



Data Warehousing

Duration- 2 Months

Introduction

Data Warehousing

Business Analysis and On-line Analytical processing (OLAP):

Basic Concepts

Data Warehousing Components

Building a Data

Warehouse

Database Architectures for Parallel Processing

Parallel DBMS

Vendors

Multidimensional Data Model

Data Warehouse Schemas for Decision Support

Concept Hierarchies

Characteristics of OLAP Systems

Typical OLAP Operations

OLAP and OLTP

Data Mining

Introduction: Introduction to Data Mining Systems

Knowledge Discovery Process

Data Mining Techniques

Issues

Applications

Data Objects and attribute types,

Statistical description of data

Data Preprocessing

- Cleaning,
- Integration
- Reduction,
- Transformation and discretization,
- Data Visualization
- Data similarity and dissimilarity measures



Data mining, frequent pattern Analysis:

Mining Frequent Patterns

Associations and Correlations

Mining Methods

- Pattern Evaluation Method –
- Pattern Mining in Multilevel, Multi Dimensional Space
- Constraint Based Frequent Pattern Mining
- Classification using Frequent Patterns

Classification and Clustering:

Decision Tree Induction

Bayesian Classification

Rule Based Classification

Classification by Back Propagation

Support Vector Machines

Lazy Learners

Model Evaluation and Selection-Techniques to improve Classification Accuracy.

Clustering Techniques

Cluster analysis

- Partitioning Methods
- Hierarchical Methods –
- Density Based Methods
- Grid Based Methods
- Evaluation of clustering –
- Clustering high dimensional data
- Clustering with constraints,

Outlier analysis

Outlier detection methods