Predictive Analytics using Oracle Data Mining

This Predictive Analytics using Oracle Data Mining Ed 1 training will review the basic concepts of data mining. Expert Oracle University instructors will teach you how to leverage the predictive analytical power of Oracle Data Mining, a component of the Oracle Advanced Analytics option.

Learn To:

- 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, apply, and deploy multiple data mining models.
- Use Oracle Data Mining's predictions and insights to address many kinds of business problems.
- Deploy data mining models for end-user access, in batch or real-time, and within applications.

Benefits to You

When you've completed this course, you'll be able to use the Oracle Data Miner 4.1, the Oracle Data Mining "workflow" GUI, which enables data analysts to work directly with data inside the database. The Data Miner GUI provides intuitive tools that help you 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 - Get Results in Real-Time

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

- Analyst
- Data Scientist
- Database Administrator

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, apply, and deploy multiple data mining models
- Use Oracle Data Mining's predictions and insights to address many kinds of business problems
- Deploy data mining models for batch or real-time access by end-users

Topics

- Introduction
    - Course Objectives
    - Suggested Course Prerequisites
    - Suggested Course Schedule
    - Class Sample Schemas
    - Practice and Solutions Structure
    - Review location of additional resources
- Predictive Analytics and Data Mining Concepts
    - What is the Predictive Analytics?
    - Introducing the Oracle Advanced Analytics (OAA) Option?
    - 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 the SQL Developer interface
- Introducing Oracle Data Miner 4.1
    - Data mining with Oracle Database
    - 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
    - Using Explore and Graph Nodes
    - Using the Column Filter Node
    - Creating Classification Models
    - Building the Models
    - Examining Class Build Tabs
- 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

- 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 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
- 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
- Mining Structured and Unstructured Data
  - Dealing with Transactional Data
  - Handling Aggregated (Nested) Data
  - Joining and Filtering data
  - Enabling mining of Text
  - Examining Predictive Results
- Using Predictive Queries
  - What are Predictive Queries?
  - Creating Predictive Queries
  - Examining Predictive Results
- Deploying Predictive models
  - Requirements for deployment
  - Deployment Options
  - Examining Deployment Options