SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)

(Established under section 3 of the UGC Act, 1956)
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Founder: Prof. Dr. S. B. Mujumdar, M. Sc., Ph. D. (Awarded Padma Bhushan and Padma Shri by President of India)

Course Name : Data Warehousing and Mining Lab

Course Code : TE7013

Faculty : Engineering

Course Credit : 1

Course Level : 4

Sub-Committee (Specialization) : Computer Science

Learning Objectives :

The students are able to:

Analyze multidimensional data using 'Online Analytical Processing' tool

Apply different data pre-processing steps on a data set

Experiment how to produce a quantitative analysis report/memo with the necessary information to make decisions

Demonstrate basic data mining algorithms, methods, and tool

Test and compare different data mining algorithms such as A-priori, Decision Tree Classifier, K-means clustering

Books Recommended :

Book	Author	Publisher
Data Mining Concepts and Techniques	J. Han, M. Kamber	Morgan Kaufmann Publishers, 2001.
Data mining: Concepts, models, methods and algorithms	M. Kantardzic	John Wiley & Sons Inc., 2003.
Database System Concepts Fifth Edition	Avi Silberschatz Henry F. Korth S. Sudarshan	McGraw-Hill

Course Outline :

Sr. No.	Topic	Actual Teaching Hours	Contact Hours Equivalence
1	**Build data flow transformation operations:** character map Multicast, Conditional split, Aggregation, Sort, Derived column.	6	6
2	**Study Data mining tool e.g. RapidMiner formerly known as YALE** WEKA R-Programming Orange KNIME NLTK.	6	6
3	**Create a simple multi-dimensional cube and perform OLAP operations.**	6	6
4	**Implement Apriori Algorithm to find frequent item set generated from a given data set using java.**	4	4
5	**Implement K-means clustering data mining algorithm.**	4	4
6	**Implement decision tree for a data set**	4	4
	Total	30	30

Pre Requisites :

Knowledge of database fundamentals is desirable

Evaluation :

Quiz

Viva

Pedagogy :

Class room teaching on concepts of data warehouse and data mining

Research seminars

Expert :

Dr. Parag Kulkarni,Professor, Founder, Chief Scientist and CEO,iknowlation Research Labs
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