Reflection

In the week 8, I have learned support vector machine which finds an optimal decision boundary (which may be a point, line, plane, or hyperplane depending on the dimensionality) that best separates different classes in the feature space. SVM can be used on both classification and regression. I also have studies about soft margin classifier, which flexible misclassification and the usage of cross validation to have best soft margin. Also found out that SVM also have non-linear that map the input features into higher-dimension space and compute distance between pairs of data points. The SVM kernel function compute usage of the similarity of the data points rather than working with the high-dimensional coordinates directly, leading to have faster computation performance.

For the coding, I have found out that the model performance is quite worst in class1 compare to last week. So, I look through the code and found out that the class weigh is set as balanced. While looking for the kernel, I have learned that in the kernel, apart from linear, poly and rbf there are also other kernel such as sigmoid, ANOVA and chi square and so on.