

Title : Development of Classification Models for Predicting Credit Limit Approval of Business Customers

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ABSTRACT

This study aims to analyze the general characteristics of business customers applying for credit limit approval, develop classification models using Decision Tree and Binary Logistic Regression techniques to predict credit approval outcomes, and compare the performance of these models. The sample consisted of 300 business customers, and the dataset was divided into training and testing sets at a ratio of 90:10. The dataset contains fifteen independent variables and a dependent variable (approval status). The results revealed that key factors influencing credit limit approval were registered capital, latest shareholders' equity, the presence of a guaranteed letter, shared credit utilization, and net profit. The decision tree model achieved balanced classification performance with an accuracy of 82.76% and an F1-score of 82.62%, whereas the Binary Logistic Regression model produced lower accuracy of 72.41% and F1-score of 60.00%. This findings indicate that the decision tree model outperforms Binary Logistic Regression and is more suitable for supporting decision-making in credit limit approval processes.

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