Addinsoft
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ADDINSOFT DATA SCIENCE MADE SIMPLE

INTRODUCTION TO STATISTICS AND MULTIVARIATE ANALYSIS WITH XLSTAT-BASIC+

This course covers the most commonly used data analysis methods in a wide variety of fields, including research, biostatistics, marketing, sensometrics, finance and industry. The methods are illustrated with numerous examples and implemented in XLSTAT Basic+, with an in-depth interpretation of the results. Participants will have time to practice on real data provided by the instructor. At the end of the course, participants should be able to quickly find and implement appropriate statistical methods to answer their own data-related questions using XLSTAT Basic+.

Duration: 21 hours (5 days)
Location: Training available in person at your premises, or online via videoconference
Price (excluding VAT):

- Inter-company online training : $1580,00 per participant
- Intra-company online training : $3950,00 per training
- Intra-company on site training : $3950,00 per training + trainer's travel expenses

Trainee profile:
Anyone who wants to learn to use the XLSTAT-Basic+ software package
Employees - Executives - Researchers - Students

Required experience:

- Basic experience in using Microsoft Excel
- Some knowledge of basic statistical tools (the course provide some reminders)

Training objectives

Upon completion of this course, the trainee will be able to:

- Use the XLSTAT software
- Analyze data using multivariate methods
- Interpret the results of multivariate analyzes

Training syllabus

Day 1:

- Introduction
  - Discussion, personal introductions
  - A few definitions: individuals, variables, sample, population
  - Preparation of a dataset for analysis
- Univariate and bivariate descriptive statistics
  - Quantitative variables: mean, standard deviation, variance, median, quartiles, histograms, box plots, scatter plots

- Categorical variables: sorting, mode, bar chart, crosstabs

Day 2:

- Multivariate exploratory statistics
  - Reducing dimensionality: Principal Component Analysis, Correspondence Analysis
  - Clustering data: Hierarchical Ascending Classification, k-means
- Statistical tests
  - Null hypothesis significance testing & p-values
  - Parametric vs. non-parametric tests
  - Comparison & association tests

Day 3:

- Statistical modeling
  - Introduction
  - Linear Regression
  - One-way ANOVA and multiple comparisons
  - 2-way ANOVA and interaction effects
  - ANCOVA
- Machine learning
  - Introduction to supervised and unsupervised Machine Learning

Training organization

Teaching staff:

Jean-Paul Maalouf is a senior statistics consultant who joined the Addinsoft team in 2014. He holds a PhD in biology and has extensive experience in teaching statistics, which he has been doing intensively since 2012. He has taught at the largest French research institutions (INRA, CNRS, INSERM, CIRAD, several universities), as well as at private companies around the world. His teaching methods are based on a conceptual approach and are more focused on concrete examples than on the explanation of complex mathematical formulas. The concepts are thus easily grasped by people who do not necessarily have a background in mathematics but wish to become quickly operational in the field of data analysis.

Teaching techniques:

- Trainees are welcomed in a dedicated virtual classroom
- Training materials are projected
- Theoretical presentations
- Concrete case studies
- Support documents are provided online after the training
- An XLSTAT license key (the latest version) is provided for the duration of the training
- Trainees must use their own computers with their license keys previously installed

Follow-up: evaluating training participation and results

- Attendance sheets

- Situational exercises with case studies (datasets will be provided)
- Certificate of completion

Accessibility for disabled people:
People with disabilities who wish to take this course can contact us directly, so we can examine together the best way to proceed.

Prior access to the course before it begins: 2 days

Online training: The link to the virtual classroom will be sent by email the week before the course starts.

Contact: For further information, you can contact us by email at: training@xlstat.com or by phone at (646) 412 3348.