Assignment 3(CLL788)

The code for this assignment is uploaded as python notebook file (CLL788_Assignment_3.ipynb). This file also contains all the graphs.

1. First we plot Data1.xlsx. After plotting this data, we can see that there are 2 features in this data. These features are clearly linearly separable. We can separate this data using SVM.

3. We have tried many different values of C for making the plots. On plotting Data2.xlsx, we see that points are not linearly separable. This means that some features are overlapping. So we use regularization and use different values of c for plotting the graphs. We see that when the value if c is extremely small then the classifier is very inaccurate. But as we increase the value of c then it slowly reaches the value for becoming the optimal large margin classifier. But after that point, if we go on to increase the value of c, then the classifier becomes small-margin classifier. In general, a small(not extremely small) value of c causes large margin classifier and large values of c cause small margin classifier.