Python for Data Science: Hands-on Technical Overview (TTPS4873)

Category: AI, Data & Analytics | **Vendor:** Trivera Tech

Duration: 16.00 hours (2 days) **13.0 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

This course introduces data analysts and business analysts (as well as anyone interested in Data Science) to the Python programming language, as it's often used in Data Science in web notebooks. This goal of this course is to provide students with a baseline understanding of core concepts that can serve as a platform of knowledge to follow up with more in-depth training and real-world practice.

About This Course

This course introduces data analysts and business analysts (as well as anyone interested in Data Science) to the Python programming language, as it's often used in Data Science in web notebooks. This goal of this course is to provide students with a baseline understanding of core concepts that can serve as a platform of knowledge to follow up with more in-depth training and real-world practice.

Who Should Attend

This introductory-level course is intended for Business Analysts and Data Analysts (or anyone else in the data science realm) who are already comfortable working with numerical data in Excel or other spreadsheet environments. No prior programming experience is required, and a browser is the only tool necessary for the course.

Prerequisites & Entry Requirements

General Prerequisites:

This course is geared for data analysts, developers, engineers or anyone tasked with utilizing Python for data analytics tasks. While
there are no specific programming prerequisites, students should be comfortable working with files and folders and should not be
afraid of the command line and basic scripting.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

This course is approximately 50% hands-on, combining expert lecture, real-world demonstrations and group discussions with machine-based practical labs and exercises. Our engaging instructors and mentors are highly experienced practitioners who bring years of current 'on-the-job' experience into every classroom. Throughout the hands-on course students, will learn to leverage Python scripting for data science (to a basic level) using the most current and efficient skills and techniques.
Working in a hands-on learning environment, guided by our expert team, attendees will learn about and explore (to a basic level):
How to work with Python interactively in web notebooks
The essentials of Python scripting
Key concepts necessary to enter the world of Data Science via Python

Detailed Course Outline

An Overview of Python

- Why Python
- Python in the Shell
- Python in Web Notebooks (iPython, Jupyter, Zeppelin)
- Demo: Python, Notebooks, and Data Science

Getting Started

- Using variables
- Builtin functions
- Strings
- Numbers
- Converting among types
- Writing to the screen
- Command line parameters

Flow Control

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

Sequences, Arrays, Dictionaries and Sets

- About sequences
- Lists and list methods
- Tuples
- Indexing and slicing
- Iterating through a sequence
- Sequence functions, keywords, and operators
- List comprehensions
- Generator Expressions
- Nested sequences
- Working with Dictionaries
- Working with Sets

Working with files

- File overview
- Opening a text file
- Reading a text file
- Writing to a text file
- Reading and writing raw (binary) data

Functions

- Defining functions
- Parameters
- Global and local scope
- Nested functions
- Returning values

Essential Demos

- Sorting
- Exceptions
- Importing Modules
- Classes
- Regular Expressions

The standard library

- Math functions
- The string module

Dates and times

- Working with dates and times
- Translating timestamps
- Parsing dates from text
- Formatting dates
- Calendar data

Python and Data Science

- Data Science Essentials
- Pandas Overview
- NumPy Overview
- SciKit Overview
- MatPlotLib Overview
- Working with Python in Data Science

, An Overview of Python

Why Python

Python in the Shell

Python in Web Notebooks (iPython, Zeppelin)

Demo: Python, and Data Science

Getting Started

Using variables

Builtin functions

Strings

Numbers

Converting among types

Writing to the screen

Command line parameters

Running standalone scripts under Unix and Windows

Flow Control

About flow control

White space

Conditional expressions

Relational and Boolean operators

While loops

Alternate loop exits

Sequences, Dictionaries and Sets

About sequences

Lists and list methods

Tuples

Indexing and slicing

Iterating through a sequence

Sequence functions, and operators

List comprehensions

Generator Expressions

Nested sequences

Working with Dictionaries

Working with Sets

Working with files

File overview

Opening a text file

Reading a text file

Writing to a text file

Reading and writing raw (binary) data

Functions

Defining functions

Parameters

Global and local scope

Nested functions

Returning values

Sorting

The sorted() function

Alternate keys

Lambda functions

Sorting collections

Using operator.itemgetter()

Reverse sorting

Errors and Exception Handling

Syntax errors

Exceptions

Using try/catch/else/finally

Handling multiple exceptions

Ignoring exceptions

Essential Demos

Importing Modules

Classes

Regular Expressions

The standard library

Math functions

The string module

Dates and times

Working with dates and times

Translating timestamps

Parsing dates from text

Formatting dates

Calendar data

numpy

numpy basics

Creating arrays

Indexing and slicing

Large number sets

Transforming data

Advanced tricks

Python and Data Science

Data Science Essentials

Working with Python in Data Science

Working with Pandas

pandas overview

Dataframes

Reading and writing data

Data alignment and reshaping

Fancy indexing and slicing

Merging and joining data sets

Time Permitting

matplotlib

Creating a basic plot

Commonly used plots

Ad hoc data visualization

Advanced usage

Exporting images

Additional Course Details

Nexus Humans Python for Data Science: Hands-on Technical Overview (TTPS4873) training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the Python for Data Science: Hands-on Technical Overview (TTPS4873) course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for Python for Data Science: Hands-on Technical Overview (TTPS4873)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 2-day Python for Data Science: Hands-on Technical Overview (TTPS4873) course provides up to 13.0 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Python for Data Science: Hands-on Technical Overview (TTPS4873) training?

The training takes place over 2 day(s), with each day lasting approximately 16.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Python for Data Science: Hands-on Technical Overview (TTPS4873)?

Yes, we provide corporate training, dedicated training, and closed classes for Python for Data Science: Hands-on Technical Overview (TTPS4873). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Python; Data Science; Data Anlaysis; Machine Learning

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Q: Why choose Nexus Human for Python for Data Science: Hands-on Technical Overview (TTPS4873)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Python for Data Science: Hands-on Technical Overview (TTPS4873) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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