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Application of artificial neural network in customer analytics: A literature and classification

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Industries are relying on increasing the customer base as a means of growth of the industry, irrespective of churn prediction. It could be argued that churning of customers, have the same or even greater consequence on the company itself. According to a recent study, churn helps the business have a better roadmap about future revenue prediction. Hence, for churn prediction, different researchers have used different methods in distinct sectors which primarily depend on customer participation. It is especially difficult in customer churn to prevent and predict in a world where business models, demands of customers, and services are constantly changing. In such a structure, providers get to know the actual value of sustaining customers in the workplace. Customer churn is a challenging and critical issue for many sectors, with the acquisition cost of customers increasing. Thus, it is a mandatory and absolute necessity for service providers to prevent the churn phenomenon in order to attain the availability of service. Every-year companies are losing up to 30% of customers because of churn and obtaining new customers are 5-10 times costlier than retaining the existing customers. The paper chooses distinct approaches to Artificial Neural Network (ANN). It will create a strategic plan which is practiced on the customer's analytics according to a particular sequence to classify them into distinctive categories. The four main approaches can be customized for churn prediction. Based on the ability and potential of a customer, customers will be categorized. The classification will be based on different research studies with their unique methodologies and dimensions. The outcome will show the final classification of churn according to ANN. In Custom Analytics (CA), the two proposed dimensions namely, customer retention and customer identification will sort out the identity of customers in four major categorical approaches. They are ANN, Ensemble Approach, Growing Self-Organizing Map (GSOM), and Self-Organizing Map (SOM). Hence, this effective strategy for customer retention would help industries make better informed decisions.

Keywords: Artificial Neural Network, Churn prediction, Churn retention, Classification