

## Machine Learning Lab, B.Tech 5th Semester

### Instructions

1. You are required to submit your assignment responses by 12 PM today through the Google Form that has been emailed to you.
2. There will be evaluation for this assignment.
3. Plagiarism checking will be performed on all the submissions for this assignment. If plagiarism is detected, your assignment will not be evaluated.

### Evaluation Assignment 2

1. You are working as a data analyst for a retail company, and you have been tasked with segmenting the customer base into distinct groups for targeted marketing strategies. You have collected data on customer purchases, which includes the following features:

- (a) Total Spending (in USD)
- (b) Number of Transactions
- (c) Average Purchase Value (in USD)

You have a dataset with the following customer records:

Customer ID	Total Spending	Number of Transactions	Average Purchase Value
1	500	10	50
2	1500	15	100
3	200	5	40
4	800	20	40
5	300	8	37.5
6	600	12	50
7	1000	10	100
8	450	9	50
9	1200	14	85.71
10	900	7	128.57

Table 1

Implement the K-Medoids Algorithm to segment the customers into k clusters and evaluate the effectiveness of your algorithm.

Note: You are not allowed to use inbuilt function of any machine learning model.