

Python for Data Science Bootcamp

Learn the fundamentals of Python and object-oriented programming in this 5-day intensive course. You'll gain a solid understanding of Python, with a strong emphasis on using libraries and frameworks for data science.

Course Outline

Section 1

Introduction to Programming

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

Variables & Data Types

- Strings, Integers, 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

Contact

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