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| Course- B.TECH | Type- AI Core-1 |
| Course Code- **CSET211** | Course Name- **Statistical Machine Learning** |
| Year- Second | Semester- ODD |
| Date- 04/10/2022 | Batch- CSE 3rd Semester |

**Lab Assignment (03rd Oct – 7th Oct 2022)**

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

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

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| **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.**