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## Advanced Predictive Modeling Using IBM SPSS Modeler (v18)

### Information

**Length:** 1.0 Day  
**Ref:** 0A037G-X  
**Delivery method:** Classroom  
**Price:** EUR

### Overview

This course builds on the courses Predictive Modeling for Categorical Targets Using IBM SPSS Modeler (v18) and Predictive Modeling for Continuous Targets Using IBM SPSS Modeler (v18). It presents advanced techniques to predict categorical and continuous targets. Before reviewing the modeling techniques, data preparation issues are addressed such as partitioning and detecting anomalies. Also, a method to reduce the number of fields to a number of core fields, referred to as components or factors, is presented. Advanced classification models, such as Decision List, Support Vector Machines and Bayes Net, are reviewed. Methods are presented to combine individual models into a single model in order to improve predictive power, including running and evaluating many models in a single run, both for categorical and continuous targets.

### Public

Users of IBM SPSS Modeler responsible for building predictive models who want to leverage the full potential of classification models in IBM SPSS Modeler.

### Prerequisites

- General computer literacy
- Experience using IBM SPSS Modeler including familiarity with the Modeler environment, creating streams, reading data files, exploring data, setting the unit of analysis, combining datasets, deriving and reclassifying fields, and basic knowledge of modeling.
- Prior completion of Introduction to Predictive Models using IBM SPSS Modeler (v18) is recommended.
- Familiarity with basic modeling techniques, either through completion of the courses Predictive Modeling for Categorical Targets Using IBM SPSS Modeler and/or Predictive Modeling for Continuous Targets Using IBM SPSS Modeler, or by experience with predictive models in IBM SPSS Modeler.

### Objective

Please refer to course overview.

### Topics

1. Preparing Data for Modeling
  - Address general data quality issues
  - Handle anomalies
  - Select important predictors
  - Partition the data to better evaluate models
  - Balance the data to build better models
2. Reducing Data with PCA/Factor
  - Explain the basic ideas behind PCA/Factor
  - Customize two options in the PCA/Factor node
3. Using Decision List to Create Rulesets
  - Explain how Decision List builds a ruleset
  - Use Decision List interactively
  - Create rulesets directly with Decision List
4. Exploring advanced predictive models
  - Explain the basic ideas behind SVM
  - Customize two options in the SVM node
  - Explain the basic ideas behind Bayes Net
  - Customize two options in the SVM node
5. Combining Models
  - Use the Ensemble node to combine model predictions
  - Improve the model performance by meta-level modeling
6. Finding the Best Predictive Model
  - Find the best model for categorical targets with AutoClassifier
  - Find the best model for continuous targets with AutoNumeric

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