

Propensity-to-Buy Model to Generate Leads for Cross-Sell Opportunities in Insurance Industry

By

Nishani Peiris

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Abstract

With the increasing competition on the insurance industry, companies are eagerly looking for methods to maximize its profit by increasing sales. One of them turned out to be cross selling which has been found to be a very effective strategy in generating profit. In addition, cross selling contributes for customer retention by building a larger product portfolio of the customer, which tightens it more strongly to the company and minimizes the risk of the customer moving to a competitive company. But the companies constantly try to improve the effectiveness of cross-selling campaigns due to the traditional methods they adopt, which leads to the dissatisfaction of customers, which often leads to the loss of their part in favor of a competitive company. This study focuses on addressing that issue by exploring technological and analytical tools for identifying prospects for cross selling for the successful implementation of cross selling.

With latest advances in technology, most companies are gathering a wide range of data which can be utilized in identifying the customers who are most likely to purchase another product. Considering the insurance industry, this prediction can assist insurance service agents and marketing personals in determining whom should be targeted for the promotion for an additional product. To fulfill this purpose, this study proposes a machine learning model that considers customer/ agent characteristics, product specifications, past premium payments etc. The model is developed to help the business identify the best prospects for new products or existing another product based on generalized information obtained from customers' past behavior.

Logistic Regression, Random Forest and Support Vector Machine algorithms were used in developing a propensity to buy model to identify leads for cross selling, out of which, the Random Forest model produced the highest accuracy of 99%. It could be concluded that customer's payment behavior, product specifications, customer's financial capacity and agent's performance are the factors associated with cross selling.