

**CREDIT CARD APPLICATION SCORING SYSTEM**

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## ABSTRACT

The application of business intelligence in the banking sector cannot be ignored. Automated credit scoring systems simplifies strategic decision-making in the credit card business. Two logistic regression models, the standard version with interactions and one based on the concepts of Weight of Evidence (WOE) and the Decision Tree technique Chi-Square Automatic Interaction Detection (CHAID), are compared in modeling credit card applications of a local universal bank.

The models yield similar results in terms of indentifying which factors are significant to the determination an account's delinquency status. Percentage of correct classification, Sensitivity and Specificity are also similar. Considering the nonparametric nature of decision trees, WOE and CHAID provide a robust alternative to logistic regression in the development of automated credit scoring systems. Moreover, the bank's definition of a bad account is confirmed through Roll Rate analysis.