Oracle - Oracle Database 11g: Data Mining Techniques

Code: D73528GC10
Length: 2 days
URL: View Online

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.

Skills Gained
- 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

Who Can Benefit
- Application Developers
- Business Analysts
- Data Warehouse Analyst
- Database Administrators

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

Course Details

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