Addinsoft
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ADDINSOFT | DATA SCIENCE MADE SIMPLE

SENSORY DATA ANALYSIS WITH XLSTAT-SENSORY

This course covers the main methods of sensory analysis and the appropriate statistical analyses, from data collection, through routine processing of sensory and consumer studies (establishment of a sensory profile, panel performance evaluation, segmentation of consumers, etc.) to the processing of specific tests (analysis of multiple tables, preference mapping, ...). The trainer provides numerous examples based on real data to allow the participants to become familiar with the practice of sensory data analysis with XLSTAT-Sensory. An important part of the training is the interpretation of the results. At the end of the course, participants will be able to quickly find and implement the relevant statistical methods to meet their own needs using XLSTAT-Sensory.

Duration: 21 hours (3 days)
Location: Training available in person at your premises, or online via videoconference
Price (excluding VAT):
- Inter-company online training : $1750,00 per participant
- Intra-company online training : $4350,00 per training
- Intra-company on site training : $4350,00 per training + trainer's travel expenses

Trainee profiles:
- Anyone who wants to learn how to use XLSTAT-Sensory
- Researchers in the field of sensory analysis
- Quality control and/or R&D technicians
- Engineers

Required experience:
- Knowledge of basic statistical tools.
- Basic experience using Microsoft Excel

Training Objectives

- Be capable of performing statistical tests
- Conduct an ANOVA
- Carry out multivariate analyses
- Perform multi-table analyses
- Perform preference mapping
- Carry out discrimination and defect identification tests on a product
- Learn about temporal sensory methods

Training syllabus

- Introduction : statistics and sensory analysis (sensometrics)
    - Collecting sensory data:

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- The different types of data
- Typical presentation formats: complete blocks, incomplete blocks, Latin squares, Williams designs, MOLS
  - o Descriptive statistics and different visualizations:
    - Unidimensional analysis (main graphs and indicators)
    - Bivariate analysis (main graphs and indicators)

- Simple product description, relationship between two sensory attributes.
  - o Statistical tests: parametric and non-parametric approaches:
    - Conditions for the use of statistical tests
    - Best practices
    - Standard tests: Student, Friedman, Wilcoxon, Mann-Whitney, Kruskal-Wallis, etc.

- Statistically significant difference between 2 products.
  - o Analysis of variance (ANOVA):
    - One and two factor ANOVA
    - Extension to more complex models (more than 2 factors, random effect)

- Product effect analysis and multiple product comparisons in a hedonic test; Panel performance study (discriminating power, reproducibility, homogeneity)
  - o Multivariate analysis:
    - Principal Component Analysis (PCA)
    - Factorial analysis of simple and multiple correspondences (FCA and MCA)
    - Hierarchical Ascending Classification (HAC)

- Construction of a sensory "product space"; Definition of product groups, descriptors or consumer segments.
  - o Multiple table analysis:
    - Multiple Factor Analysis (MFA)
    - Generalized Procrustes Analysis (GPA)

- Introduction to holistic and rapid sensory methods (napping, flash profile, etc.).
  - o Preference mapping:
    - Internal mapping
    - External mapping

- How to link consumer preferences to product sensory characteristics.
  - o Product discrimination tests:
    - Basic principle of discrimination tests
    - Overview of the triangle test
  - o A product defect identification test: Penalty analysis
  - o Temporal methods for sensory evaluation:
    - Basic principle of temporal methods
    - Time-Intensity (TI)
    - Temporal Dominance of Sensations (TDS)

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Training organization

Teaching staff:

After working as a statistician in a service company and then as head of scientific calculation for L'Oréal R&I, **Damien Brémaud** is now an independent sensometrics consultant.

He holds a master's degree in econometrics and has nearly 20 years of experience in sensometrics, during which he has provided numerous training courses in applied statistics to private companies (from SMEs to large groups) in food, cosmetics, transport, optics, tobacco, sports and more…

He is a member of the Board of Directors of the SFAS (French Society of Sensory Analysis) and the SFdS (French Society of Statistics) for the Agro-Industry group. He is also a lecturer for the "Sensory and Innovation in Food" master's at the University of Tours.

Teaching techniques:

- Trainees are welcomed in a dedicated virtual classroom
- Training materials are projected.
- Theoretical presentations
- Concrete case studies
- Quizzes
- Support documents are provided online after the training.

Follow-up: evaluating training participation and results

- Attendance sheets
- Oral and written questions
- Situational exercises, scenarios
- Training evaluation forms
- Certificate of completion of the training course

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.

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