

# Clustering and Association Modeling Using IBM SPSS Modeler

## Course Outline

### 1: Introduction to clustering and association models

- Identify the association and clustering modeling techniques available in IBM SPSS Modeler
- Explore the association and clustering modeling techniques available in IBM SPSS Modeler
- Discuss when to use a particular technique on what type of data

### 2: Clustering models and K-Means clustering

- Identify basic clustering models in IBM SPSS Modeler
- Identify the basic characteristics of cluster analysis
- Recognize cluster validation techniques
- Understand K-Means clustering principles
- Identify the configuration of the K-means node

### 3: Clustering using the Kohonen network

- Identify the basic characteristics of the Kohonen network
- Understand how to configure a Kohonen node
- Model a Kohonen network

### 4: Clustering using TwoStep clustering

- Identify the basic characteristics of TwoStep clustering
- Identify the basic characteristics of Two Step AS clustering
- Model and analyze a TwoStep clustering solution

### 5: Use Apriori to generate association rules

- Identify three methods of generating association rules
- Use the Apriori node to build a set of association rules
- Interpret association rules

#### 6: Use advanced options in Apriori

- Identify association modeling terms and rules
- Identify evaluation measures used in association modeling
- Identify the capabilities of the Association Rules node
- Model associations and generate rules using Apriori

#### 7: Sequence detection

- Explore sequence detection association models
- Identify sequence detection methods
- Examine the Sequence node
- Interpret the sequence rules and add sequence predictions to steams

#### 8: Advanced Sequence detection

- Identify advanced sequence detection options used with the Sequence node
- Perform in-depth sequence analysis
- Identify the expert options in the Sequence node
- Search for sequences in Web log data

#### A: Examine learning rate in Kohonen networks (Optional)

- Understand how a Kohonen neural network learns

#### B: Association using the Carma model (Optional)

- Review association rules
- Identify the Carma model
- Identify the Carma node
- Model associations and generate rules using Carma