DATA WAREHOUSING AND DATA MINING LAB
(Common to CSE & IT)

Course Code : 15CT1140

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Course Outcomes:

At the end of the Course, the Student will be able to:

CO 1 Able to get the acquaintance to WEKA tool

CO 2 Competent to preprocess the data for mining

CO 3 Proficient in generating association rules

CO 4 Able to build various classification models

CO 5 Able to realise clusters from the available data

LIST OF EXPERIMENTS:

1. Basics of WEKA tool
   a. Investigate the Application interfaces.
   b. Explore the default datasets.
2. Pre-process a given dataset based on the following:
   a. Attribute Selection b.Handling Missing Values
   c. Discretization d. Eliminating Outliers
3. Pre-process a given dataset based on the following:
   a. Discretization b. Eliminating Outliers
4. Create a dataset in ARFF (Attribute-Relation File Format) for any given dataset and perform Market-Basket Analysis.
5. Generate Association Rules using the Apriori algorithm.
6. Generate Association Rules using the FP-Growth algorithm.
7. Build a Decision Tree by using ID3 algorithm.
8. Demonstration of classification rule process on a given dataset using Naïve Bayesian Classifier.

9. Demonstration of classification rule process on a given dataset using Back propagation (Multi-layer perceptron) Classifier.
10. Build various Regression models.
11. Cluster the given dataset by using the k-Means Clustering algorithm and visualize the cluster mean values and standard deviation of dataset attributes.
12. Cluster the given dataset by using the DBSCAN Clustering algorithm.
13. Cluster the given dataset by using the Expectation Maximization Clustering algorithm.

TEXT BOOKS:

JlaweiHan and Kamber,"Data Mining Concepts and Techniques", Third Edition, Elsevier, 2011.

REFERENCE:

Ian H.Witten,EibeFank, Mark A Hall, "Data Mining Practical Machine Learning Tools and Techniques", Third edition,Morgan Kaufmann Publishers, 2011.

WEB REFERENCE:

www.cs.waikato.ac.nz/ml/weka/downloading.html