Miami Dade College

Course Description

CAP4767 | Data Mining | 4.00 credits

Students will learn how to extract useful data from an organization's data warehouse and analyze it to uncover hidden patterns and relationships. An emphasis will be placed on unsupervised data mining techniques, as well as the use of the RapidMiner software. Prerequisites: CAP1788 and CAP2761C

Course Competencies:

Competency 1: The student will demonstrate an understanding of data mining concepts and techniques by:

1. Preparing the analysis services database
2. Building a targeted mailing structure
3. Adding and processing models
4. Exploring the targeted mailing models
5. Testing models
6. Creating and working with predictions

Competency 2: The student will demonstrate an understanding of data mining analysis services by:

1. Creating the intermediate data mining solution creating an intermediate data mining solution
2. Creating a data source

Competency 3: The student will demonstrate an understanding of how to build a forecasting scenario by:

1. Adding a data source view for forecasting
2. Specifying the requirements for a time series model
3. Creating a forecasting structure and model
4. Modifying the forecasting structure
5. Customizing and processing the forecasting model
6. Exploring the forecasting model and choosing the proper model
7. Creating time series predictions and advanced time-series predictions
8. Updating data in time series predictions
9. Replacing data in time series predictions
10. Comparing predictions for forecasting models

Competency 4: The student will demonstrate an understanding of how to build a market basket scenario by:

1. Adding a data source view with nested tables
2. Creating a market basket structure and model
3. Modifying and processing the market basket model
4. Exploring the market basket models
5. Filtering a nested table in a mining model
6. Predicting associations

Competency 5: The student will demonstrate an understanding of how to build a sequence clustering scenario by:

1. Creating a sequence clustering mining model structure
2. Processing the sequence clustering model
3. Exploring the sequence clustering model
4. Creating a related sequence clustering model
5. Generating predictions about a sequence clustering model

Competency 6: The student will demonstrate an understanding of how to build neural network and logistic regression models by:

1. Adding a data source view for call center data
2. Creating a neural network structure and model
3. Exploring the call center model

4. Adding a logistic regression model to the call center structure
5. Creating predictions for the call center models
6. Creating and querying data mining models using MDX and DAX