Prediction of Customer Behavior on RFMT model using Artificial Neural Networks

Abstract

Nowadays huge amount of data are available to companies about their customers. These data can be used to establish and evaluate neural networks to predict the behavior of the customers. The goal of this paper is to predict customer behavior using neural network. Artificial neural networks are widely used in business disciplines (finance, insurance, banking, accounting and marketing). Feed-forward back propagation neural network is used as a classifier to predict whether a customer will buy in this month or not. The results of applying the artificial neural networks methodology to predict based upon recency, frequency, monetary, and time (RFMT) model show abilities of the network to learn the patterns corresponding to RFMT of the customer. In this study, the data were obtained from UCI Machine Learning Repository. The data is separated into inputs and targets. The RFMT will act as the inputs to the neural network. The targets for the neural network will be identified with 1's as buyer and will be identified with 0's as non-buyer. In all cases, the percent correctly classified in the simulation sample by the feed-forward back propagation network is 75 percent. The results show that the proposed predict neural network could be useful for identifying the buyer customer.