

PREDICTING CUSTOMER CHURN IN BANKING INDUSTRY USING NEURAL NETWORKS

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ABSTRACT

The aim of this article is to present a case study of usage of one of the data mining methods, neural network, in knowledge discovery from databases in the banking industry. Data mining is automated process of analysing, organization or grouping a large set of data from different perspectives and summarizing it into useful information using special algorithms. Data mining can help to resolve banking problems by finding some regularity, causality and correlation to business information which are not visible at first sight because they are hidden in large amounts of data. In this paper, we used one of the data mining methods, neural network, within the software package Alyuda NeuroIntelligence to predict customer churn in bank. The focus on customer churn is to determinate the customers who are at risk of leaving and analysing whether those customers are worth retaining. Neural network is statistical learning model inspired by biological neural and it is used to estimate or approximate functions that can depend on a large number of inputs which are generally unknown. Although the method itself is complicated, there are tools that enable the use of neural networks without much prior knowledge of how they operate. The results show that clients who use more bank services (products) are more loyal, so bank should focus on those clients who use less than three products, and offer them products according to their needs. Similar results are obtained for different network topologies.

KEY WORDS

data mining, neural network, banking, customer churn

CLASSIFICATION

JEL: C45, G21

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