

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.

Audience

Application Developers
Business Analysts
Data Warehouse Analyst
Database Administrators

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

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

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 the 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