



Lesson Plan Odd Semester 2022

Stream : CSE
Subject : Data Warehousing and Data Mining
Subject Code : PEC-IT602B

Lecture No. (L)	Description	Reference(s) Text
L1	Overview of Data mining, Type of data can be mined	Te1(Chapter 1), Te2, Te3
L2	Overview of Data warehouse	Te1 (Chapter 1)
L3	Mining frequent patterns: Association and correlations; Market basket analysis, frequent itemset, Apriori Algorithm	Te1 (Chapter 1,2)
L4	Pruning, Association analysis : vertical approach ECLAT	Te3(Chapter 1.4)
L5	Association analysis : pattern tree, FP tree, FP growth	Te3 (Chapter 5)
L6	Lift, Uninteresting rules, Correlation, Maximal Frequent Item Set, and Closed Frequent Item Set.	Te3 (Chapter 5)
L7	Sequential Pattern Mining concepts, subsequences, primitives	Te3 (Chapter 5)
L8	CSM, SPADE algorithm	Te3 (Chapter 5)
L9	Cluster Analysis – Types of Data in Cluster Analysis, Partitioning methods	Te3 (Chapter 5)
L10	Hierarchical Methods, agglomerative , divisive methods, CLARA	Te1 (Chapter 3,4)
L11	Density based method DBSCAN, improved algorithm BIRCH	Te3 (Chapter 5)
L12	Classification algorithm, general approach, Decision tree	Te3 (Chapter 5)
L13	Decision tree properties and entropy	Te3(Chapter 1.4)
L14	Information gain and Gini index	Te1 (Chapter 4)
L15	SVM classifier	Te1 (Chapter 4)
L16	Bayesian classifier	Te1 (Chapter 4)
L17	Transactional Patterns and other temporal based frequent patterns Periodicity Analysis for time related sequence data	Te1 (Chapter 4)
L18	Mining Time series Data	Te1 (Chapter 5)
L19	Trend analysis, Mining Data Streams,	Te1 (Chapter 5),Te2
L20	Similarity search in Time-series analysis	Te1 (Chapter 5),Te2
L21	Methodologies for stream data processing and stream data systems	Te1 (Chapter 6), Te2
L22	Frequent pattern mining in stream data,	Te1 (Chapter 6)
L23	Sequential Pattern Mining in Data Streams	Te1 (Chapter 6)
L24	Classification of dynamic data streams	Te3 (Chapter 4)
L25	Graph Mining; Social Network Analysis;	Te1 (Chapter 7)
L26	modulation for communication, filtering	Te1 (Chapter 7)
L27	Feedback control systems	Te1 (Chapter 7)
L28	Class Imbalance Problem;	Te1 (Chapter 7)
L29	Web Mining, mining multimedia data on the web,	Te1 (Chapter 7)
L30	Mining the web page layout structure	Te1 (Chapter 7)
L31	Mining web link structure,	Te1 (Chapter 9)
L32	Automatic classification of web documents and web usage mining	Te1 (Chapter 9)
L33	Distributed Data Mining	Te3 (Chapter 9)
L34	Recent trends in Distributed Warehousing and Data Mining,	Te3 (Chapter 10)
L35	Class Imbalance Problem;	Te3 (Chapter 10)
L36*	Tutorial FP growth	Te4
L37*	Tutorial Decision tree	Te1 ,Te3



L38*	Tutorial SVM	Te1 , Te2
L39*	Tutorial Sub graph mining	Te3
L40*	Tutorial SPADE algo	Te1

Te1: Data Mining Concepts and Techniques - Jiawei Han and M Kamber, Elsevier Publication.

Te2: Introduction to Data Mining - Vipin Kumar, Pang-Ning Tan, Michael Steinbach, Addison Wesley.

Te3: Data Mining Techniques – Arun K. Pujari, University Press