Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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Introduction to Machine Learning Models Using IBM SPSS Modeler (V18.2)

CODE:	LENGTH:	PRICE:
0A079G	2 day(s)	£1,300.00

Description

This course provides an introduction to supervised models, unsupervised models, and association models. This is an application-oriented course and examples include predicting whether customers cancel their subscription, predicting property values, segment customers based on usage, and market basket analysis.

Objectives

Introduction to machine learning models • Taxonomy of machine learning models • Identify measurement levels • Taxonomy of supervised models • Build and apply models in IBM SPSS Modeler
Supervised models: Decision trees - CHAID • CHAID basics for categorical targets • Include categorical and continuous predictors • CHAID basics for continuous targets • Treatment of missing values
Supervised models: Decision trees - C&R Tree
• C&R Tree basics for categorical targets • Include categorical and continuous predictors • C&R Tree basics for continuous targets • Treatment of missing values
Evaluation measures for supervised models • Evaluation measures for categorical targets • Evaluation measures for continuous targets
Supervised models: Statistical models for continuous targets - Linear regression • Linear regression basics • Include categorical predictors • Treatment of missing values
Supervised models: Statistical models for categorical targets - Logistic regression • Logistic regression basics • Include categorical predictors • Treatment of missing values
Association models: Sequence detection • Sequence detection basics • Treatment of missing values
Supervised models: Black box models - Neural networks • Neural network basics • Include categorical and continuous predictors • Treatment of missing values
Supervised models: Black box models - Ensemble models • Ensemble models basics • Improve accuracy and generalizability by boosting and bagging • Ensemble the best models
Unsupervised models: K-Means and Kohonen • K-Means basics • Include categorical inputs in K-Means • Treatment of missing values in K-Means • Kohonen networks basics • Treatment of missing values in Kohonen
Unsupervised models: TwoStep and Anomaly detection • TwoStep basics • TwoStep assumptions • Find the best segmentation model automatically • Anomaly detection basics • Treatment of missing values
Association models: Apriori • Apriori basics • Evaluation measures • Treatment of missing values
Preparing data for modeling • Examine the quality of the data • Select important predictors • Balance the data

Audience

- Data scientists
- Business analysts
- Clients who want to learn about machine learning models

Prerequisites

- Knowledge of your business requirements

Programme

Introduction to machine learning models• Taxonomy of machine learning models• Identify measurement levels• Taxonomy of supervised models• Build and apply models in IBM SPSS ModelerSupervised models: Decision trees - CHAID• CHAID basics for categorical targets• Include categorical and continuous predictors• CHAID basics for continuous targets• Treatment of missing valuesSupervised models: Decision trees - C&R Tree• C&R Tree basics for categorical targets• Include categorical and continuous predictors• C&R Tree basics for continuous targets• Treatment of missing valuesEvaluation measures for supervised models• Evaluation measures for categorical targets• Evaluation measures for continuous targetsSupervised models: Statistical models for continuous targets - Linear regression• Linear regression basics• Include categorical predictors• Treatment of missing valuesSupervised models: Statistical models for categorical targets - Logistic regression• Logistic regression basics• Include categorical predictors• Treatment of missing valuesSupervised models: Black box models - Neural networks• Neural network basics• Include categorical and continuous predictors• Treatment of missing valuesSupervised models: Black box models - Ensemble models• Ensemble models basics• Improve accuracy and generalizability by boosting and bagging• Ensemble the best modelsUnsupervised models: K-Means and Kohonen• K-Means basics• Include categorical inputs in K-Means• Treatment of missing values in K-Means• Kohonen networks basics• Treatment of missing values in KohonenUnsupervised models: TwoStep and Anomaly detection• TwoStep basics• TwoStep assumptions• Find the best segmentation model automatically• Anomaly detection basics• Treatment of missing valuesAssociation models: Apriori• Apriori basics• Evaluation measures• Treatment of missing valuesAssociation models: Sequence detection• Sequence detection basics• Treatment of missing valuesPreparing data for modeling• Examine the quality of the data• Select important predictors• Balance the data

Further Information

Prior to enrolling, IBM Employees must follow their Division/Department processes to obtain approval to attend this public training class. Failure to follow Division/Department approval processes may result in the IBM Employee being personally responsible for the class charges.
GBS practitioners that use the EViTA system for requesting external training should use that same process for this course. Go to the EViTA site to start this process:
http://w3.ibm.com/services/gbs/evita/BCSVTEnrl.nsf
Once you enroll in a GTP class, you will receive a confirmation letter that should show:

- The current GTP list price
- The 20% discounted price available to IBMers. This is the price you will be invoiced for the class.

Session Dates

On request. Please contact us

Additional Information

This training is also available as onsite training. Please contact us to find out more.