Python for Data Science

Category: Software Development & Programming | **Vendor:** Various

Duration: 14.00 hours (2 days) **11.4 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

Did you know that data professionals spend up to 80% of their time cleaning and preparing data? Python is the industry’s go-to language for streamlining this process, making it an essential tool for anyone looking to analyze, visualize, and derive insights from data. Master the complete data science tech stack essential for landing a job at the world’s leading companies. This Python for Data Science course takes a structured, in-depth approach, helping you not only learn how to apply data science but also why it matters. Through a carefully balanced mix of real-world case studies and the mathematical theory behind key data science algorithms, you'll develop both the practical skills and foundational understanding needed to excel in the field. Please note, this course is able to be offered in either 3 full day sessions or 5 evening sessions. See the schedule below.

About This Course

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Who Should Attend

Intermediate Python developers looking to use Python to explore and visualize large or complex data sets. Check out our Introduction to Python course if you’re new to Python.

Prerequisites & Entry Requirements

General Prerequisites:

To be successful in this course, learners should have the level of knowledge and experience gained from Introduction to Python

Learning Outcomes

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

The Python for Data Science course teaches the fundamentals of Python for data analysis and visualization. Participants will work with key libraries like Pandas, NumPy, Matplotlib, and Seaborn to clean, transform, and analyze data. They will create interactive visualizations to communicate insights effectively and apply their skills through hands-on projects using Jupyter Notebook and real-world datasets.

Detailed Course Outline

1. Introduction to Python for Data Science

- Overview of Python and its role in data science
- Setting up Python environments (Anaconda, Jupyter Notebooks)
- Writing and running Python scripts

2. Working with Jupyter Notebooks

- Introduction to Jupyter Notebooks
- Markdown and code cells
- Running, saving, and sharing notebooks

3. Numerical Computing with NumPy

- Understanding arrays and their advantages
- Creating and manipulating NumPy arrays
- Mathematical operations and broadcasting

4. Data Manipulation with Pandas

- Understanding Series and DataFrames
- Importing and exploring datasets
- Filtering, sorting, and transforming data

5. Data Input and Output (I/O)

- Reading and writing Excel files
- Working with CSV files
- Connecting and querying SQL databases

6. Converting Datasets to Pandas DataFrames

- Transforming structured and unstructured data
- Importing datasets from APIs and web sources

7. Advanced Data Handling

- Altering specific data using custom functions
- Handling missing data – filling, dropping, and imputing values
- Aggregating data using group operations

8. Data Visualization with Matplotlib

- Creating fully customizable plots
- Implementing custom figures and axis
- Adding labels, legends, and annotations

9. Statistical Data Visualization with Seaborn

- Creating scatter plots
- Generating distribution plots
- Visualizing summary statistics with box plots

10. Hands-on Projects and Real-World Applications

- Data analysis case studies
- End-to-end data science project
- Best practices for working with large datasets

Frequently Asked Questions

Q: What delivery options are available for Python for Data Science?

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 course provides up to 11.4 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Python for Data Science training?

The training takes place over 2 day(s), with each day lasting approximately 14.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Python for Data Science?

Yes, we provide corporate training, dedicated training, and closed classes for Python for Data Science. 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: Why choose Nexus Human for Python for Data Science?

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 training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

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