Hands-on Predicitive Analytics with Python (TTPS4879)

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

Duration: 24.00 hours (3 days) **19.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

Hands-on Predictive Analytics with Python®is a three-day, hands-on course that guides students through a step-by-step approach to defining problems and identifying relevant data. Students will learn how to perform data preparation, explore and visualize relationships, as well as build models, tune, evaluate, and deploy models.® Each stage has relevant practical examples and efficient Python code.®

About This Course

Predictive analytics is an applied field that employs a variety of quantitative methods using data to make predictions. It involves much more than just throwing data onto a computer to build a model. This course provides practical coverage to help you understand the most important concepts of predictive analytics. Using practical, step-by-step examples, we build predictive analytics solutions while using cutting-edge Python tools and packages.

Hands-on Predictive Analytics with Python is a three-day, hands-on course that guides students through a step-by-step approach to defining problems and identifying relevant data. Students will learn how to perform data preparation, explore and visualize relationships, as well as build models, tune, evaluate, and deploy models. Each stage has relevant practical examples and efficient Python code. You will work with models such as KNN, Random Forests, and neural networks using the most important libraries in Python's data science stack: NumPy, Pandas, Matplotlib, Seaborn, Keras, Dash, and so on. In addition to hands-on code examples, you will find intuitive explanations of the inner workings of the main techniques and algorithms used in predictive analytics

Who Should Attend

Foundation-level Predictive Analytics with Python skills for Intermediate skilled team members new to these skills. This is not a basic class.

Prerequisites & Entry Requirements

General Prerequisites:

This course is geared for Python experienced attendees who wish to learn and use basic machine learning algorithms and concepts.

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. Working in a hands-on learning environment, guided by our expert team, attendees will learn to:

- Understand the main concepts and principles of predictive analytics
- Use the Python data analytics ecosystem to implement end-to-end predictive analytics projects
- Explore advanced predictive modeling algorithms w with an emphasis on theory with intuitive explanations
- Learn to deploy a predictive model's results as an interactive application
- Learn about the stages involved in producing complete predictive analytics solutions
- Understand how to define a problem, propose a solution, and prepare a dataset
- Use visualizations to explore relationships and gain insights into the dataset
- Learn to build regression and classification models using scikit-learn
- Use Keras to build powerful neural network models that produce accurate predictions
- Learn to serve a model's predictions as a web application

Detailed Course Outline

The Predictive Analytics Process

Technical requirements

What is predictive analytics

Reviewing important concepts of predictive analytics

The predictive analytics process

A quick tour of Python's data science stack

Problem Understanding and Data Preparation

Technical requirements

Understanding the business problem and proposing a solution

Practical project €œ diamond prices

Practical project €œ credit card default

Dataset Understanding €œ Exploratory Data Analysis

Technical requirements

What is EDA

Univariate EDA

Bivariate EDA

Introduction to graphical multivariate EDA

Predicting Numerical Values with Machine Learning

Technical requirements

Introduction to ML

Practical considerations before modeling

MLR

Lasso regression

KNN

Training versus testing error

Predicting Categories with Machine Learning

Technical requirements

Classification tasks

Credit card default dataset

Logistic regression

Classification trees

Random forests

Training versus testing error

Multiclass classification

Naive Bayes classifiers

Introducing Neural Nets for Predictive Analytics

Technical requirements

Introducing neural network models

Introducing TensorFlow and Keras

Regressing with neural networks

Classification with neural networks

The dark art of training neural networks

Model Evaluation

Technical requirements

Evaluation of regression models

Evaluation for classification models

The k-fold cross-validation

Model Tuning and Improving Performance

Technical requirements

Hyperparameter tuning

Improving performance

Implementing a Model with Dash

Technical requirements

Model communication and/or deployment phase

Introducing Dash

Implementing a predictive model as a web application

Additional Course Details

Nexus Humans Hands-on Predicitive Analytics with Python (TTPS4879) 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 Hands-on Predicitive Analytics with Python (TTPS4879) 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 Hands-on Predicitive Analytics with Python (TTPS4879)?

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 3-day Hands-on Predicitive Analytics with Python (TTPS4879) course provides up to 19.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Hands-on Predicitive Analytics with Python (TTPS4879) training?

The training takes place over 3 day(s), with each day lasting approximately 24.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Hands-on Predicitive Analytics with Python (TTPS4879)?

Yes, we provide corporate training, dedicated training, and closed classes for Hands-on Predicitive Analytics with Python (TTPS4879). 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

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Q: Why choose Nexus Human for Hands-on Predicitive Analytics with Python (TTPS4879)?

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 Hands-on Predicitive Analytics with Python (TTPS4879) 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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