Data Science Projects with Python

Category: AI, Data & Analytics | **Vendor:** Logical Operations

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 is designed to give you practical guidance on industry-standard data analysis and machine learning tools in Python, with the help of realistic data. The course will help you understand how you can use pandas and Matplotlib to critically examine a dataset with summary statistics and graphs, and extract the insights you seek to derive.You will continue to build on your knowledge as you learn how to prepare data and feed it to machine learning algorithms, such as regularized logistic regression and random forest, using the scikit-learn package. You ll discover how to tune the algorithms to provide the best predictions on new and unseen data. As you delve into later sections, you ll be able to understand the working and output of these algorithms and gain insight into not only the predictive capabilities of the models but also their reasons for making these predictions.

About This Course

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Who Should Attend

If you are a data analyst, data scientist, or a business analyst who wants to get started with using Python and machine learning techniques to analyze data and predict outcomes, this book is for you. Basic knowledge of computer programming and data analytics is a must. Familiarity with mathematical concepts such as algebra and basic statistics will be useful.

Learning Outcomes

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

By the end of this course, you will have the skills you need to confidently use various machine learning algorithms to perform detailed data analysis and extract meaningful insights from data.

Detailed Course Outline

Data Exploration and Cleaning

- Python and the Anaconda Package Management System
- Different Types of Data Science Problems
- Loading the Case Study Data with Jupyter and pandas
- Data Quality Assurance and Exploration
- Exploring the Financial History Features in the Dataset
- Activity 1: Exploring Remaining Financial Features in the Dataset

Introduction to Scikit-Learn and Model Evaluation

- Introduction
- Model Performance Metrics for Binary Classification
- Activity 2: Performing Logistic Regression with a New Feature and Creating a Precision-Recall Curve

Details of Logistic Regression and Feature Exploration

- Introduction
- Examining the Relationships between Features and the Response
- Univariate Feature Selection: What It Does and Doesn't Do
- Building Cloud-Native Applications
- Activity 3: Fitting a Logistic Regression Model and Directly Using the Coefficients

The Bias-Variance Trade-off

- Introduction
- Estimating the Coefficients and Intercepts of Logistic Regression
- Cross Validation: Choosing the Regularization Parameter and Other Hyperparameters
- Activity 4: Cross-Validation and Feature Engineering with the Case Study Data

Decision Trees and Random Forests

- Introduction
- Decision trees
- Random Forests: Ensembles of Decision Trees
- Activity 5: Cross-Validation Grid Search with Random Forest

Imputation of Missing Data, Financial Analysis, and Delivery to Client

- Introduction
- Review of Modeling Results
- Dealing with Missing Data: Imputation Strategies
- Activity 6: Deriving Financial Insights
- Final Thoughts on Delivering the Predictive Model to the Client

Additional Course Details

Nexus Humans Data Science Projects with Python 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 Data Science Projects with Python 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 Data Science Projects with Python?

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 Data Science Projects with Python 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 Data Science Projects with Python 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 Data Science Projects with Python?

Yes, we provide corporate training, dedicated training, and closed classes for Data Science Projects with Python. 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 Data Science Projects with Python?

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 Data Science Projects with Python 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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