DISCRIMINANT ANALYSIS IMPLEMENTATION BASED ON VARIABLE PREDICTIVE MODELS FOR SIMILARITY PATTERN CLASSIFICATION

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Abstract

At present, there are many pattern classification methods that can be used such as LDA, kNN, Bayesian networks, CART, ANN and SVM. However, many classification methods mentioned above raises some issues. The problem are the large computational cost, and weakness methods mentioned above to classify the class because it is based solely on inter-class boundary only (decision boundaries).

As an alternative method other than the methods already exist (LDA, kNN, Bayesian networks, CART, ANN and SVM), the relationship between features (inter-relation) in a class can be used to classify a sample of a particular class. Based on these ideas on the model predictive variable method based class discrimination (VPMCD) proposed by Raghuraj Rao and Lakshminarayana Samavedham as a new classification approach to the problem of large data and overlapping which can not be easily solved by the other classification methods.

The testings are done using six well studied data sets (Diabetic, Hear, Iris, Wine, Digit, Letter). The results are equations which have capability to classify new sample.
Keyword: Data classification, Variabel predictive models, Discriminant analysis, Machine learning, Multivariate statistics