua.edu.cn/anaconda/pkgs/  
↪main/  
conda config --set show_channel_urls yes  
conda config --add channels http://mirrors.tuna.tsinghua.edu.cn/anaconda/  
↪cloud/pytorch/  
conda config --add channels http://mirrors.tuna.tsinghua.edu.cn/anaconda/  
↪cloud/conda-forge/  
conda config --add channels http://mirrors.tuna.tsinghua.edu.cn/anaconda/  
↪cloud/msys2/  
conda config --add channels http://mirrors.tuna.tsinghua.edu.cn/anaconda/  
↪cloud/menpo/
```



```

Anaconda Prompt

ca-certificates:      2018.03.07-0                --> 2020.1.1-0
certifi:              2018.4.16-py36_0          --> 2019.11.28-py36_0
conda:                4.5.4-py36_0             --> 4.8.2-py36_0
cryptography:        2.2.2-py36hfa6e2cd_0         --> 2.8-py36h7a1dbc1_0
curl:                 7.60.0-h7602738_0         --> 7.68.0-h2a8f88b_0
libcurl:              7.60.0-hc4dcbb0_0         --> 7.68.0-h2a8f88b_0
libpng:               1.6.34-h79bbb47_0         --> 1.6.37-h2a8f88b_0
libssh2:              1.8.0-hd619d38_4           --> 1.8.2-h7a1dbc1_0
openssl:              1.0.2o-h8ea7d77_0           --> 1.1.1d-he774522_4
pycurl:               7.43.0.1-py36h74b6da3_0      --> 7.43.0.5-py36h7a1dbc1_0
qt:                   5.9.5-vc14he4a7d60_0       --> 5.9.7-vc14h73c81de_0
sqlite:               3.23.1-h35aae40_0          --> 3.31.1-he774522_0
tk:                   8.6.7-hcb92d03_3          --> 8.6.8-hfa6e2cd_0
vc:                   14-h0510ff6_3             --> 14.1-h0510ff6_4
vs2015_runtime:      14.0.25123-3              --> 14.16.27012-hf0eaf9b_1

Proceed ([y]/n)?

Downloading and Extracting Packages
cpuonly-1.0           | 2 KB | ##### | 100%
torchvision-0.5.0    | 5.8 MB | ##### | 7%
pytorch-1.4.0        | 61.9 MB | 7 | 1%

CondaHTTPError: HTTP 000 CONNECTION FAILED for url <https://conda.anaconda.org/pytorch/win-64/torchvision-0.5.0-py36_cpu.tar.bz2>
Elapsed: -

An HTTP error occurred when trying to retrieve this URL.
HTTP errors are often intermittent, and a simple retry will get you on your way.

CondaHTTPError: HTTP 000 CONNECTION FAILED for url <https://conda.anaconda.org/pytorch/win-64/pytorch-1.4.0-py3.6_cpu_0.tar.bz2>
Elapsed: -

```

Fig. 11: Example of HTTP Error

```

conda config --add channels http://mirrors.tuna.tsinghua.edu.cn/anaconda/
↪ cloud/bioconda/
conda config --add channels http://mirrors.tuna.tsinghua.edu.cn/anaconda/
↪ cloud/peterjc123/
conda config --add channels http://mirrors.tuna.tsinghua.edu.cn/anaconda/
↪ cloud/pytorch/

```

Note: Pay attention to http. If you mistakenly type https, HTTP errors occur, too.

- (b) Go to C:\Users\<your user name>, open the .condarc file with a text editor, remove the - defaults line, and save the file.
- (c) In the Anaconda Prompt, run the command in Step 2 but remember to remove -c pytorch from the command line.

1.2.2 Installing PyTorch through Pip

1.3 Verifying Installation

To verify that you have successfully installed the desired PyTorch, run sample PyTorch code to construct a randomly initialized tensor.

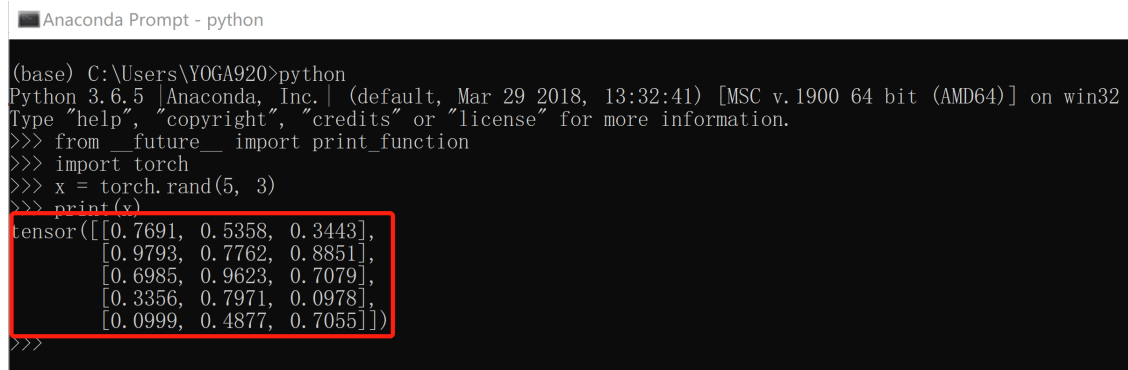
1. In the Anaconda Prompt, type:

```
python
```

2. Enter the following code:

```
from __future__ import print_function
import torch
x = torch.rand(5, 3)
print(x)
```

The output is shown in [Fig. 12](#).



```
Anaconda Prompt - python
(base) C:\Users\YOGA920>python
Python 3.6.5 |Anaconda, Inc.| (default, Mar 29 2018, 13:32:41) [MSC v.1900 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> from __future__ import print_function
>>> import torch
>>> x = torch.rand(5, 3)
>>> print(x)
tensor([[0.7691, 0.5358, 0.3443],
        [0.9793, 0.7762, 0.8851],
        [0.6985, 0.9623, 0.7079],
        [0.3356, 0.7971, 0.0978],
        [0.0999, 0.4877, 0.7055]])
>>>
```

Fig. 12: Output of Sample Code

REVISION HISTORY

Table A1: Revision History

Revision	Description	Author
0.1/ March 2020	Initial release.	Ivy Wong