



Keras Installation and Environment Setup

Keras is one of the most popular Python libraries. It is having high demand these days as it is straight-forward and simple. It is a high-level API that does not perform low-level computations. Keras runs on the TensorFlow and Theano.

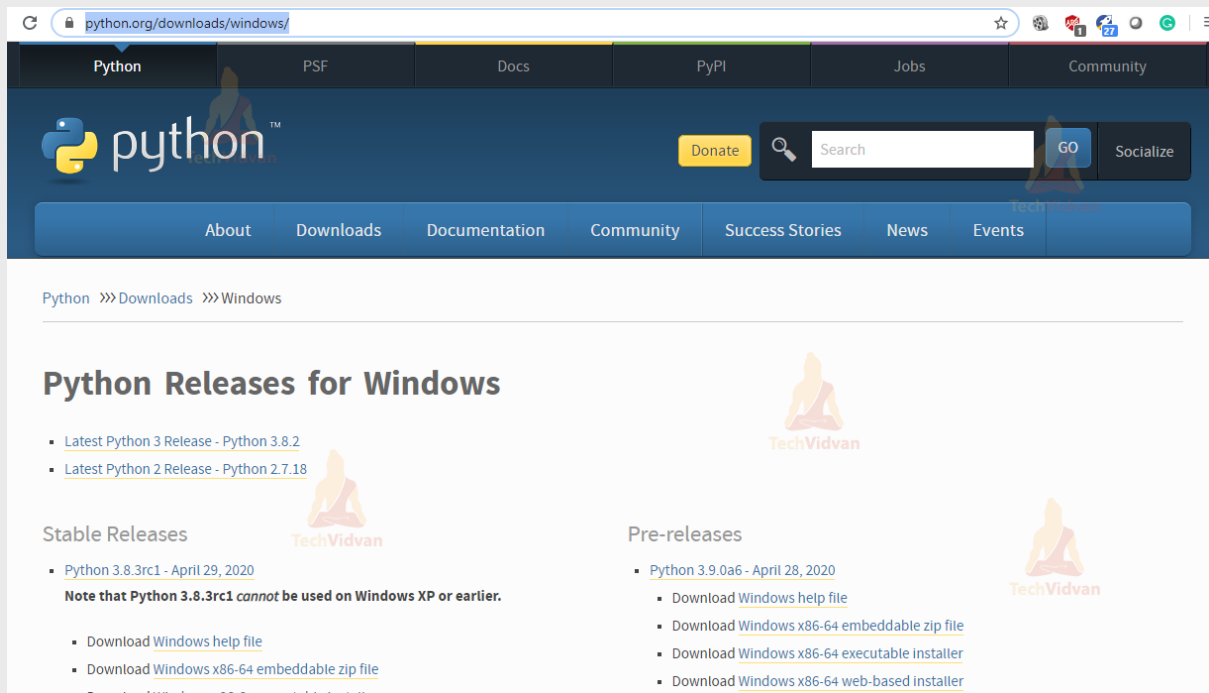
It is handy for Deep Learning and focuses on the idea of Models. Keras is an open-source Python library. It is very easy and effortless to download. It is easily and freely available. You can download Keras with no efforts.

Let us learn Keras installation in easy steps.

Keras Installation and Environment setup

Step 1: Install Python

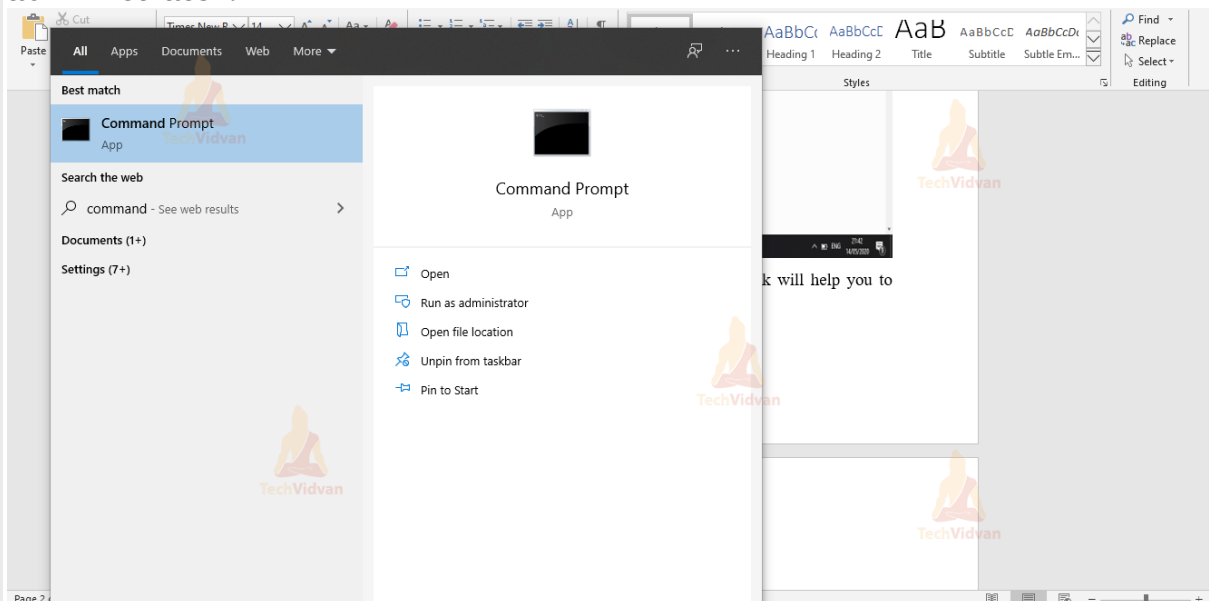
It is the primary task to install Python in your system. Python is an open-source language. It is easily available.



Click on Latest Python 3 Release – Python 3.8.2. This link will help you to download the latest version of Python.

Step 2: Now, Open the Command Prompt

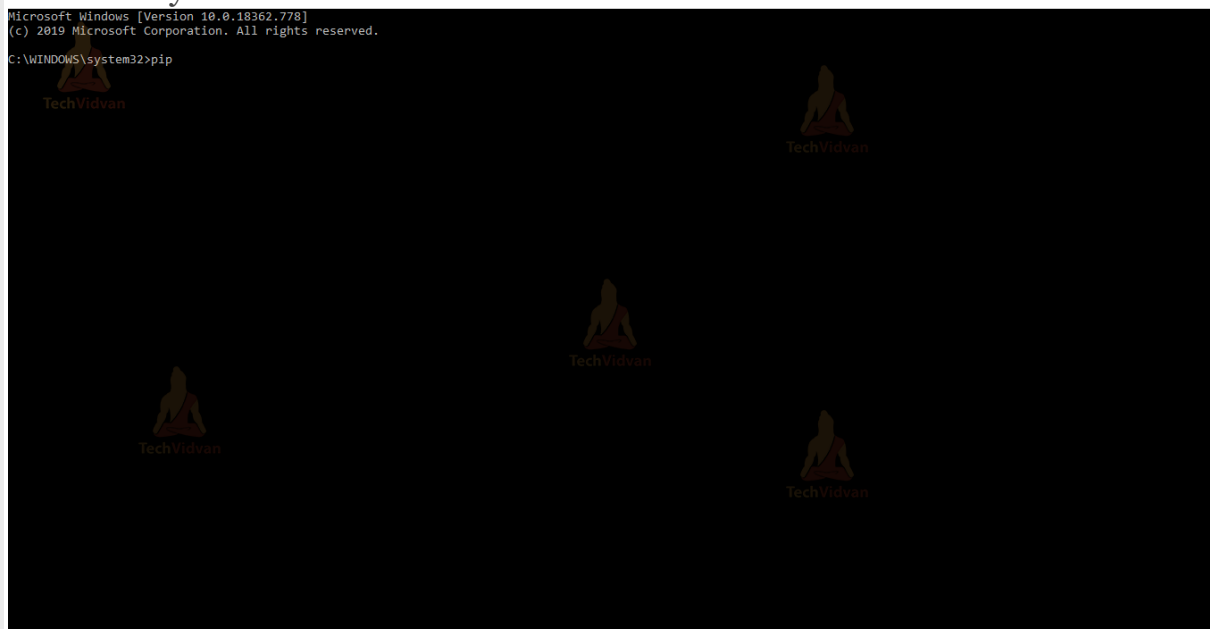
In this step, open the command prompt. Run the command prompt as an administrator.



Running the command prompt as an administrator will enable you to make changes in your system. It will ask you permission to make changes to your system. So, give it permission by pressing the 'Yes' button.

Step 3: Now, type 'pip' in Command Prompt

Type 'pip' as a command in the command prompt. It will help you to check whether Python is installed or not.



After typing 'pip' in the command prompt, you will see many functions executing. Wait, till the functions execute.

```
C:\WINDOWS\system32>pip

Usage:
  pip <command> [options]

Commands:
  install           Install packages.
  download          Download packages.
  uninstall         Uninstall packages.
  freeze            Output installed packages in requirements format.
  list              List installed packages.
  show              Show information about installed packages.
  check             Verify installed packages have compatible dependencies.
  search            Search PyPI for packages.
  wheel             Build wheels from your requirements.
  hash              Compute hashes of package archives.
  completion        A helper command used for command completion.
  help              Show help for commands.

General Options:
  -h, --help            Show help.
  --isolated            Run pip in an isolated mode, ignoring
                        environment variables and user configuration.
                        Give more output. Option is additive, and can be
                        used up to 3 times.
  -v, --verbose         Show version and exit.
  -V, --version         Give less output. Option is additive, and can be
                        used up to 3 times (corresponding to WARNING,
                        ERROR, and CRITICAL logging levels).
  --log <path>         Path to a verbose appending log.
  --proxy <proxy>       Specify a proxy in the form
                        [user:passwd@]proxy.server:port.
                        Maximum number of retries each connection should
                        attempt (default 5 times).
  --retries <retries>   Set the socket timeout (default 15 seconds).
  --timeout <sec>       Default action when a path already exists:
                        (s)witch, (i)gnore, (w)ipe, (b)ackup, (a)bort.
  --exists-action <action>
                        Mark this host as trusted, even though it does
                        not have valid or any HTTPS.
  --trusted-host <hostname>
                        Path to alternate CA bundle.
  --cert <path>         Path to SSL client certificate, a single file
                        containing the private key and the certificate
                        in PEM format.
  --client-cert <path>
                        Store the cache data in <dir>.
  --cache-dir <dir>
```

Step 4: Write ‘pip install tensorflow==1.8’ in Command Prompt

Being the fact that Keras runs on the top of Keras. You need to install TensorFlow first.

```
C:\WINDOWS\system32>pip install tensorflow==1.8_
```

After typing this command, you will see many functions executing. Tensorboard, termcolor, numpy, wheel, etc are the functions that will be

executed. You can many commands and functions executing in the image below.

```
C:\WINDOWS\system32>pip install tensorflow==1.8
Collecting tensorflow==1.8
  Downloading https://files.pythonhosted.org/packages/f4/88/980d7032b7488fcca5b0b8d420fcd97919197a9e7acf280ab74fc7db6993/tensorflow-1.8.0-cp36-cp36m-win_amd64.whl (34.4 MB)
    100% |#####| 34.4MB 18kB/s
Collecting six>=1.10.0 (from tensorflow==1.8)
  Downloading https://files.pythonhosted.org/packages/65/eb/1f97cb97bfc2390a276969c6fae16075da282f5058082d4cb10c6c5c1dba/six-1.14.0-py2.py3-none-any.whl
Collecting gast>=0.2.0 (from tensorflow==1.8)
  Downloading https://files.pythonhosted.org/packages/d6/84/759f5dd23fec8ba71952d97bcc7e2c9d7d63bdc582421f3cd4be845f0c98/gast-0.3.3-py2.py3-none-any.whl
Collecting tensorboard<1.9.0,>=1.8.0 (from tensorflow==1.8)
  Downloading https://files.pythonhosted.org/packages/59/a6/0ae6092b7542cfedba6b2a1c9b8dceaf278238c39484f3ba03b03f07803c/tensorboard-1.8.0-py3-none-any.whl (3.1MB)
    100% |#####| 3.1MB 129kB/s
Collecting termcolor>=1.1.0 (from tensorflow==1.8)
  Downloading https://files.pythonhosted.org/packages/8a/48/a76be51647d0eb9f10e2a4511bf3ffb8cc1e6b14e9e4fab46173aa79f981/termcolor-1.1.0.tar.gz
Collecting protobuf>=3.4.0 (from tensorflow==1.8)
  Downloading https://files.pythonhosted.org/packages/ff/52/a71156b8dbb8a40833b7a571e22c9e65ca4204a56739f97d3eaa25d11e/protobuf-3.11.3-cp36-cp36m-win_amd64.whl (1.1MB)
    100% |#####| 1.1MB 281kB/s
Collecting grpcio>=1.8.6 (from tensorflow==1.8)
  Downloading https://files.pythonhosted.org/packages/97/5b/5d962954bdae84c9d5b06978a15049d947a2dad5b02130b3d984d07c0e1/grpcio-1.28.1-cp36-cp36m-win_amd64.whl (2.1MB)
    100% |#####| 2.2MB 197kB/s
Collecting numpy>=1.13.3 (from tensorflow==1.8)
  Downloading https://files.pythonhosted.org/packages/5c/74/04e9fb4ed91aaca3bf762429c3567c9523c311b1ef615795737e16f3cd23/numpy-1.18.4-cp36-cp36m-win_amd64.whl (12.8MB)
    100% |#####| 12.8MB 48kB/s
Collecting wheel>=0.26 (from tensorflow==1.8)
  Downloading https://files.pythonhosted.org/packages/8c/23/848298ccc8e40f5bbb59009b32848a4c38f4e7f3364297ab3c3e2e2cd14/wheel-0.34.2-py2.py3-none-any.whl
Collecting absl-py>=0.1.6 (from tensorflow==1.8)
  Downloading https://files.pythonhosted.org/packages/1a/53/9243c600e047bd4c3df9e9cfabc1e8004a82cac2e0c484580a78a94ba2a/absl-py-0.9.0.tar.gz (104kB)
    100% |#####| 112kB 208kB/s
Collecting astor>=0.6.0 (from tensorflow==1.8)
  Downloading https://files.pythonhosted.org/packages/c3/88/97eef84f48fa4fbd6750e62dceafba6c63c81b7ac1420856c8dcca3f9/astor-0.8.1-py2.py3-none-any.whl
Collecting html5lib==0.9999999 (from tensorflow==1.8)
  Downloading https://files.pythonhosted.org/packages/ae/ae/bcb60402c60932b32dfaf19bb53870b29eda2cd17551ba5639219f5abf9/html5lib-0.9999999.tar.gz (889kB)
    100% |#####| 890kB 161kB/s
Collecting bleach==1.5.0 (from tensorflow==1.8)
  Downloading https://files.pythonhosted.org/packages/33/70/86c5fec937ea4964184d4d6c4f0b9551564f821e1c3575907639036d9b9b/bleach-1.5.0-py2.py3-none-any.whl
Collecting markdown>=2.6.8 (from tensorflow==1.8)
  Downloading https://files.pythonhosted.org/packages/a4/63/eaec2bd025ab48c754b55e8819af0f6a69e2b1e187611dd40cbbe101ee7f/Markdown-3.2.2-py3-none-any.whl (88kB)
    100% |#####| 92kB 459kB/s
Collecting Werkzeug>=0.11.10 (from tensorflow==1.8)
  Downloading https://files.pythonhosted.org/packages/cc/94/5f7079a0e00bd6863ef8f1da638721e9da21e5bacee597595b318f71d62e/Werkzeug-1.0.1-py2.py3-none-any.whl (298kB)
    100% |#####| 307kB 289kB/s
Requirement already satisfied: setuptools in c:\users\radhika\appdata\local\programs\python\python36\lib\site-packages (from protobuf>=3.4.0->tensorflow==1.8)
```

Step 5: Write ‘pip install keras’ on Command Prompt

Now, it’s time to finally install Keras. After writing ‘pip install keras’, you will see prompt collecting many files.

```
C:\WINDOWS\system32>pip install tensorflow==1.8
Collecting tensorflow==1.8
  Downloading https://files.pythonhosted.org/packages/f4/88/980d7032b7488fcca5b0b8d420fcd97919197a9e7acf280ab74fc7db6993/tensorflow-1.8.0-cp36-cp36m-win_amd64.whl (34.4 MB)
    100% |#####| 34.4MB 18kB/s
```

You will see that it is automatically ignoring the functions are that not much necessary. It is very easy to install Keras. It will automatically install all the secondary files it needs.

After writing this command, wait for it to execute completely. Once it is done, you have successfully installed Keras. Now, you can easily work with the Keras code. Write the Keras commands easily and safely. Enjoy working with Keras.

Conclusion

This is how Keras installation is done. Keras is an open-source Python library. It is easy to install Keras. As Keras runs on the top of TensorFlow, Theano. You have to install any of these libraries first.

Here, you can see TensorFlow. After installing TensorFlow, you can install Keras. It is not a burden to install Keras. It is not too time-consuming. You can easily and quickly install it.