

## **Department of Computer Science & Engineering**

**Final Year B. Tech. (CSE) – I : 2022-23**

### **5CS462 : PE5 - Data Mining Lab**

#### **Assignment No. 3**

Use / extend the data analysis tool (menu driven GUI) developed in Assignment No. 2 to perform the following classification task :

1. Implement the decision tree classifier using the following attribute selection measures and graphically show/visualize the tree:
  - a. Information Gain
  - b. Gain Ratio
  - c. Gini Index
2. Tabulate the results in confusion matrix and evaluate the performance of above classifier using following metrics :
  - a) Recognition rate
  - b) Misclassification rate
  - c) Sensitivity
  - d) Specificity
  - e) Precision & Recall
3. Use the following categorical data sets from UCI machine learning repository :
  - a. Balance Scale data set
  - b. Car evaluation data set
  - c. Breast-cancer data set

**Deadline : 27/08/2022**

**Dr. B. F. Momin**  
**Course Teacher**