* svm.py - A basic SVM framework is implemented in this file, mainly the calculation formula.
* plattSMO.py - This file uses SMO for optimization. When selecting optimization variables, select the two variables with the largest error step size for optimization, which can greatly improve the optimization speed.
* SVM3.py - This file implements an SVM multi-classifier, and its implementation principle is: for every two categories in the sample, an SVM binary classifier is trained. For k categories, a total of k(k-1)/2 SVM binary classifiers can be trained. When predicting, the test examples are input into k(k-1)/2 classifiers respectively. Suppose (i,j) represents the SVM classifier that divides class i and class j. For each classifier (i,j): If the classification result is +1, then count[i] +=1 If the classification result is -1, Then count[j] +=1 The final classification result takes the category with the largest count of the corresponding category as the final classification result.
* SVM2.py - This file implements an SVM binary classifier, which is different from multi-classification in that there is only one classifier.