destiny
Business & Technology Consulting ^{SM}
Education Solutions

Enterprise Miner® Software

Course Length: 3 days   **CEUs** 1.8
Format: Hands on Training

AUDIENCE

This course teaches several predictive modeling techniques available in SAS/Enterprise Miner ®Software. Students learn the Enterprise Miner Interface. Predictive models based on Logistic Regression, Neural Networks and Decision Trees are developed.

BENEFITS

Students will be able to:
- Navigate the Enterprise Miner Interface
- Construct a Process Flow Diagram
- View Distribution Characteristics of Variables
- Transform Input Variables
- Sample and Subset Data
- Incorporate Sub-Diagrams into Process Flow Diagram
- Create HTML Summary Report of Enterprise Miner Project
- Generate and save SAS code created by Enterprise Miner
- Develop Logistic Regression Model
- Develop Neural Network Multilayer Perceptron Model (MLP)
- Develop Neural Network Cascade Model
- Develop Decision Tree Model
- Use Lift Charts and ROC curves to assess individual models and compare different models.
- Score data
- Create composite model from several models.

PREREQUISITES

- Programming I: SAS® Essentials course or equivalent understanding.
- Understand basic statistical concepts.
- Understand Linear and Logistic Regression.

COURSE TOPICS

Overview
- Concepts and terminology
- Overall Enterprise Miner capabilities
- Interface components

Create Process Flow Diagram
- Adding Nodes
- Opening nodes
- Modifying node parameters

- Running a diagram

Data Preparation
- Select data set
- Assign variable roles
- Partition data set into different model roles
- View variable distribution characteristics
- Transform variables
- Filter outliers
- Imputation techniques to replace missing values

Create Sub diagram
- Select nodes to include in sub-diagram
- Enter and Exit nodes for sub-diagram
- Collapse sub-diagram

Logistic Regression
- Default settings
- Selection criteria
- Setting probabilities for variables to enter and remain in model
- Significant variables
- Parameter estimates
- Misclassification rate and overall model assessment

Neural Networks
- Basic concepts and terminology
- Construct a Multilayer Perceptron Model
- Construct a Neural Network based on Principal Components
- Construct a Cascade Neural Network
- Modifying underlying architecture
- Changing model parameters
- Variable weights
- Training history
- Misclassification rate and overall model assessment

Decision Trees
- Basic concepts and terminology
- Tree structures
- Splitting Criteria
- Pruning
- Misclassification rate and overall model assessment

Score Data
- Score an independent data set
- Save score code to external file

- Use score code outside Enterprise Miner

Assess Model
- Assess individual models
- Compare models
- Lift chart
- ROC curve

Composite Model
- Combine several models to form composite model