

Python for Data Science Bootcamp

Discover Python and data science with no prior coding or math experience required. You'll learn the fundamentals of Python and libraries, including pandas and scikit-learn. By the end of the Python for Data Science bootcamp, you'll be able to manipulate and analyze data with Python and create beautiful data visualizations.

Group classes in NYC and onsite training is available for this course. For more information, email nyc@careercenters.com or visit: <https://www.careercenters.com/courses/python-data-science-nyc>



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Course Outline

Section 1

Introduction to Programming

- History of Computers
- Understanding Hardware
- Writing First Program ("Hello World")

Variables & Data Types

- Strings, Integers, Floats, Boolean, etc.
- Assigning Variables
- Operators

Section 2

Control Flow

- Define motivation behind control flow
- If, If-Else, Elif, Switch Statements

Complex Data Types

- Initializing Lists
- Printing Lists
- List functions such as length, append, pop, etc.
- Introduction to Dictionaries & their structures

Loops

- Define the motivation behind using a loop
- For, While, Do-While, For Each loops

- Error Handling

Functions

- Identify when to use a function
- Syntax & Implementation
- Arguments & Return values

Section 3

Object Oriented Programming

- Introduction to O.O.P paradigm
- Introduction to Objects, Classes, Instances
- Inheritance, Abstraction, and Sets

Section 4

Advanced Python

- File Input
- User Input
- List Comprehension
- Packages

Section 5

Data Science

- Introduction to Data Science
- Review Python Fundamentals
- Understanding the data science discipline
- Pandas
- Data set reading
- Filtering, Cleaning, Manipulating Data
- Excel vs Python

Data Visualization

- Matplotlib Package
- Understanding motivations between different graphs

Machine Learning

- Sci-Kit Learn package
- Understand motivation and definition of machine learning