Oracle Database 11g: Data Mining Techniques

Duration: 2 Days

What you will learn

In this course, students review the basic concepts of data mining and learn how leverage the predictive analytical power of the Oracle Database Data Mining option by using Oracle Data Miner 11g Release 2. The Oracle Data Miner GUI is an extension to Oracle SQL Developer 3.0 that enables data analysts to work directly with data inside the database.
The Data Miner GUI provides intuitive tools that help you to explore the data graphically, build and evaluate multiple data mining models, apply Oracle Data Mining models to new data, and deploy Oracle Data Mining's predictions and insights throughout the enterprise. Oracle Data Miner's SQL APIs automatically mine Oracle data and deploy results in real-time. Because the data, models, and results remain in the Oracle Database, data movement is eliminated, security is maximized and information latency is minimized.

Related Training

Required Prerequisites

A working knowledge of: The SQL language and Oracle Database design and administration

Course Objectives

Explain basic data mining concepts and describe the benefits of predictive analysis

Understand primary data mining tasks

and describe the key steps of a data mining process

Use the Oracle Data Miner to build

evaluate

and apply multiple data mining models

Use Oracle Data Mining's predictions and insights to address many kinds of business problems

including: Predict individual behavior

Predict values

Find co-occurring events

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Learn how to deploy data mining results for real-time access by end-users

Course Topics

Introduction
Course Objectives
Suggested Course Pre-requisites
Suggested Course Schedule
Class Sample Schemas
Practice and Solutions Structure
Review location of additional resources (including ODM and SQL Developer documentation and online resources)

Overviewing Data Mining Concepts
What is Data Mining?
Why use Data Mining?
Examples of Data Mining Applications
Supervised Versus Unsupervised Learning
Supported Data Mining Algorithms and Uses

Understanding the Data Mining Process
Common Tasks in the Data Mining Process

Introducing Oracle Data Miner 11g Release 2
Data mining with Oracle Database
Introducing the SQL Developer interface
Setting up Oracle Data Miner
Accessing the Data Miner GUI
Identifying Data Miner interface components
Examining Data Miner Nodes
Previewing Data Miner Workflows

Using Classification Models
Reviewing Classification Models
Adding a Data Source to the Workflow
Using the Data Source Wizard
Creating Classification Models
Building the Models
Examining Class Build Tabs
Comparing the Models
Selecting and Examining a Model

Using Regression Models
Reviewing Regression Models
Adding a Data Source to the Workflow
Using the Data Source Wizard
Performing Data Transformations

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Creating Regression Models
Building the Models
Comparing the Models
Selecting a Model

Performing Market Basket Analysis
What is Market Basket Analysis?
Reviewing Association Rules
Creating a New Workflow
Adding a Data Source to th Workflow
Creating an Association Rules Model
Defining Association Rules
Building the Model
Examining Test Results

Using Clustering Models
Describing Algorithms used for Clustering Models
Adding Data Sources to the Workflow
Exploring Data for Patterns
Defining and Building Clustering Models
Comparing Model Results
Selecting and Applying a Model
Defining Output Format
Examining Cluster Results

Performing Anomaly Detection
Reviewing the Model and Algorithm used for Anomaly Detection
Adding Data Sources to the Workflow
Creating the Model
Building the Model
Examining Test Results
Applying the Model
Evaluating Results

Deploying Data Mining Results
Requirements for deployment
Deployment Tasks
Examining Deployment Options

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