Week11: CS 6301 - Machine Learning Lab

Date: 30.5.22

Instructions:

1. For exercises and spot u prepare a document with ur code, results obtained, plots and inferences (what do u understand from the results).

2. Write ur own functions (instead of packages) for the algorithms to get full mark.

1. Implement KNN (5)

Perform KNN classification with the following data and find the class of test data? (5)
Find the optimum value for K? Use any data other than Iris. (5)

2. Implement SVM (5)

Implement SVM model with linear, polynomial and RBF kernels for your own dataset and plot your results.

3. K-Means Clustering (5)

Use the K-means algorithm and Euclidean distance to cluster the 8 data points given below into K = 3 clusters. Use Euclidean distance for calculating distance matrix. Print intermediate results of each iteration. Plot the clusters?

x1 = (2, 8), x2 = (2, 5), x3 = (1, 2), x4 = (5, 8), x5 = (7, 3), x6 = (6, 4), x7 = (8, 4), x8 = (4, 7).