

Artificial Intelligence in B2B sales – An approach to predict customer churn

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Introduction and research objectives

To target customers with tailored offerings, sales today is highly centered on analyzing large amounts of data. In Business-to-Consumer (B2C) sales, data analytics and increasingly Artificial Intelligence have been used for many years to better understand customer needs. In contrast, analytics in the Business-to-Business (B2B) market is not as advanced as in the B2C market. However, the B2B market also offers very high potential to benefit from these new technologies, because there are typically fewer but more profitable customers - therefore, companies and salespeople feel the win or loss of a customer intensely and should understand the expectations in detail.

This thesis aims to deepen the understanding of how digitized globalization is changing the B2B landscape and its associated customer expectations. In addition, it explores existing potential of sales analytics using Artificial Intelligence. To ascertain what customer information is relevant for the sales department, a survey is conducted. The results provide the starting point for building a suitable data strategy. Furthermore, the insights gained will be used to model a prototype machine learning use case to improve the sales performance.

Changing B2B landscape

The sales process is turning from a transaction into a customer journey and changes the world of B2B buying and selling. This includes, among other things, unrestricted access to information via the Internet which allows customers to conduct their own research without the influence of the supplier. In addition, emerging technologies are providing new opportunities and changing business models. Social selling and the connection to the customer as a relationship manager are

becoming increasingly important. Establishing a close relationship with the customer is more crucial than ever to differentiate from the competition. Thus, the role of the salesperson is changing to that of a relationship manager who helps the customer solve his problems. This is best done with a lot of knowledge and close collaboration to achieve the customer's goal.

Emerging technologies in B2B sales

To date, B2B salespeople invest much time in developing close and strong customer relationships for the purpose of assessing the *what, why, when* and *how* of the customer buying decision. Notably in the last two years, sales has changed enormously, but sales organizations, especially SMEs (Small and medium-sized enterprises), still operate as they did 20 years ago. Technology is providing sales with new opportunities to streamline processes and unlock new business opportunities. Artificial Intelligence (AI) can discover optimization potential and supports the strategic sales management approach, thus empowering the implementation of the sales and corporate strategy. This allows support and optimization across the entire sales process from lead generation and qualification, deal management and customer communication, to account management and business development. Furthermore, it is possible to improve the accuracy of future planning and overall sales performance.

Methodical approach

To make a practical contribution, a survey is conducted within the organization. The aim is to find out what information salespeople would like to know about their customers in order to build a consistent data strategy across the company. One insight was the prediction of customer churn, which is why a machine learning use case was implemented.

Predict customer churn using Artificial Intelligence

A company and their margin only grow when more orders are completed than in the past, which usually happens through customer growth. To achieve this, two factors are crucial. One is the successful acquisition of new customers to expand the customer base, and another one is the retention of existing customers. Since it has been known for many years that acquiring new customers

is far more time-consuming and expensive than retaining them, there should be an effort taken to prevent the customer from churning. In B2B companies, even a small reduction in customer churn can make the difference between a good and a bad year. In many cases, the salespersons salary composition consists of new investments made and the contribution margin. Therefore, there is a great economic interest to address this issue and predict customer churn. Often, churn is the result of customer dissatisfaction, a better competitive offering, or more successful sales strategies by the competition. Knowing that the customer has a high probability of leaving or not, allows the salesperson to take appropriate action before losing the customer. This can be in form of specific programs, offers, discounts, and incentives. The situation is different when there is an apparent reason, or the churn is not voluntary. For instance, if the customer's financial resources do not allow a new investment to be made, or if a strategic reorganization of the company has been determined, it is often hardly worth acting. However, it is also possible to draw conclusions about companies in similar situations or related characteristics.

The machine learning model was implemented with the object-oriented scripting language *Python*, using the interactive programming environment *Jupyter Notebook*. If general and overarching patterns or correlations can be identified as to why a customer churns, this knowledge offers the salesperson the opportunity to act and target customers at risk of churn. It is now up to each sales employee to deal with the issue individually and to consider how and whether the customer can be retained. In a first step this includes weighing up whether it is worth the effort to keep the customer. For example, is the probability of a customer churning very high, he is often already very determined and will hardly be persuaded to change his mind. Another case could be that the customer is not very profitable but requires a lot of administrative effort. The approach can be seen in the following figure.

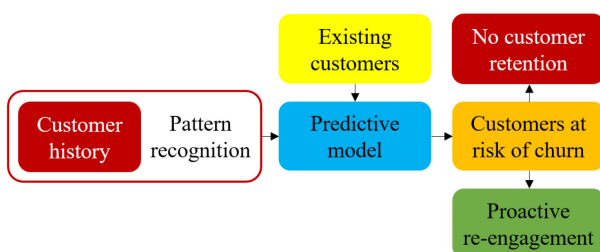


Figure 1: Approach to predict customer churn

In the long term, this model serves to identify trends at an early stage and to develop the business sustainably, which in turn can save on recovery measures. Thus, cost-benefit analyses can be conducted better, and the strategy can be adjusted for the future.

Conclusion

First, the thesis presents the context of the topic sales in general as well as current trends and changes in the B2B

landscape. It was found that emerging technologies are changing not only the way of selling, but also the customers' expectations on an easy and individual buying process. More specifically, touchpoints along the customer journey are changing, becoming increasingly digital and enabling more individual interactions.

Another important research field for this thesis was to evaluate Artificial Intelligence in the context of sales for the purpose of analyzing historical data and predicting future events. This provides sales management and salespeople with important future insights in many areas such as lead intelligence, sales automation, social media, product configuration, and more. From this, trends can be identified at an early stage and measures can be proactively initiated.

Currently, the technology is developing faster than the progress in companies and leaves a lot of untapped potential. In this thesis, the area of sales analytics was examined in greater detail and possible scenarios for action were discussed. Based on the results, a machine learning model was developed to predict customer churn. The results show that, above all, *customer satisfaction* and the *margin* made with the customer have a major influence on whether the customer churns or not. These characteristics may interfere with each other. If the margin is very high, the price for the services provided may be set too high and can have a negative impact on customer satisfaction. If the customer is not satisfied with the services provided, he may consider the price to be too high although it is fair. The obtained predictions can be used to take targeted measures for proactive customer retention and hence increase sales efficiency.

Outlook

To stay successful in the future, it is necessary to develop a sophisticated data strategy and align it with the business strategy. An one-time approach is not sufficient; rather a continuous development is necessary to be successful in the future. Therefore, it is important to set long-term goals which includes to plan early on what data will be needed for future analysis.

The developed prototype has shown that a large and qualitative data set is crucial for accurate predictions. Consideration should be given early on how the relevant data can be collected internally or whether it may need to be sourced externally. Similarly, sufficient AI expertise and capabilities are needed within the company.

Finally, it is important to remember that only the combination of AI and human intelligence will lead to maximum success. For this reason, it is particularly important to train salespeople that they can interpret and apply AI-generated information correctly.

It became clear that the potential of AI in B2B sales is still in its infancy but offers tremendous opportunities. Those who embrace the technology will have a significant competitive advantage in the coming years and will be better prepared to meet future challenges than those who do not.