



STANLEY
COLLEGE OF ENGINEERING & TECHNOLOGY FOR WOMEN
(Approved by AICTE , New Delhi | Affiliated to Osmania University ,Hyderabad)
Address : Chapel Road, Abids ,Hyderabad

CS-451

DATA MINING

UNIT-I

Introduction: Fundamentals of Data Mining, Kinds of Patterns can be mined, Technologies Used, Applications and Issues in Data Mining

Types of Data: Attribute types, Basic Statistical descriptions of Data, Measuring data Similarity and Dissimilarity

Data Preprocessing: Need of Preprocessing, Data Cleaning, Data Integration, Data Reduction, Data Transformation

UNIT-II

Data Warehouse and OLAP: Data Warehouse, Data Warehouse Modeling, Data Warehouse Design and Usage, Data Warehouse Implementation, Data Generalization by Attribute-oriented induction

UNIT-III

Mining Frequent Patterns, Associations and Correlations: Market Basket Analysis, Association rule mining, Frequent Item set mining methods, Pattern Evaluation methods, Constraint based frequent pattern mining, Mining Multilevel and Multidimensional patterns

UNIT-IV

Classification : General approach to classification, Classification by Decision Tree Induction , Bayes Classification methods, Bayesian Belief Networks, Classification by Backpropagation, Lazy Learners, Other Classification methods , Classification using Frequent patterns, Model Evaluation and selection

UNIT-V

Cluster Analysis: Basic Clustering methods, Partitioning methods, Density –Based Methods, Grid-based methods, and Evaluation of Clustering, Outlier Analysis and Detection methods

Data Mining Trends and Research Frontiers: Mining Complex Data Types, Data Mining Applications, Data Mining Trends

Suggested Reading:

Data Mining – Concepts and Techniques - Jiawei Han & Micheline Kamber and Jain Pei, Third Edition, India (2011).

References:

1. Data Mining Introductory and advanced topics – Margaret H Dunham, Pearson education
2. Data Mining Techniques – Arun K Pujari, University Press.
3. Data Warehousing in the Real World – Sam Anahory & Dennis Murray Pearson Edn
4. Data Warehousing Fundamentals – Paulraj Ponnaiah Wiley Student ed.
5. The Data Warehouse Life cycle Tool kit – Ralph Kimball Wiley student edition.