

Learning Path and Resources for Python

1. Python and its IDE Installation

The easiest way to get everything is to download the Anaconda Distribution. It comes with Python, Jupyter Lab, and many useful packages such as Numpy, Pandas, Matplotlib, etc. [Jupyter Lab](#) is the most popular Python IDE for data science. In addition, you may also need a code editor, I would recommend VS Code and its Python extension.

- [Anaconda Distribution](#)
- [Visual Studio Code + Python Extension](#)

2. Python as a language

Before anything else, you should learn Python as a programming language. You need to have a solid understanding of its syntax and data structures. No matter what packages you will use and what tasks you want to accomplish, you will be using Python, after all. It is *not* a wise choice to jump to something like cleaning your data with Pandas. You need to believe that the time you invest upfront to be proficient in Python will save you much more time later on randomly searching the internet while trying to debug your code.

For the first-time programmers, I would highly recommend the following two courses taught by Professor Charles R. Severance. You can audit both of them on Coursera for free.

- [Programming for Everybody \(Getting Started with Python\)](#)
- [Python Data Structures](#)

Professor Severance has also written a textbook, and each of its chapter is followed by a glossary, which should clarify those programming and Python terms you will hear frequently. As a Python beginner for data science purpose, you only need to carefully read first ten chapters except chapter 7 and quickly scan through chapter 14.

- [Python for Everybody](#)

If you are a more experienced programmer, *A Byte of Python* might be a better choice.

- [A Byte of Python](#)

In addition, the official Python tutorial is also a well-written and concise introduction to Python. You should at least scan through the chapter 10 and 11 to have a sense of its standard library.

- [The Python Tutorial](#)