

EXPLORATORY DATA ANALYSIS LAB SYLLABUS

1. Data transformation and pre-processing. Write R programs to read data from keyboard and transform it to various ranges like $[-3,+3]$, $[-1,+1]$, $[0,1]$ etc.
2. Write R programs to read data from keyboard or text files and compute summary measures like arithmetic mean, median, mode, variance and standard deviation. Also read a set of X,Y values and find covariance and correlation, use statistical techniques to identify outlier data.
3. Estimation of missing data, global methods, class based methods, multiple imputation methods etc.
4. Exploratory Data Analysis for Structured Data.
5. Write R programs to implement the k-means clustering algorithm by reading the data and user-specified value of k. Display the characteristics of the clusters found by the algorithm.
6. Write R programs for nearest neighbour algorithms for classification.