IC252 Eval 4
Level 1: Paper A

07th May, 2019

I declare that the following information is true. Moreover, I promise not to indulge in any form of academic dishonesty during this exam.

Name	
Roll Num	
Attempt no.	
Signature	
TC 1 (1)	
TC 2 (2)	
TC 3 (3)	
TC 4 (2)	
Coding style (2)	
Total (10)	
Evaluator's signature	

Please note that from this evaluation round, each re-attempt (evaluation round) will involve a penalty of 2 points.

Q1. Consider the dataset attached in this question in the CSV file named Eval_Level1_Round_4_A.csv. This file contains a car evaluation database. This is a multivariate dataset obtained from machine learning repository. There are 1728 instances and 6 attributes in this file. This is a classification dataset with 4 class values {unacc, acc, good, vgood}.
The first attribute name is 'Buying', its values are {vhigh, high, med, low}.
The second attribute name is 'Maintenance', its values are {vhigh, high, med, low}.
The third attribute name is 'doors', its values are {2, 3, 4, 5}.
The fourth attribute name is 'Persons', its values are {2, 4, more}.
The fifth attribute name is 'Lug_boot', its values are {small, med, big}.
The sixth attribute name is 'Safety', its values are {low, med, high}.

1. Please accept the class (x), doors (C), and Persons (D) from the user
2. Please estimate the following:
    a. count of cases where doors = C for class = x
    b. count of cases where doors = C and Persons = D for class = x
3. Please estimate the following probability: P (Persons = D| doors = C) for a class x

A sample run of the program:

Please enter the x: unacc
Please enter C: 2
Please enter D: 4

count of cases where doors = 2 for class = unacc: 326
count of cases where doors = 2 and Persons = 4 for class = unacc: 82
Probability (Persons = 4| doors = 2) = 0.25