

## A COMPARISON OF MULTINOMIAL CLASSIFICATION RULES FOR BINARY VARIABLES

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### Abstract

The performance of four multinomial classification Rules for Binary variables from unknown populations was examined by Monte Carlo methods. The procedures examined were the fisher linear discriminant function, the likelihood ratio criterion, the predictive approach and Dillon-Goldstein Rule. The four classification procedures for binary variables are discussed and evaluated at each of 118 configurations of the sampling experiments. The results obtained ranked the procedures as follows: Linear discriminant function, Dillon-Goldstein Rule, predictive Rule and Likelihood ratio criterion.

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Key Words : *Multinomial, Fisher linear discriminant function, Predictive rule, Likelihood ratio, Binary variables misclassification.*