Data Driven Computing and Networking (DDCN-2019)

Classification using SVM Algorithm

A. Write a python script to perform the following tasks:-

1. Load all the required packages to implement SVM Classification algorithm
2. Create two lists named X and Y having following values.

   x={1, 5, 1.5, 8, 1, 9}

   y={2, 8, 1.8, 8, 0.6, 11}
3. Plot and display scatter chart of x and and y.
4. Create an array X which stores the pair of each element of x and y respectively and define a list Y having following values.

   y = [0,1,0,1,0,1]
5. Apply SVM function with parameters kernel="linear" and C=1.0 and store classifier model in a variable "clf".
6. Fit svm classifer model named "clf" on arrays X and Y.
7. Predict the target value for the data {0.58,0.76} using svm classifier model.
8. Predict the target value for the data { 10.58,10.76} using svm classifier model.
9. Compute weight and bias of the svm classifer model and print them.
10. Perform prediction for the values from 0 to 12 and plot scatter chart for non weighted division.