ARROW

Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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Data Mining Predictive Analytics with Microsoft Analysis Services and Excel PowerPivot

CODE:	LENGTH:	PRICE:
MS-55040	3 days	$1,785.00

Description

This three-day instructor-led course will introduce the students to the concepts of data mining, machine learning and predictive analytics utilizing the Microsoft toolsets including SQL Server Analysis Services and Excel with PowerPivot and the Data Mining Add-ins.

Objectives

After completing this course, students will be able to:
Have a firm understanding of the concept of data mining.
Explore the user interface.
Use offline mode and immediate mode.
Create and configure a data source.
Create and configure data view.
Explore data.
Create and configure named calculation.
Create and configure named queries.
Walk-through a project to completion.
Explore the models.
Compare mining structures.
Use cross validation.
Create reports using Reporting Services.
Save queries.
Save results to the database.
Create multiple nested tables off of a case table.
Use Microsoft Association Rules Algorithm.
Use Microsoft Sequence Clustering Algorithm.
Use Microsoft Time Series Algorithm.
Use Microsoft Neural Network Algorithm.
Properly prepare data for mining.
Use Model Usage—Browse.
Use Model Usage—Query.
Use Accuracy and Validation.
Use Decision Trees.
Use Logistic Regression.
Use Naïve Bayes.
Use Neural Network.
Use Estimate Tool.
Use Cluster.
Use Associate Tool.
Use Forecast Tool.
Use Table Analysis Tools.
Use Visio Add-In.
Complete five different business scenarios that further reinforce the concepts learned.

Audience

This course is intended for Power Users, IT Professionals, Report Developers, BI Professionals, Project Managers and Team Leads interested in exploring the Microsoft toolsets for data mining, machine learning, and predictive analytics.

Prerequisites

Before attending this course, students must have:
Experience with Excel
Basic understanding of business analytics

Programme

Module 1: Introduction
This module explains how the class will be structured and introduces course materials and additional administrative information.
Lessons
Introduction
Course Materials
Facilities
Prerequisites
What We'll Be Discussing
After completing this module, students will be able to:
Successfully log into their virtual machine.
Have a full understanding of what the course intends to cover.
Module 2: Data Mining Concepts
This module will get students grounded in the terminology and concepts commonly utilized in data mining.
Lessons
Concepts and Terminology
Data Mining and Results
CRISP-DM
Business Problems for Data Mining
Models, Induction, and Prediction
Data Mining Tasks
Key Concepts
Lab : Data Mining Concepts
After completing this module, students will be able to:
Have a firm understanding of the concept of data mining.
Module 3: SQL Server Analysis Services Data Mining Tools
This module familiarizes the student with the data mining tools in SQL Server Analysis Services.
Lessons
Introduction to SQL Server Data Tools
Project Walk-Through
Stepping Through the Data Mining Wizard
Testing and Validation of Mining Models
Cross Validation
The Mining Model Prediction Tab
Reports
Lab : SQL Server Analysis Services Data Mining Tools
After completing this module, students will be able to:
Explore the user interface.
Use offline mode and immediate mode.
Create and configure a data source.
Create and configure data view.
Explore data.
Create and configure named calculations.
Create and configure named queries.
Walk-through a project to completion.
Explore the models.
Compare mining structures.
Use cross validation.
Create reports using Reporting Services.
Save queries.
Save results to the database.
Create multiple nested tables off of a case table.
Module 4: The Microsoft Data Mining Algorithms
This module explains the Microsoft implementations of the generic types of algorithms uses in data mining. The students will work with each algorithm and implement an example of each.
Lessons
Types of Data Mining Algorithms
Microsoft Decision Trees Algorithm
Microsoft Linear Regression Algorithm
Microsoft Clustering Algorithm

Microsoft Nave Bayes Algorithm
Microsoft Association Algorithm
Microsoft Sequence Clustering Algorithm
Microsoft Time Series Algorithm
Microsoft Neural Network Algorithm
Microsoft Logistic Regression Algorithm
Lab : The Microsoft Data Mining Algorithms
After completing this module, students will be able to:
Use Microsoft Association Rules Algorithm.
Use Microsoft Sequence Clustering Algorithm.
Use Microsoft Time Series Algorithm.
Use Microsoft Neural Network Algorithm.
Module 5: Excel PowerPivot Data Mining Add-ins
This module switches to the use of Excel with PowerPivot and the Data Mining Add-ins. Here the students will see the different
capabilities between Excel and SQL Server Analysis Services and learn to use the data mining features of Excel and generate
consumable reports from analytics and data mining.
Lessons
Data Mining Tab
Connection
Data Preparation
Management
Model Usage
Accuracy and Validation
Data Modeling
Visio Data Mining Add-In
Lab : Excel PowerPivot Data Mining Add-ins
After completing this module, students will be able to:
Properly prepare data for mining.
Use Model Usage—Browse and Document Model.
Use Model Usage—Query.
Use Accuracy and Validation.
Use Decision Trees.
Use Logistic Regression.
Use Nave Bayes.
Use Neural Network.
Use Estimate Tool.
Use Cluster.
Use Associate Tool.
Use Forecast Tool.
Use Table Analysis Tools.
Use Visio Add-In.
Module 6: Concept Reinforcement Scenarios
This module consists of five scenarios to help reinforce the concepts covered in this course.
Lessons
Scenario 1
Scenario 2
Scenario 3
Scenario 4
Scenario 5
Lab : Concept Reinforcement Scenarios
After completing this module, students will be able to:
Complete five different business scenarios that further reinforce the concepts learned.

Session Dates

On request. Please contact us

Additional Information

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