

# School of Computer Science Engineering and Technology

Course- B.TECH

Course Code- CSET211

Year- Second

Date- 04/10/2022

Type- AI Core-1

Course Name- Statistical Machine Learning

Semester- ODD

Batch- CSE 3rd Semester

**Lab Assignment (03<sup>rd</sup> Oct – 7<sup>th</sup> Oct 2022)**

## **Lab 6 – Decision tree classifier (2 marks)**

**Objective:** Student will be able to learn how to implement decision tree classifier.

Exp. No.	Name	CO1	CO2	CO3
08	Decision tree classifier			✓

### **Question -1: Marks: 1, Time: 45 min**

**Consider the Dataset: bill\_authentication**

**Objective:** The objective of this assignment is make students understand how to apply Decision Tree classifier

**Task :** Train test split 80/20

**Task :** Call decision tree Class

**Task :** Change the criteria from entropy to gini index

**Task :** Fit classifier

**Task :** Predict using above classifier

### **Question -2: Marks: 1, Time: 45 min**

**Consider the dataset “car\_evaluation.csv”.**

**Attribute Information:**

**Class Values:** unacc, acc, good, vgood

**Attributes:**

**buying: vhigh, high, med, low.**

**maint: vhigh, high, med, low.**

**doors: 2, 3, 4, 5more.**

**persons: 2, 4, more.**

**lug\_boot: small, med, big.**

**safety: low, med, high**

**Task: Implement the decision tree classifier with the following criteria by Information gain (Entropy) for Attribute selection method.**