

# Credit Card Approval Prediction using Machine Learning

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**Abstract:** The increased credit card defaulters have forced the companies to think carefully before the approval of credit applications. Credit score cards typically rely on historical data, which may lose their predictive accuracy during periods of significant economic fluctuations. Logistic regression is a commonly used method for credit scoring, as it is well-suited for binary classification tasks and allows for calculation of coefficients for each feature. To enhance ease of interpretation and practicality, score cards often multiply the logistic regression coefficients by a scaling factor (e.g., 100) and round them. Secondly, the performance of the built model is compared with the other two traditional predictive methods such as Boosting, Random Forest, and Support Vector Machines have been introduced into credit card scoring. However, these methods often do not have good transparency. It may be difficult to provide customers and regulators with a reason for rejection or acceptance.

**Keywords:** Explanatory Data Analysis, Bivariate Analysis, Multivariate Correlation, S3 bucket model hosting, Model Deployment, Random Forest, Support Vector Model

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