COURSE SYLLABUS

Python for Data Science Bootcamp (Self-Paced)

Unlock the power of Python for data-driven decision-making as you master Python programming fundamentals and dive into data analysis. Acquire essential skills to clean and manipulate data, create insightful visualizations, and perform statistical analysis, all through hands-on projects with real-world datasets.

Group classes (Live Online) and onsite training are available for this course. For more information, email onsite@graduateschool.edu or visit: https://www.graduateschool.edu/courses/python-data-science-online



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Course Outline

Python Fundamentals

Data Types & Variables

- Statements & Expressions
- Variables
- Integers & Floats
- Strings

Data Structures & Attributes

- Functions & Methods
- Lists
- Indexing & Slicing
- Booleans

Structuring Programs

Complex Data Structures & Control Flow

- Dictionaries
- Conditional Statements
- For Loops
- Creating Functions

Packages & Object Oriented Programming

- Classes & Objects

- Modules & Imports
- Packages & Documentation

Arrays & Dataframes

NumPy

- Arrays
- Universal Functions
- Boolean Indexing

Pandas

- Pandas Dataframes
- Pandas Series & dtypes
- Column Manipulation
- Descriptive Statistics

Analyzing & Visualizing Data

Data Analysis

- Filtering & Cleaning Data
- Groupby Operations
- Pivot Tables

Data Visualization

- Plotting with Matplotlib
- Bar Charts
- Scatter Plots
- Histograms
- Customizing Visualizations