

Applications of Data Mining Techniques in Customer Churn Prediction

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Abstract

Customer churn prediction creates the opportunity of designing preventing strategies for managers and marketers. Yet, application of data mining techniques in that field even enhances the process by hastening it and improving its accuracy. According to the lack of a comprehensive literature review about the application of data mining techniques in customer churn prediction, an overview of the existing literature about that topic is provided in this paper. It examines the subject from different points of view, including historical, technical, and statistical perspectives. From the historical point of view, the paper includes a brief history of outstanding researches that has exploited data mining and statistical techniques in the field of churn prediction, the emergence, necessity and importance, and current situation of such researches. This is based on a review of about 40 papers. From the technical point of view, a classification of papers regarding the data mining and statistical techniques used in different stages of their research methodologies is provided. Some of those techniques are neural networks, random forests, support vector machine, decision trees, etc. In each class, one paper is discussed briefly as a representative of that class. Finally, papers are analyzed from statistical point of view. Some of the considered factors are year of publication and techniques used. This may give an overview of less explored areas to whom may want to contribute to the current literature.