neos AI

Course 3

Advanced Machine Learning Practices (Unsupervised)

PRICE: $2,450 / participant **DURATION:** 2 days

FOR: Developers / BI Analysts / Consultants / Statisticians / Marketing Specialists / IT Professionals

DESCRIPTION

Are you a developer, analyst, statistician, marketing specialist or IT professional? Do you have data and you seek to discover the hidden behavioral patterns? Do you want to perform sentiment analysis on social media, texts or profile your customers? Do you want to master the use of clustering models? This training is for you!

Designed by Data Science and Artificial Intelligence professionals, this 2-day training is an intensive and immersive course that addresses the application of unsupervised learning approaches or clustering, using the most advanced tools and programming languages used in the field including R and Python.

Through a series of practical case studies, you will acquire applied experience in the main clustering concepts to discover interesting models, extract useful knowledge, and support decision making.

You will be guided, step by step, into the world of machine learning. Each module of the course is practice-oriented, with labs where participants will have the chance to develop new skills: Ask the right questions, manipulate data, apply clustering models and create visualizations to communicate the results.

LEARNING OBJECTIVE

With this course, the participants will be able to:

- Identify the key elements for the implementation of a clustering approach
- Describe and execute unsupervised machine learning algorithms
- Use libraries (R/Python) for Machine Learning
- Reuse code snippets in their real-world projects

PREREQUISITIES

The participant must have:

- Basic knowledge of programming
- Basic knowledge of mathematics/statistics
- Basic knowledge of R/Python programming would be a plus

PRIOR TO STARTING THE COURSE

A participant must have:

- A laptop with a decent configuration: 8Go of RAM, 500Go of disk space, Intel I3 or higher is a minimum requirement
- Installed software required for training (an installation manual will be provided prior to training)
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COURSE OUTLINE

- Introduction to unsupervised approaches
    - Definitions, concepts, and challenges
    - Processes
- Identification of the learning problem
- Presentation of R/Python modules for unsupervised learning
- Data preparation:
    - Initial exploration
    - Preprocessing and transformation
- K-means algorithm
    - Apply the model to real-life cases
    - Parameter Tuning
    - Evaluation and validation measures
    - Result interpretation
- Association Rule Learning Algorithm
    - Apply the model to real-life cases
    - Evaluation and validation measures
    - Result interpretation
- Model comparison and interpretation
- Application project: a case study for algorithm application