



Data Analysis With Python

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Installation

Python distribution is available for a wide variety of platforms. You need to download only the binary code applicable for your platform and install Python.

If the binary code for your platform is not available, you need a C compiler to compile the source code manually. Compiling the source code offers more flexibility in terms of choice of features that you require in your installation.

Here are the steps to install Python on Windows machine.

- Open a Web browser and go to <https://www.python.org/downloads/>
- Follow the link for the Windows installer python-XYZ.msi file where XYZ is the version you need to install.
- To use this installer python-XYZ.msi, the Windows system must support Microsoft Installer 2.0. Save the installer file to your local machine and then run it to find out if your machine supports MSI.

Run the downloaded file. This brings up the Python install wizard, which is really easy to use. Just accept the default settings, wait until the install is finished, and you are done.

Programs and other executable files can be in many directories, so operating systems provide a search path that lists the directories that the OS searches for executables.

The path is stored in an environment variable, which is a named string maintained by the operating system. This variable contains information available to the command shell and other programs.

The **path** variable is named as PATH or Path in Windows

Downloads page of official website for Python's standard distribution (<https://www.python.org/downloads>) has installers for Python 3.x and 2.x versions. At the time of writing 32 bit and 64 bit msi installers for Python 3.6.2 and python 2.7.13 are available. Download appropriate installer.

Invoke the installer with administrator privileges and go through the installation wizard choosing recommended options. Perform installation for all users and add python executable to path system variable when prompted to.

Run python.exe from command prompt. A command window with python prompt of three gt (>>>) symbols will appear. That confirms successful installation of Python on windows OS.

While installing cygwin, make sure you install the python/python-setuptools from the list. This will install "easy_install" package. Once you have easy_install, you can use it to install pip. Type the following command:

```
$ easy_install-a.b pip
```

You must replace a.b with your python version which can be 2.7 or 3.4 or whatever else. Now you can use pip to install the module you want. For example, To install the latest version of "SomeProject":

```
$ pip install 'SomeProject'
```

To install a specific version:

```
$ pip install 'SomeProject==1.4'
```

To install greater than or equal to one version and less than another:

```
$ pip install 'SomeProject>=1,<2'
```

Python is a widely used high-level programming language. To write and execute code in python, we first need to install Python on our system.

Installing Python on Windows takes a series of few easy steps.

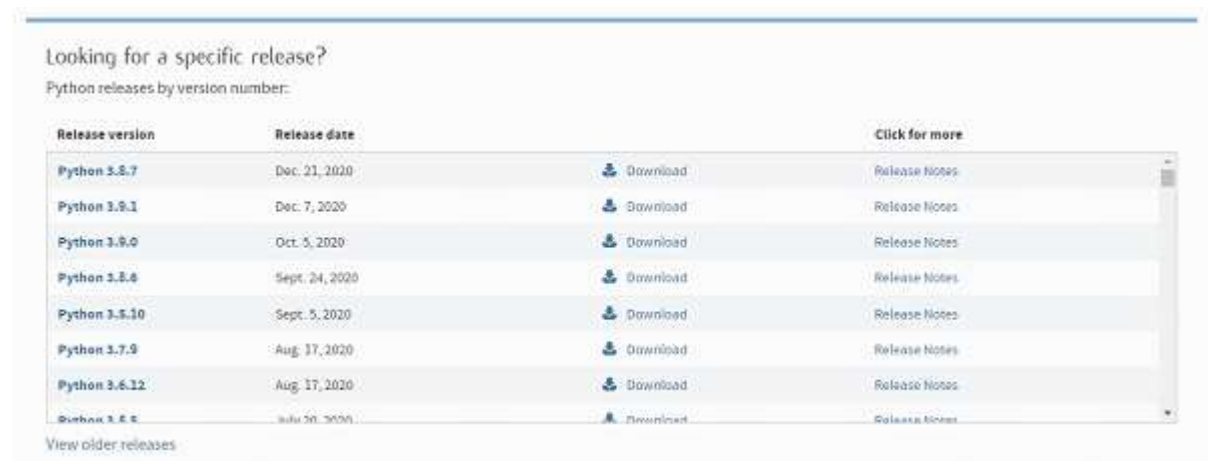
Step 1 – Select Version of Python to Install

Python has various versions available with differences between the syntax and working of different versions of the language. We need to choose the version which we want to use or need. There are different versions of Python 2 and Python 3 available.

Step 2 – Download Python Executable Installer

On the web browser, in the official site of python (www.python.org), move to the Download for Windows section.

All the available versions of Python will be listed. Select the version required by you and click on Download. Let suppose, we chose the Python 3.9.1 version.



Release version	Release date		Click for more
Python 3.8.7	Dec. 21, 2020	 Download	Release Notes
Python 3.9.1	Dec. 7, 2020	 Download	Release Notes
Python 3.9.0	Oct. 5, 2020	 Download	Release Notes
Python 3.8.6	Sept. 24, 2020	 Download	Release Notes
Python 3.8.10	Sept. 5, 2020	 Download	Release Notes
Python 3.7.9	Aug. 17, 2020	 Download	Release Notes
Python 3.6.12	Aug. 17, 2020	 Download	Release Notes
Python 3.6.8	July 28, 2020	 Download	Release Notes

[View older releases](#)

On clicking download, various available executable installers shall be visible with different operating system specifications. Choose the installer which suits your system operating system and download the installer. Let suppose, we select the Windows installer(64 bits).

The download size is less than 30MB.

Version	Operating System	Description	MDS Sum	File Size	GPG
Gzipped source tarball	Source release		429ae95d24227f8fa1560684fad6fca7	25372998	SIG
XZ compressed source tarball	Source release		61981498e75ac8f00adcb908281fad66	18897104	SIG
macOS 64-bit Intel installer	Mac OS X	for macOS 10.9 and later	74f5cc5b5783ce8fb2ca55f11f3f0699	29795899	SIG
macOS 64-bit universal2 installer	Mac OS X	for macOS 10.9 and later, including macOS 11 Big Sur on Apple Silicon (experimental)	8b19748473609241e60aa3618bbaf3ed	37451735	SIG
Windows embeddable package (32-bit)	Windows		96c6fa81e8b650e66c3dd41258ae317	7571141	SIG
Windows embeddable package (64-bit)	Windows		e70e5c22432d8f57a497cde5ec2e5ce2	8402333	SIG
Windows help file	Windows		c49d9b6ef88c0831ed0e2d39bc42b316	8787443	SIG
Windows installer (32-bit)	Windows		dde210ea04a31c27488605a9e7cd297a	27126136	SIG
Windows installer (64-bit)	Windows	Recommended	b3fce2ed8bc315ad2bc49eae48a94487	28204528	SIG

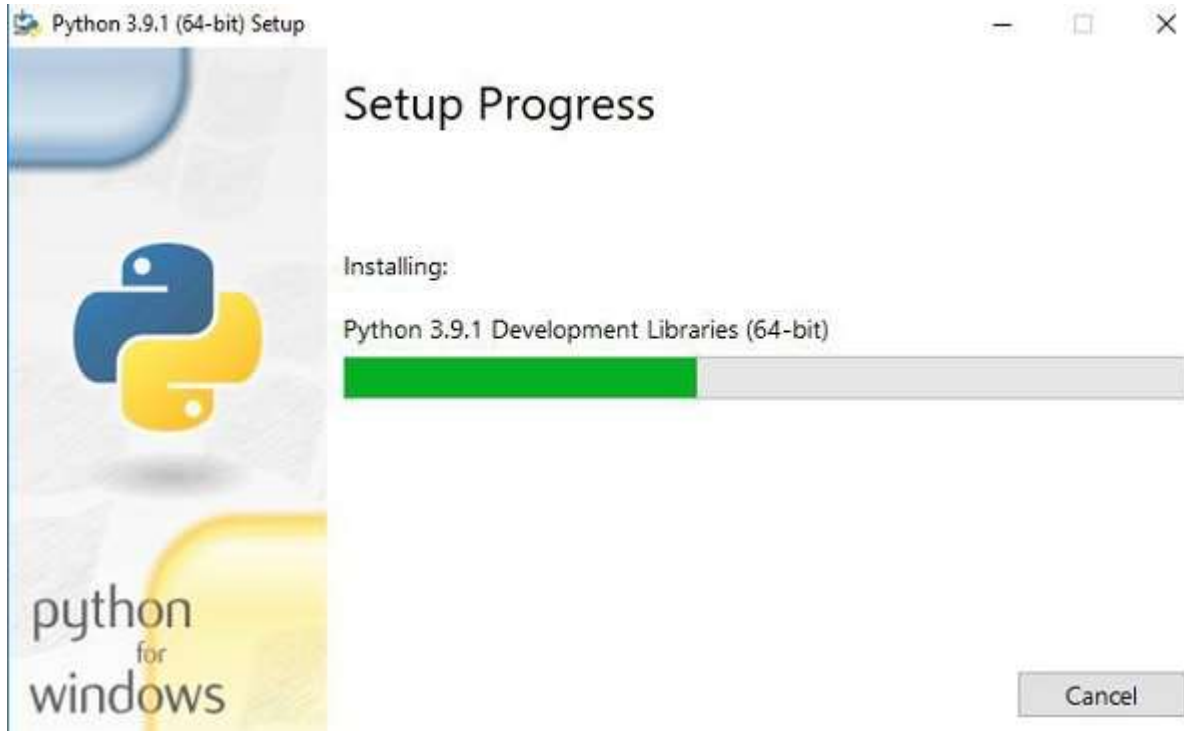
Step 3 – Run Executable Installer

We downloaded the Python 3.9.1 Windows 64 bit installer.

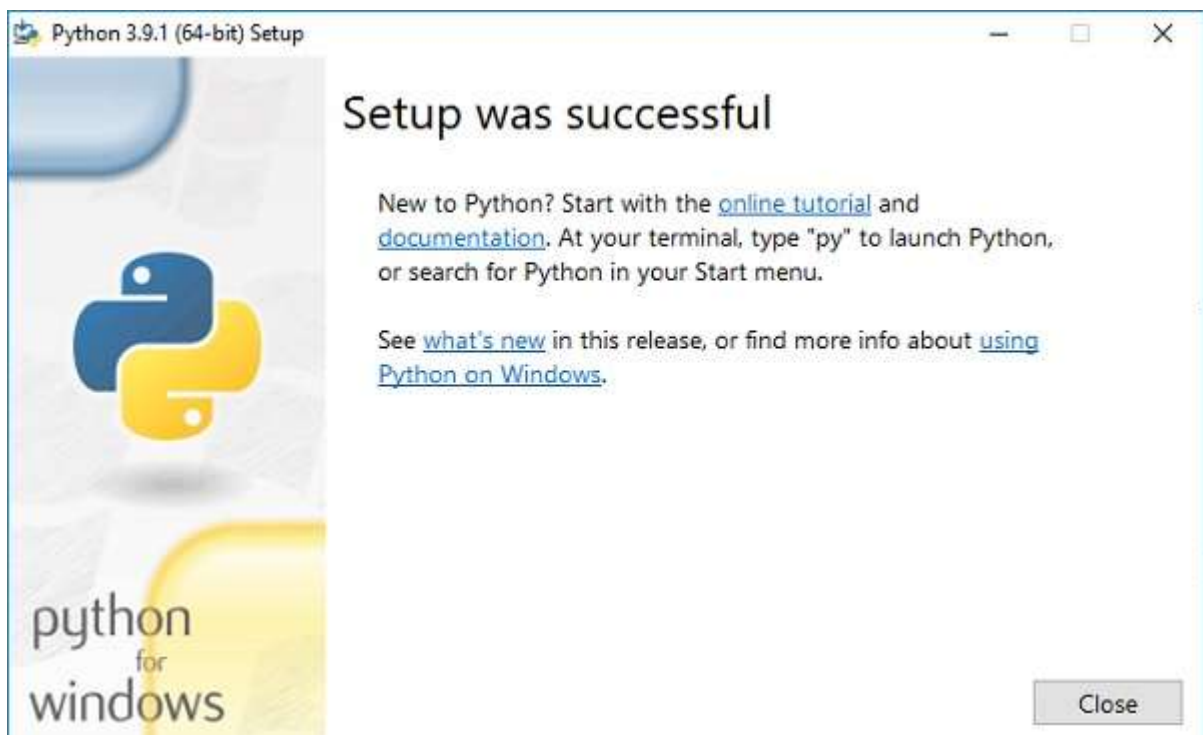
Run the installer. Make sure to select both the checkboxes at the bottom and then click Install New.



On clicking the Install Now, The installation process starts.



The installation process will take few minutes to complete and once the installation is successful, the following screen is displayed.



Step 4 – Verify Python is installed on Windows

To ensure if Python is successfully installed on your system. Follow the given steps –

- Open the command prompt.
- Type 'python' and press enter.

- The version of the python which you have installed will be displayed if the python is successfully installed on your windows.

```
Command Prompt - python
Microsoft Windows [Version 10.0.17134.1304]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Inderjit Singh>python
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec 7 2020, 17:08:21) [MSC v.1927 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> _
```

Step 5 – Verify Pip was installed

Pip is a powerful package management system for Python software packages. Thus, make sure that you have it installed.

To verify if pip was installed, follow the given steps –

- Open the command prompt.
- Enter pip -V to check if pip was installed.
- The following output appears if pip is installed successfully.

```
Command Prompt
Microsoft Windows [Version 10.0.17134.1304]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Inderjit Singh>pip -V
pip 20.2.3 from c:\users\inderjit singh\appdata\local\programs\python\python39\lib\site-packages\pip (python 3.9)

C:\Users\Inderjit Singh>
```

We have successfully installed python and pip on our Windows system.

Anaconda Installation

Note

Using Anaconda in a commercial setting? You may need to purchase a license to stay compliant with our [Terms of Service](#). This can be accomplished through [Anaconda Commercial Edition](#), [Anaconda Team Edition](#), or [Anaconda Enterprise](#). If you have already purchased Commercial Edition, please proceed to the [Authenticating Commercial Edition](#) section after completing your installation here. Haven't purchased Commercial Edition yet? Visit <https://anaconda.cloud/register> to get started.

1. [Download the Anaconda installer](#).
2. RECOMMENDED: Verify data integrity with SHA-256. For more information on hashes, see [What about cryptographic hash verification?](#)
3. Double click the installer to launch.

Note

To prevent permission errors, do not launch the installer from the [Favorites](#) folder.

Note

If you encounter issues during installation, temporarily disable your anti-virus software during install, then re-enable it after the installation concludes. If you installed for all users, uninstall Anaconda and re-install it for your user only and try again.

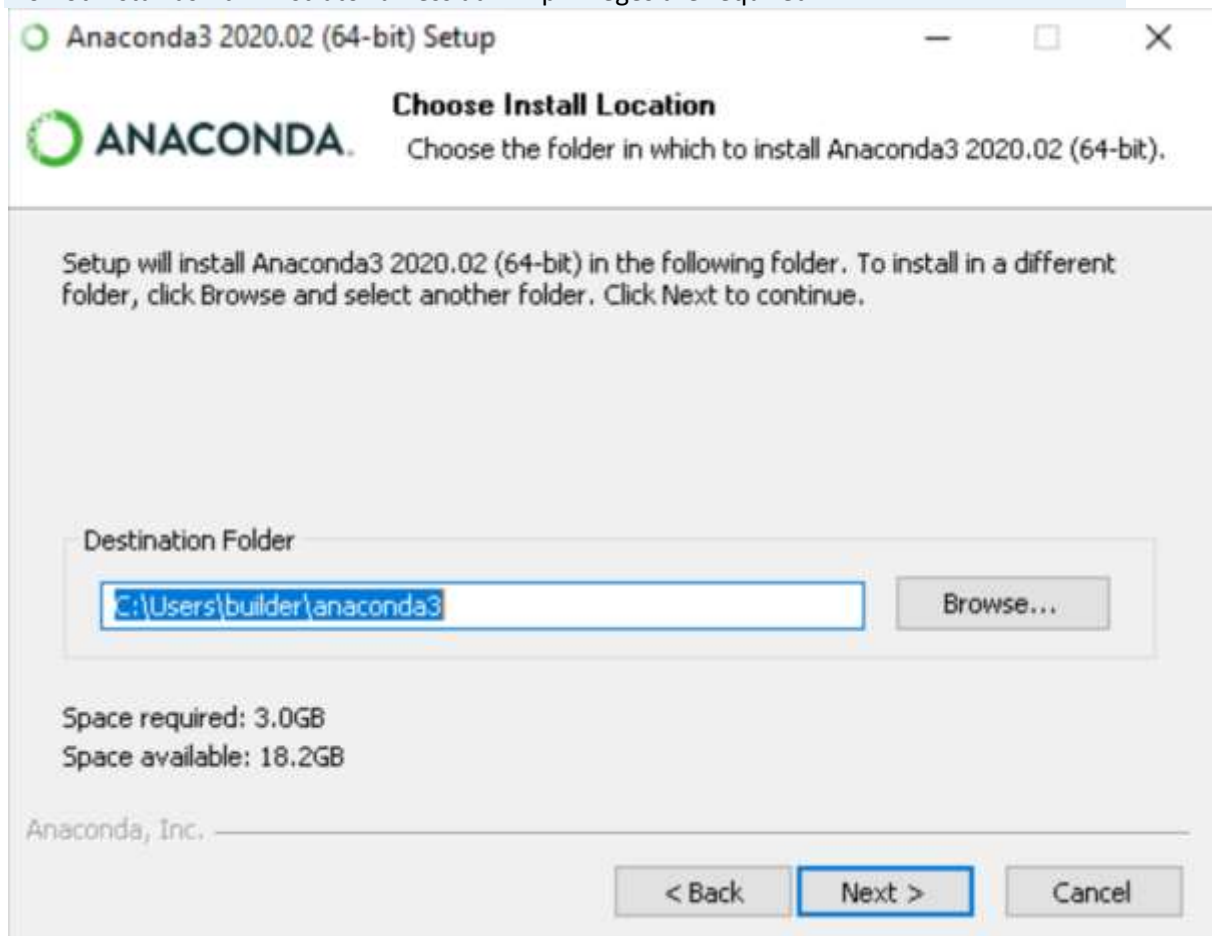
4. Click Next.
5. Read the licensing terms and click "I Agree".
6. Select an install for "Just Me" unless you're installing for all users (which requires Windows Administrator privileges) and click Next.
7. Select a destination folder to install Anaconda and click the Next button. See [FAQ](#).

Note

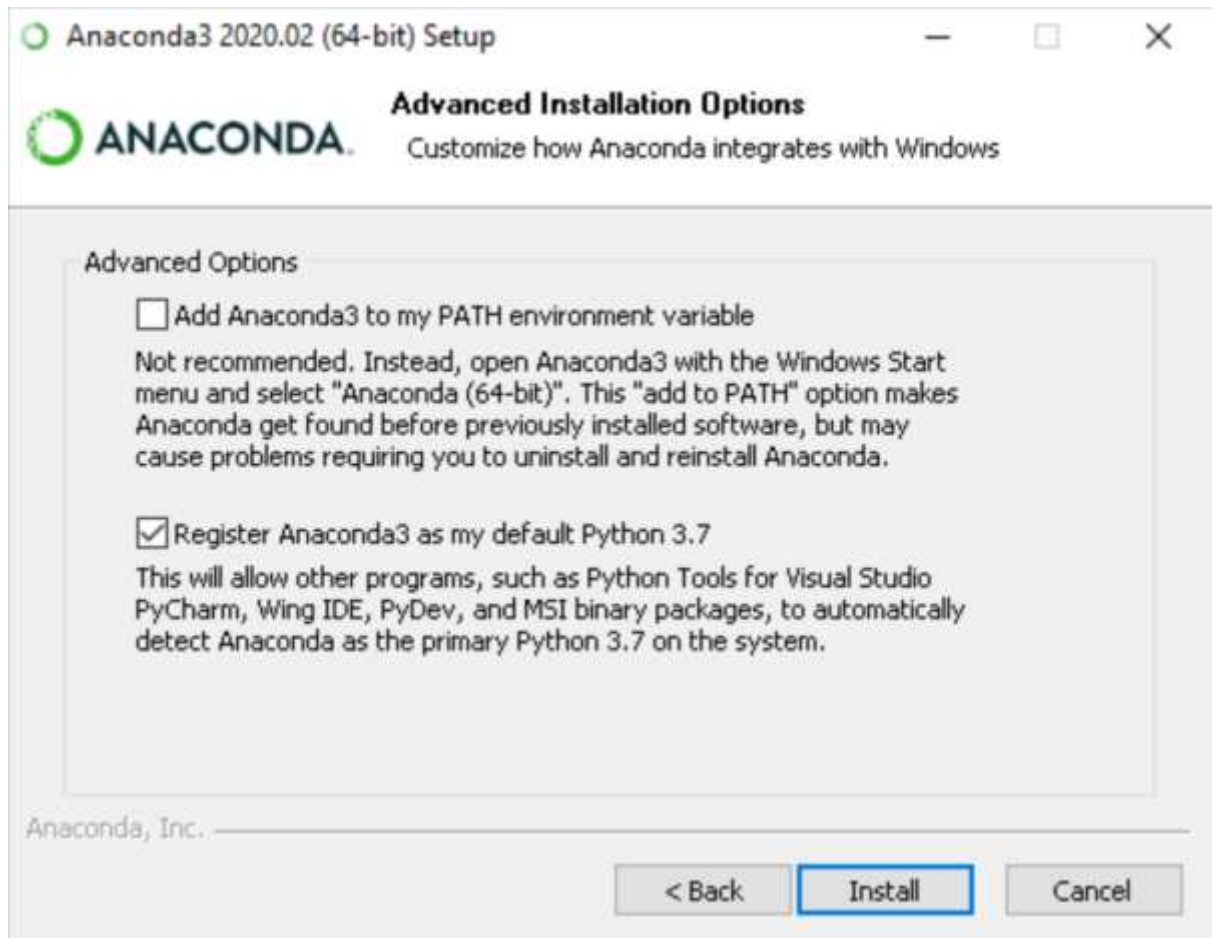
Install Anaconda to a directory path that does not contain spaces or unicode characters.

Note

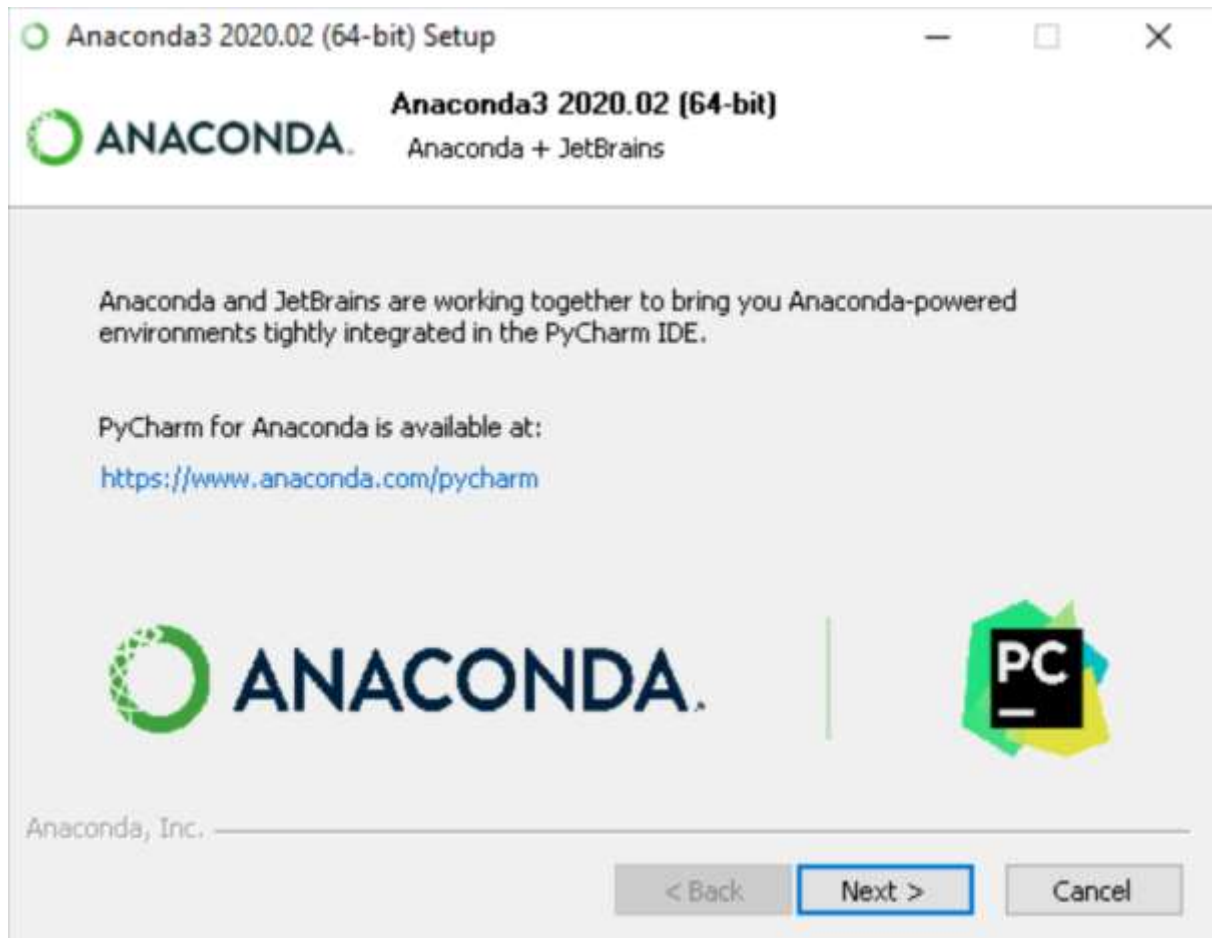
Do not install as Administrator unless admin privileges are required.



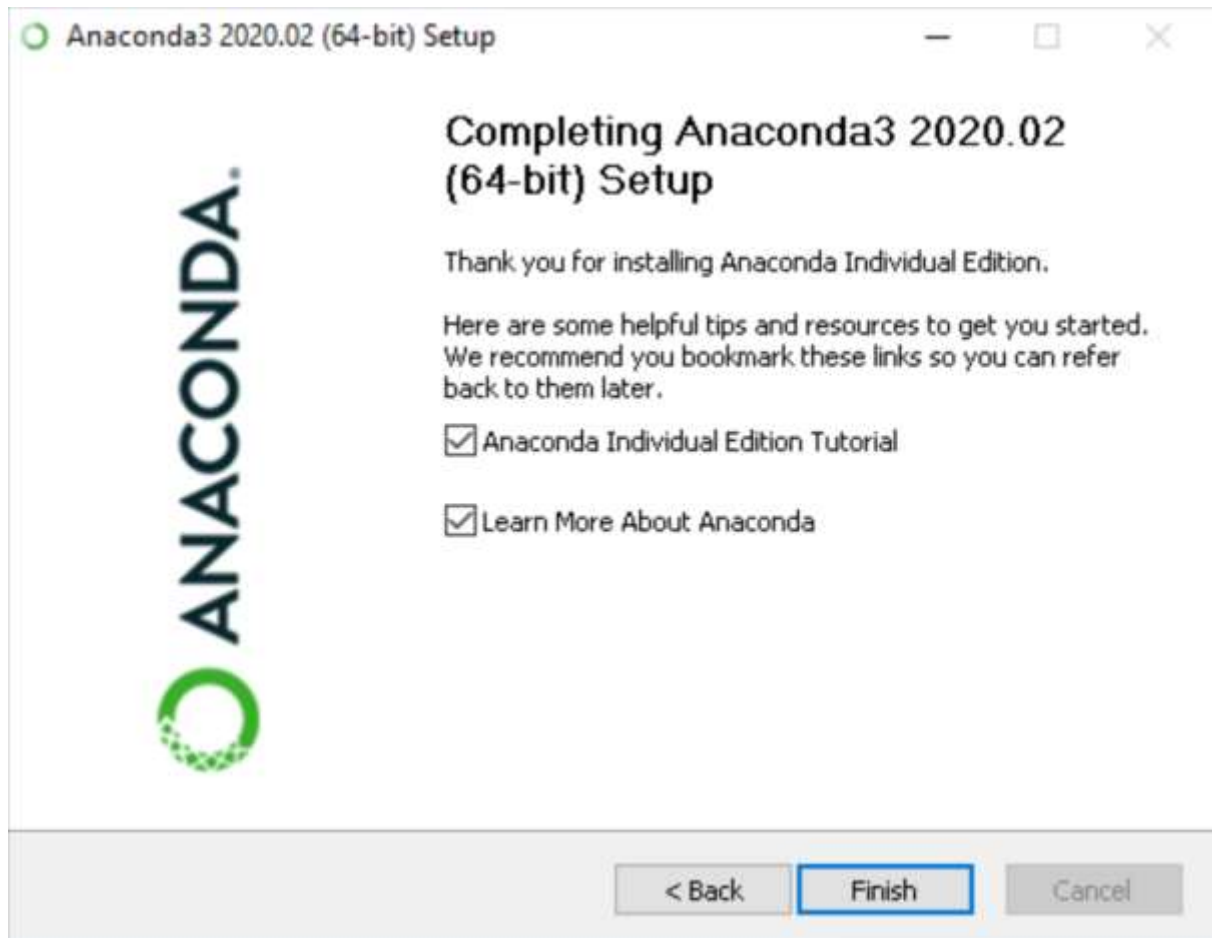
8. Choose whether to add Anaconda to your PATH environment variable. We recommend not adding Anaconda to the PATH environment variable, since this can interfere with other software. Instead, use Anaconda software by opening Anaconda Navigator or the Anaconda Prompt from the Start Menu.



9. Choose whether to register Anaconda as your default Python. Unless you plan on installing and running multiple versions of Anaconda or multiple versions of Python, accept the default and leave this box checked.
10. Click the Install button. If you want to watch the packages Anaconda is installing, click Show Details.
11. Click the Next button.
12. Optional: To install PyCharm for Anaconda, click on the link to <https://www.anaconda.com/pycharm>.



- Or to install Anaconda without PyCharm, click the Next button.
13. After a successful installation you will see the “Thanks for installing Anaconda” dialog box:



14. If you wish to read more about Anaconda.org and how to get started with Anaconda, check the boxes “Anaconda Individual Edition Tutorial” and “Learn more about Anaconda”. Click the Finish button.
15. Verify your installation.