Data Mining – A Practitioner's Course (2 Days)

This course provides an overview of various data mining techniques with examples of how they are used in various organizations such as retail, finance, biotechnology and social media. Case studies are used to allow participants to work through several data mining issues using the techniques described.

Data mining is the process of discovering interesting knowledge from large amounts of data. It is an interdisciplinary field with contributions from many areas, such as statistics, machine learning, information retrieval, pattern recognition and bioinformatics. Data mining is widely used in many domains, such as retail, finance, telecommunication and social media.

Objectives

- State the business opportunity as an analytics question.
- Identify the data mining options available to solve the business question.
- Plan for common data challenges.
- Apply data mining techniques relevant to the business question.

Prerequisites

This course will be accessible to students without prior training in quantitative research methods. However, students with a background in basic descriptive and inferential statistics will, most likely, get more out of the course.

Course Outline

Introduction to Data Mining
- Descriptive and Predictive
- Models and Algorithms
- Regression vs. Classification
- Supervised/Unsupervised Learning
- Data Mining Example

2. Data Analytics Framework
- Following a Process
- Potential Data Problems
- Analyzing and Exploring the Data

3. Data Mining Methods
- Descriptive Methods
- Clustering
- Association Rules
- Sequence Rules
- Predictive Methods
- Classification
- Regression
- Deviation Detection