

Python Introduction.

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Python is a widely used general-purpose, high level programming language. It was created by Guido van Rossum in 1991 and further developed by the Python Software Foundation. It was designed with an emphasis on code readability, and its syntax allows programmers to express their concepts in fewer lines of code.

Python is a programming language that lets you work quickly and integrate systems more efficiently.

There are two major Python versions: **Python 2 and Python 3**. Both are quite different.

Python is a high-level, interpreted, and general-purpose dynamic programming language that focuses on code readability. It generally has small programs when compared to Java and C. It was founded in 1991 by developer Guido Van Rossum. Python ranks among the most popular and fastest-growing languages in the world. Python is a powerful, flexible, and easy-to-use language. In addition, the python community is very active. It is used in many organizations as it supports multiple programming paradigms. It also performs automatic memory management.

Advantages:

- Presence of third-party modules
- Extensive support libraries(NumPy for numerical calculations, Pandas for data analytics, etc.)
- Open source and large active community base
- Versatile, Easy to read, learn and write
- User-friendly data structures
- High-level language
- Dynamically typed language(No need to mention data type based on the value assigned, it takes data type)
- Object-Oriented and Procedural Programming language
- Portable and Interactive
 - Ideal for prototypes provide more functionality with less coding

- Highly Efficient(Python's clean object-oriented design provides enhanced process control, and the language is equipped with excellent text processing and integration capabilities, as well as its own unit testing framework, which makes it more efficient.)
- Internet of Things(IoT) Opportunities
- Interpreted Language
- Portable across Operating systems

Applications:

- GUI-based desktop applications
- Graphic design, image processing applications, Games, and Scientific/computational Applications
- Web frameworks and applications
- Enterprise and Business applications
- Operating Systems
- Education
- Database Access
- Language Development
- Prototyping
- Software Development
- Data Science and Machine Learning
- Scripting

Organizations using Python:

- Google (Components of Google spider and Search Engine)
- Yahoo(Maps)
- YouTube
- Mozilla
- Dropbox
- Microsoft
- Cisco
- Quora
- Facebook



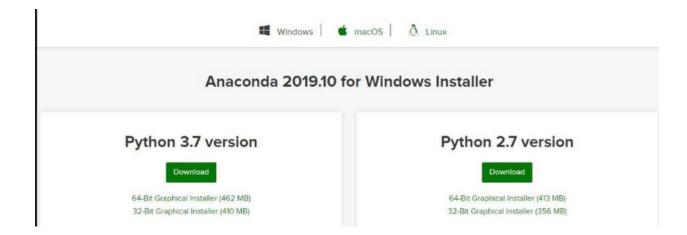
How to Install Anaconda on Windows?

Anaconda is an open-source software that contains Jupyter, spyder, etc that are used for large data processing, data analytics, heavy scientific computing. Anaconda works for R and <u>python programming language</u>. Spyder(sub-application of Anaconda) is used for python. Opency for python will work in spyder. Package versions are managed by the package management system called conda.

To begin working with Anaconda, one must get it installed first. Follow the below instructions to Download and install Anaconda on your system:

Download and install Anaconda:

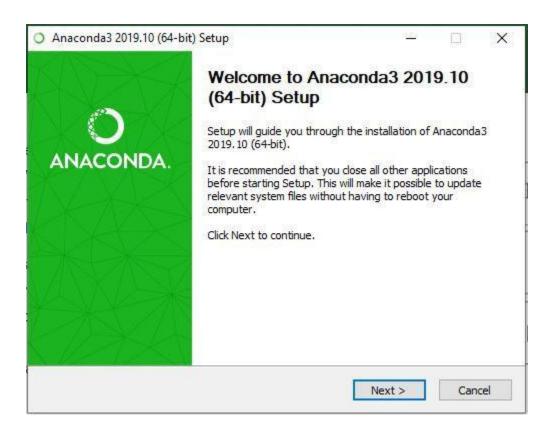
Head over to anaconda.com and install the latest version of Anaconda. Make sure to download the "Python 3.7 Version" for the appropriate architecture.





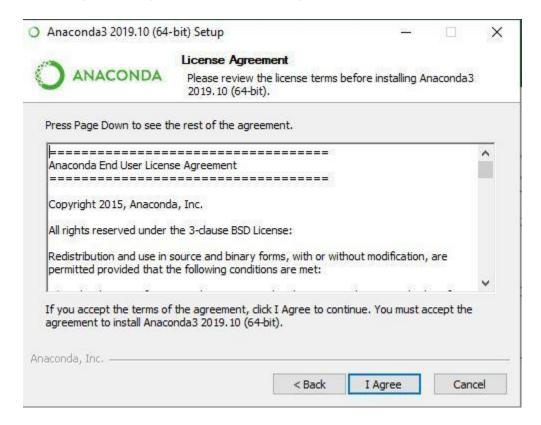
Begin with the installation process:

• Getting Started:



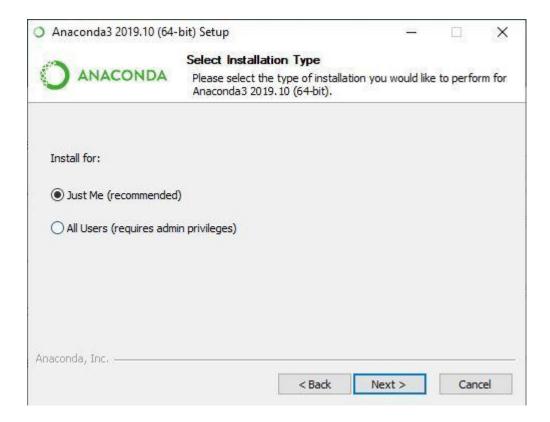


Getting through the License Agreement:



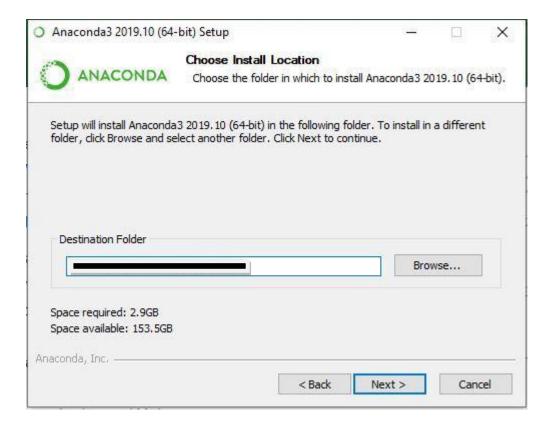


 Select Installation Type: Select Just Me if you want the software to be used by a single User



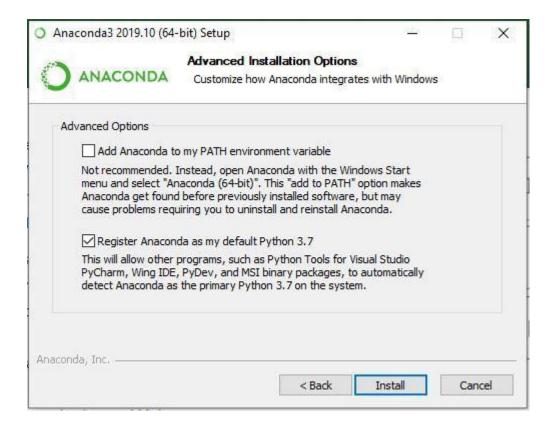


Choose Installation Location:



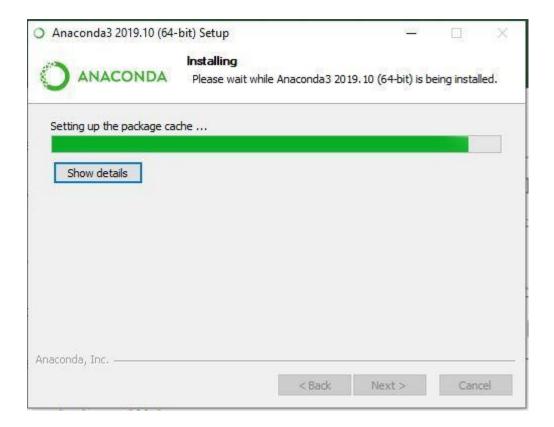


. Advanced Installation Option:





Getting through the Installation Process:





• Recommendation to Install Pycharm:





• Finishing up the Installation:





Working with Anaconda:

Once the installation process is done, Anaconda can be used to perform multiple operations. To begin using Anaconda, search for Anaconda Navigator from the Start Menu in Windows

