

**FACTORS AFFECTING CUSTOMER RETENTION IN INSURANCE: A CASE STUDY**

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Customers play a vital role in business because they bring revenue to the company. Businesses cannot continue to exist without customers. Further, it is a challenge for the company to attract new customers and retain existing customers. Retaining customers is cheaper than acquiring new customers in any type of business. Insurance companies frequently update and initiate new strategies to retain their customers due to the competition in the insurance industry. Therefore, the purpose of this study is to analyze the behaviour of policyholders and to examine how to increase the profitability level by increasing the number of customers retained in the company. The policyholders of one of the leading insurance companies in Sri Lanka have been selected. Appropriate regression and machine learning models are used to analyze customer retention. Secondary data was collected by the company database, and primary data was collected through a questionnaire and telephone conversations with customers of the relevant organization. Data was collected from 1,162 policyholders from January to December 2021. The preliminary analysis identified a significant association between the predictor variables and customer retention. Logistic Regression (LR), Decision Tree (DT), and Support Vector Machine (SVM) were used in the study to predict customer retention rate. The random sampling method was used to avoid the problem of class imbalance in the datasets considered in the study. Business party, reason (or purpose), customer retention ratio, no claims bonus, and education level were identified as the most influential factors for customer retention by using LR final model. The models mentioned above can be considered suitable models for predicting customer retention in general insurance. This study identifies the best model as the DT model, and it classifies customer retention rate with an accuracy of 66%. Therefore, the models developed in this study can be used to manage customer retention, hence increasing the profitability level.

**Keywords:** Decision Tree, Logistic Regression, Probabilistic Neural Network, Regression, Support Vector Machine