Assignment 4

Machine Learning (CS564)

Date:- 14-April-2024 ***Deadline:-25-April-2024***

Instructions:

1. Coding must be done using Python, and you can use already available clustering algorithm libraries.
2. All the assignments should be completed and uploaded before the deadline.
3. Markings will be based on the correctness and soundness of the outputs. Marks will be deducted in case of plagiarism.
4. Proper indentation and appropriate comments are mandatory.
5. You should zip all the required files and name the zip file as roll_no.zip, eg. 1501cs11.zip.
6. Upload your assignment (the zip file) in the moodle platform

Assignment:

Perform k-means clustering on the given dataset “iris.csv”.

1. Apply the elbow method to find out the optimal number of clusters
2. Apply cluster validity Dunn index to find the better cluster.
3. Apply cluster validity Davies Bouldin index find the better cluster.
4. Applying the Silhouette index to find the similarity between the clusters.
5. Plot the cluster distributions for each feature (in 2D form)