Credit Card Classification using Integration of Hierarchical Agglomerative Clustering and C4.5 Decision Tree

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Abstract

Credit card classification is a system for credit card users which is used to assign either a "good credit card ",which is likely to repay financial obligation, or a "bad credit card ", which has high possibility of defaulting on financial obligation. In a credit card classification, a credit card user's data isusually assessed and evaluated, like his financial status, annual and monthly income, assets and liabilities and previous past payments to distinguish between a "good" and a "bad" credit card for the user.This paper presents the automatic credit card classification using integration of clustering and classification algorithm. The goal of this paperisto predict the status of credit card such as good or bad. The empirical study between the integration of hierarchical agglomerative algorithm and C 4.5 decision tree algorithm and traditional C4.5 decision tree algorithm areapplied based on Stalog ("German credit data") dataset from UCI machine learning repository. Then, the accuracies of these two algorithms are compared. According to experimental results, the integration of hierarchical agglomerative clustering and C4.5 decision tree could achieve higher accuracy than the traditional C4.5 decision tree.