



STANLEY
COLLEGE OF ENGINEERING & TECHNOLOGY FOR WOMEN
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SE-516

DATA MINING

UNIT-I

Introduction : Challenges – Origins of Data Mining and Data mining Tasks

Data :Types of Data Quality – Data Preprocessing – Measures of similarity and Dissimilarity OLAP and Multidimensional Data Analysis.

UNIT-II

Classification : Preliminaries – General Approach to Solving a Classification Problem – Decision Tree Induction- Model Over fitting – Evaluating the Performance of a Classifier - Methods of Comparing Classifiers- Rule – Based Classifier.

UNIT-III

Classification : Nearest-Neighbor classifiers – Bayesian Classifiers – Artificial Neural Networks –Support Vector Machine – Ensemble Methods – Class Imbalance Problem – Multiclass Problem.

UNIT-IV

Association Analysis : Problem Definition – Frequent Item Set Generation – Rule Generation –Compact Representation of frequent Item Sets – Alternative Methods for Generating Frequent Item

Sets – FP-Growth Algorithms – Evaluation of Association patterns – Effect of Skewed Support Distribution – Handling Categorical Attributes a Handling Continuous Attributes - Handling a concept Hierarchy.

UNIT-V

Cluster Analysis : Overview – k-means –Agglomerative Hierarchical Clustering – DBSCAN Cluster evaluation on Characteristics of Data, Clusters, and Clustering Algorithms.

Suggested Reading:

1. Pang-Ning Tan Michael Steinbach, Vipin kumar, *“Introduction to Data Minings”*, Pearson Education.2008.
2. K.P. Soman, Shyam Diwakar, V.Ajay, *“Insight into Data Mining Theory and Practice”*, PHI.2010.
3. Arun K Pujari, *“Data Mining Techniques”*, University Press,2nd Edn, 2009.
4. Vikram Pudi P.Radha Krishna, *“Data Minings”*,Oxford University Press, Ist edition,2009.
5. S Sumathi, S N Sivanandam. *“Introduction to Data Mining and its Applications”*,Springer.2006