699399-17-3E AID:258164 |22/06/2020

Error-Correcting Output Codes:

Error-Correcting Output Codes is an method which designed framework for multi-class classification problems. In multi-class classification problem, the task is calculated through K>2 of that possible choices. IT is based on combining binary classifiers. ECOC affecting independence of binary classifiers . In example, in recognition task, we need to map each hand written digit to one of k = 2 classes. In multi-class problem most of the algorithms can handle directly. ECOC has some small or meta method which combines many binary classifiers in order to solve the multi-class problem.

When we extend any binary classifier to the multiclass case at that time ECOC technique is a useful . In ECOC design matrix number of dichotomizers usually considered as priori fixed. The performance of outfit code in relation to the problem domain , the selection and number of dichotomizers must hang on these. The strategy behind is to creates the new dichotomizers by minimize the confusion matrix among classes guided by a validation subset. And the account take the different relevance of each dichotomizer in weighted methodology. And from these we get , small codes and avoid overfitting with better generalization performance. In the decode, the positions coded with the symbol zero should have small influence in the results. We compare our strategy to other well-known ECOC strategies on the UCI database, and the results show it represents a significant improvement.