

Merchant Clustering and Bank's Revenue Prediction in e-Commerce

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Abstract

The use of data mining methods in e-business area can already be considered of great assistance as to prediction, knowledge management, and decision support. Particularly in e-commerce there is a significant number of metrics which have been tested and used for measuring interesting parameters. In most cases these parameters are in relation with customer habits and customer profitability. Nowadays many merchants cooperate with banks for authorizing credit card transactions in order to purchase products. Banks are also interested, in measuring the profit and the strength of this cooperation. These factors are of great importance considering decision support. In this paper we introduce two models for this scope (a) a merchant clustering model and (b) a bank's revenue predictive model. According to the first model, bank scores and classifies its cooperating merchants using a number of parameters, while in the second model predicts its revenue from e-commerce transactions.

For the clustering model we use the K-Means algorithm and in order to establish a prediction model, linear regression is applied.

Keywords

Data Mining, Clustering, K-Means algorithm, Predictive Model, Linear Regression.