

Setup Windows Python

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[Installing CNTK for Python on Windows](#)

Installing CNTK for Python on Windows

This page will walk you through the process of installing the Microsoft Cognitive Toolkit (CNTK) to use from Python in Windows. If you are looking for any other kind of support to setup a CNTK build environment or installing CNTK on your system, you should go [here](#) instead.

Depending on the Python and CNTK version (CPU, GPU, 1bit-SGD) we supply different wheel (.whl) files to install CNTK. Please select the correct installation from the list below, and substitute the name and/or link during the installation. Note that the CNTK GPU-1bit-SGD version is licensed under a specific [1bit-SGD License](#) which is MORE restrictive, than the major CNTK License.

- Easy pip install for [Anaconda3 4.1.1](#)
- Easy pip install for [Anaconda2 4.3.0.1](#)

Python	Flavor	URL
2.7	CPU-Only	https://cntk.ai/PythonWheel/CPU-Only/cntk-2.0-cp27-cp27m-win_amd64.whl
	GPU	https://cntk.ai/PythonWheel/GPU/cntk-2.0-cp27-cp27m-win_amd64.whl
	GPU-1bit-SGD	https://cntk.ai/PythonWheel/GPU-1bit-SGD/cntk-2.0-cp27-cp27m-win_amd64.whl
3.4	CPU-Only	https://cntk.ai/PythonWheel/CPU-Only/cntk-2.0-cp34-cp34m-win_amd64.whl
	GPU	https://cntk.ai/PythonWheel/GPU/cntk-2.0-cp34-cp34m-win_amd64.whl

Python	Flavor	URL
3.5	GPU-1bit-SGD	<code>https://cntk.ai/PythonWheel/GPU-1bit-SGD/cntk-2.0-cp34-cp34m-win_amd64.whl</code>
	CPU-Only	<code>https://cntk.ai/PythonWheel/CPU-Only/cntk-2.0-cp35-cp35m-win_amd64.whl</code>
	GPU	<code>https://cntk.ai/PythonWheel/GPU/cntk-2.0-cp35-cp35m-win_amd64.whl</code>
	GPU-1bit-SGD	<code>https://cntk.ai/PythonWheel/GPU-1bit-SGD/cntk-2.0-cp35-cp35m-win_amd64.whl</code>
3.6	CPU-Only	<code>https://cntk.ai/PythonWheel/CPU-Only/cntk-2.0-cp36-cp36m-win_amd64.whl</code>
	GPU	<code>https://cntk.ai/PythonWheel/GPU/cntk-2.0-cp36-cp36m-win_amd64.whl</code>
	GPU-1bit-SGD	<code>https://cntk.ai/PythonWheel/GPU-1bit-SGD/cntk-2.0-cp36-cp36m-win_amd64.whl</code>

Anaconda3

We have been testing CNTK with Anaconda3 4.1.1 (64-bit) and Python versions 2.7, 3.4, 3.5, as well as Anaconda3 4.3.1 with Python version 3.6. If you do not have a Anaconda3 Python installation, install [Anaconda3 4.1.1 Python for Windows \(64-bit\)](#).

Below we assume Anaconda is installed and that it is listed before any other Python installations in your PATH. If you plan on using a GPU enabled version of CNTK, you will need a CUDA 8 compliant graphics card and up-to-date graphics drivers installed on your system.

pip install without an environment

This is the easiest option and the only reason to avoid it is if you require specific versions of certain packages. If you have other packages that require an old version of numpy skip to [this section](#).

First time CNTK installation

If this is the first time you install CNTK then run

 Copy

```
C:\> pip install <url>
```

where `<url>` is the corresponding wheel file URL in the table on the top of this page. E.g. if you have Python 3.5 and want to install the CPU-only version, run

 Copy

```
C:\> pip install https://cntk.ai/PythonWheel/CPU-Only/cntk-2.0-cp35-cp35m-win_amd64.whl
```

Continue with a [quick installation test](#)

Upgrade an existing CNTK installation

If you already have a previous version of CNTK installed, you can install a new version of CNTK over your existing installation. It is important to supply the `--upgrade` and `--no-deps` options.

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```
C:\> pip install --upgrade --no-deps <url>
```

where `<url>` is the corresponding wheel file URL in the table on the top of this page. Once you have completed this upgrade step, you can start working with CNTK in Python or [install samples and tutorials](#).

Quick installation test

A quick test that the installation succeeded can be done by querying the CNTK version:

 Copy

```
C:\> python -c "import cntk; print(cntk.__version__)"
```

You now have successfully installed CNTK, you can start developing / training / evaluating with CNTK in Python!

Continue with [installing samples and tutorials](#)

pip install in an environment

Below we will create a new Python 3.4 environment inside Anaconda called `cntk-py34` and will pip-install CNTK into this environment. If you want a different Python version, a different environment name, or a different CNTK versions, adjust the parameters accordingly.

Open a standard command shell, create the environment, make it active, and pip-install CNTK:

 Copy

```
C:\> conda create --name cntk-py34 python=3.4 numpy scipy h5py jupyter
C:\> activate cntk-py34
C:\> pip install https://cntk.ai/PythonWheel/CPU-Only/cntk-2.0-cp34-cp34m-win_amd64.whl
```

A quick test that the installation succeeded can be done by querying the CNTK version:

 Copy

```
C:\> python -c "import cntk; print(cntk.__version__)"
```

You now have successfully installed CNTK, you can start developing / training / evaluating with CNTK in Python!

Continue with a [installing samples and tutorials](#)

Anaconda2

If you require a Python 2.7 root environment, we recommend you install [Anaconda2 4.3.0.1 \(64-bit\)](#).

Below we assume Anaconda2 is installed and that it is listed before any other Python installations in your PATH. If you plan on using a GPU enabled version of CNTK, you will need a CUDA 8 compliant graphics card and up-to-date graphics drivers installed on your system.

Anaconda2: CNTK prerequisites

CNTK requires the `Visual C++ Redistributable for Visual Studio 2015` installed on your system (in many cases this will already be the case). The installer for the VS2015.3 Runtime (`vc_redist.x64.exe`) can be downloaded [here](#).

Anaconda2: `pip install`