
Data Mining: Different Definitions of Data Mining, KDD vs. Data Mining, Stages of KDD, DBMS vs. DM, AI vs. DM, Classifications of Data Mining, Stages of KDD, DM Techniques, Discovery Driven Tasks, Classification, Frequent Episodes, Discovery of Association Rules, Clustering, Deviation Detection, Mining Problems, Applications of DM, Other Mining Problems.


Classification – Pattern: Labelled Pattern, Approaches of Classification, Evaluation of Classifiers, Normalized Confusion Matrix, Accuracy, Precision, Recall and F-score, Cross Validation Technique, Classification Techniques.


Bayesian Belief Nets (DAG): K nearest Neighbour, ANN, Learning in ANN, Perceptron as a model of neuron, Single and multiplayer Perceptron for classification and knowledge representation, Back propagation Network, Supervised, Reinforcement and Unsupervised Learning.

Classification (Complex): Support Vector Machine (SVM), Generalization Error, SVM to find out the best classification, Margin.

Clustering: Partitioned and Hierarchical Clustering, k means Clustering, Fast k Means Clustering, Fuzzy K means Clustering, Hierarchical Clustering, Agglomerative and Divisive Hierarchical Clustering, Single Linkage, Complete Linkage and Average Linkage Clustering.

Temporal and Spatial Data Mining: Temporal Data Mining, Tasks involved, Temporal Association Rules, Sequence Mining, Episode Discovery, Spatial Mining, Tasks involved, Spatial Clustering. [2]


TEXT BOOKS:

1. Data Mining Techniques – Arun K Pujari – Universities Press

REFERENCE BOOKS:

1. Data Mining – J. Han, M. Kamber, J. Pei -- Elesvier
2. Data Mining – Hand, Mannila and Smith – PHI