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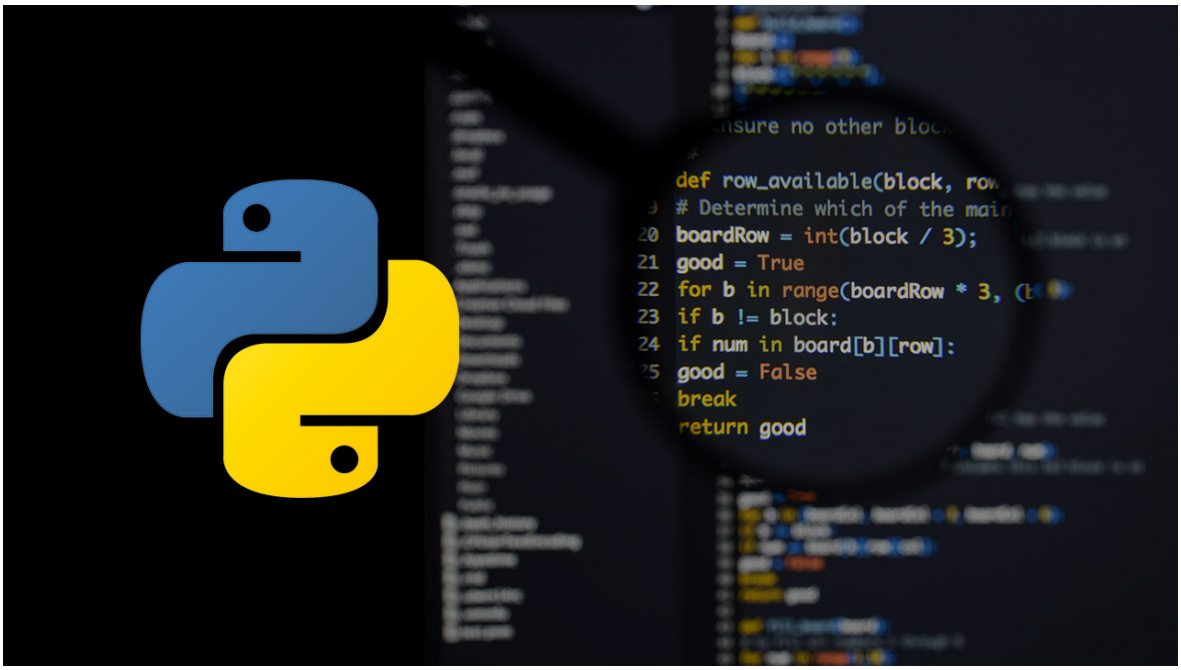
Learning Style: Virtual Classroom

Provider:

Difficulty: Beginner

Course Duration: 2 Days

Hands-on Python Essentials Primer for Data Scientists (TTPS4809)



About this course:

Python 3.x Essentials an **introductory and beyond**-level practical, hands-on Python training course that leads the student from the basics of writing and running Python scripts to more advanced features such as file operations and beginning to use the extensive functionality of Python modules. Extra emphasis is placed on features unique to Python that are essential to data analysts and scientists, such as tuples, array slices, and output formatting. This interactive course provides an exploration of working with the core programming language, not just an academic overview of syntax and grammar. Students will have a solid foundation to further

explore Python in Data Science, network administration, automation or web development.

The average salary of a data scientist with Python skills is **$93,185** per year.

Course Objective:

Working within in an engaging, hands-on learning environment, guided by our expert Python practitioner, students will learn to:

- Create working Python scripts following best practices
- Use python data types appropriately
- Read and write files
- Get familiar with the standard library and its work-saving modules
- Know when to use collections such as lists, dictionaries, and sets
- Understand Pythonic features such as comprehensions and iterators

Audience and Prerequisite:

The course will benefit advanced data scientists, data analysts, website administrators, system administrators, who are looking to learn the usage of Python for data-based operation and analysis.

Course Outline:

Module 1: An Overview of Python

- What is python?
- Advantages/Disadvantages of Python
- Getting help with pydoc

Module 2: The Python Environment

- Starting Python
- Using the interpreter
- Running a Python script
- Python scripts on Unix/Windows
- Editors, IDEs, and Notebooks
- Session: Getting Started
- Using variables
- Builtin functions
- Strings
- Numbers
- Converting among types
- Writing to the screen
- Command line parameters

Module 3: Flow Control

- About flow control
- White space
- Conditional expressions
- Relational and Boolean operators
- While loops

Module 4: Sequences

- About sequences
- Lists and list methods
- Tuples
- Indexing and slicing
- Iterating through a sequence
- Sequence functions, keywords, and operators
- List comprehensions
- Nested sequences

Module 5: Working with files

- File overview
- Opening a text file
- Reading a text file
- Writing to a text file

Module 6: Dictionaries and Sets

- About dictionaries
- Creating dictionaries
- Iterating through a dictionary
- About sets
- Creating sets
- Working with sets

Module 7: Functions

- About functions
- Function parameters
- Returning values

Module 8: Using Modules

- The import statement
- Module search path
- Zipped libraries
- Creating Modules
- Function and Module aliases

Module 9: Using the Standard Library

- Paths, directories, and filenames

- Math functions
- Random numbers
- Dates and times

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