Marketing
Advanced Analytics

Predicting customer churn

Whitepaper

QUITERIAN
Analytics to action
Churn prediction

The challenge of predicting customers’ churn

It is between five and fifteen times more expensive for a company to gain new customers than to retain the current ones. Because of this, knowing soon which customers will abandon the company or will reduce the consumption of its products or services is crucial in order to increase the degree of retention, to build a solid Customer Relationship Management (CRM) strategy and to save costs from prospects and acquisitions.

In a terribly competitive market such as the current one, there is a wide range of products and services to choose among. As a result, the behaviour of most part of consumers consists of moving free from a brand to another, from a supplier to another, looking for the product or service that best suits their needs. Organizations, regardless the sector they belong to, suffer this phenomenon daily, known as “churn” and, instead of focusing on retaining their current customers, they often invest efforts and huge amounts of money on acquiring new ones.

“In such competitive market as the current one, being able to know soon which customers will abandon the company or will stop consuming its products or services is crucial in order to increase the degree of retention, to build a solid CRM strategy and to save costs from prospects and acquisitions”

In this context, churn prediction arises as a very powerful weapon for marketing departments and companies operating in this sector. Knowing soon the percentage of customers with tendency to abandon the company will let it anticipate in order to determine the churn drivers, to know the real value of the potential loss of its customers and to take the necessary retention measures to reduce or avoid their migration.
In other words, knowing the churn in advance contributes to maintain and make the most from the current customers’ portfolio, to save costs from prospects and acquisitions and to avoid non predicted escapes or incomes loss. As it detects customer value loss soon, churn prediction provides profitability and, as it retains the customers who are about to abandon, it establishes the basis for loyalty between the company and its customers.

“Churn prediction will enable the company to anticipate in order to determine which customers are likely to cause abandon, to know the real value of the potential loss os those customers and to take the necessary retention measures to reduce or avoid their migration”

The Solution
Dynamic Data Web

Getting to know the churners to retain them on time

In the business context, “churn” refers both to a customer’s migration and to his loss of value. So, the churn phenomenon involves those customers who have ended their relationship with the company, but also those who already make use of its services but not so often or not as much as they used to and, because of this, they have lost value for the company. In both situations, however, customers show tendency to abandon, so the company needs to identify and get to know in depth those customers, either for attracting them again, or in order to anticipate to their churn and take the most suitable retention measures.

Through advanced analytics techniques, DDWeb crosses data from external and internal sources, in order to identify the segments that are experiencing low levels of satisfaction or that are abandoning and to create profiles of customers who are likely to cause abandon, or a churner’s portrait. The aim is basically to know who those customers are, how likely to migrate they are, which are their main features and how they behave.

Putting advanced analytics techniques into practice, such as Profile, DDWeb allows to create portraits of customers who are likely to abandon, selecting automatically the relevant variables that best define these customers; this means, the features (sex, age, job, number of accounts, incomes,…) and behaviours (date of last transaction, monetary value evolution,…) that explain how they are and how they are not. These profiles provide the necessary information to identify the factors that could retain the customers –loyalty factors- and generate personalized retention measures that contribute to build more solid Customer Relationship Management (CRM) strategies.

“Through advanced analytics techniques, DDWeb identifies customers who are about to abandon and creates profiles that show how they are and how they are not these customers, with the aim of detecting loyalty factors that help generate personalized retention measures”
Anticipating to reduce risks and to avoid loss

According to the created profiles and using Data Mining and Predictive Analysis techniques, DDWeb identifies learning rules that will work as the basis for future classifications or predictions, with the aim of anticipating to possible escapes and react on time. Moreover, DDWeb improves this prediction, detecting the interactions occurred between customers who are likely to cause churn and other customers of their environment that have abandoned the company recently, just by analyzing the influence these can cause on the first ones.

The mechanism used to make predictions consists of extrapolating the features which are typical of the churners to the rest of customers from the organization’s database, in order to know which customers share the same features and, therefore, to detect the customers who are likely to cause churn. The result of this process will let the organization anticipate to any future non planified situation and, as a result, to reduce risks and avoid non considered material or immaterial loss.

“DDWeb counts on Data Mining and Predictive Analysis techniques to make predictions that allow the company to anticipate to non planified escapes and, as a result, it reduces risks and avoids loss”

Making the most from the customer’s portfolio and saving costs

Not all the customers have the same value for the company. In order to know which customers are more valuable and which less, it is necessary to make the following question: How much would I lose if this customer abandoned me? Or, what is the same, to know the real value of the potential loss of a customer.

Not only does DDWeb detect which customers are the most valuable for the company, but it also allows to know the real value of the potential loss of a customer and, what is more, to detect soon a customer’s loss of value. This way, the company can, on the one hand, optimize its resources and save acquisition costs and, on the other hand, it can react quickly.

Knowing in time its customers value loss enables the company to set different levels of churn risk, in order to prioritize and to assign its business resources and efforts in a more efficient way and, as a result, to make the most from its current customers’ portfolio and avoid costs of new prospects and acquisitions. And, moreover, the company can increase its capability to react and it is able then to put into practice the appropriate retention strategies and to counteract, for example, acquisition strategies from its competitors.

“DDWeb allows to detect the customers’ value loss soon, in order to prioritize and distribute business resources and efforts more efficiently, making the most, therefore, from the current customers’ portfolio and saving costs from prospects and acquisitions”
Optimizing resources and automating processes

This process of churn management can be automated through DDWeb iWorkflow, so every time that determined conditions occur, the most appropriate actions will be put into practice. For example, the company can establish an automated system of churn prevention, that will raise the alarm in the moment that specific risk factors converge or when the customers (any customer or just a group of customers preselected for being more valuable for the company) show signs of churn.

Automation enables the company to move its experience to the churn management process, optimizing this way its resources in order to become more systematic and efficient.

“The company can automate the process with DDWeb iWorkflow, making the most from its experience at churn management, optimizing resources and becoming more systematic and efficient”

Example

How to make churn predictions with DDWeb in 7 steps

1. **Defining churn or value loss**

   In order to define the customers’ value loss, the first step consists of determining the non-consumption period. With DDWeb, there are two possibilities to do this:
   - **Engineering field**: establishes the value percentile, last transaction’s date, how has the value evolved,…
   - **RFM**: classification of customers through a Recency, Frequency and Value analysis.

   This way, we will define a business rule that will let us know which customers from the current’s portfolio have abandoned us.

2. **Identifying which customers abandon**

   Immediately afterwards, we select the customers who obey the previously defined rule, and we can do this in three different ways:
   - Through Drag&drop
   - Through Selection
   - Through Cluster (KMeans)

   This will let us select and classify the customers who have abandoned or who show a major value loss.

3. **Churn profile**

   On the previous selection (customers who have abandoned), we apply the advanced analytic technique of **Profile**, which gives us the selected group’s features, identifying the relevant variables that best describe it (age, marital status, sex,…). Profile tells us how the customers forming this group are and how they are not, what is typical from them, what makes them different, in which geographical areas it is more likely to find them,…

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4. **Prediction**

Easily and quickly, we apply the churn segment by dragging it to the predictive technique of Decision Tree, that will predict within few seconds which other customers will abandon or will show a value loss.

5. **Risk assessment**

Not all the customers with tendency to abandon have the same value. It is convenient to focus now on the most valuable customers or, at least, to classify the churners in different groups, depending on their value. We will do this by crossing churn and economic value using, for example, a Venn's Diagram, which allows us to create a quantile in various groups of benefit. This step will let us quantify the risk or, in other words, to measure how damaging the churn can be. The next step consists of selecting the most valuable groups on which we want to start actions or focus our reaction.

6. **Immediate reaction**

Campaign Workflow lets us planify and start groups of equal or different actions on each one of the different groups of customers that show a higher risk of churn, depending on the value each one represents for the company. These actions can be miscellaneous: sending a release, recommending the best product, ...

7. **Optimization**

Once the process of managing customers' churn is over, iWorkflow makes it possible to automate this flow in order to put the learnt experience into practice. With this aim, we would create a business rule with iWorkflow, that would make the same calculation but systematically, with the regularity we decide to establish. This way, we automate the action each time the given condition occurs and, as a result, we reduce the churn risk, we optimize resources, save costs and we become, therefore, more efficient.

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**To sum up. DDWeb allows to...**

- Identify which customers show tendency to churn and get to know how they are and how they are not.
- Make predictions in order to anticipate to possible non predicted escapes.
- Assess the risk and detect soon the customers’ value loss.
- Put the most suitable retention measures into practice.
- Optimize resources and automate the process of managing customer churn.

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Dynamic Data Web: Depth, Self-government and Immediacy

Dynamic Data Web is a 2.0 Business Intelligence platform, based on Data Mining and Predictive Analysis techniques, that allows to extract implicit information from data, to identify hidden relations and to discover patterns and trends in order to build predictive models. It helps organizations to take more value from data soon, so they can anticipate and become more agile, more competitive and more efficient.

With a technology conceived and developed to give answer to any kind of information request with no need to predict this request in advance (it doesn’t require modellings, it does not work with dimensional cubes nor metadata); Dynamic Data Web is the information exploitation solution which provides a dynamic environment to obtain knowledge from data and to generate added value information.

Depth and Business Knowledge
It allows to explore, to visualize, to filter and to select data in their maximum granularity to obtain the information knowledge in all their detail.
In an intuitive way (without previous programming, using the mouse), it permits to use crossing techniques, comparisons, profiles, clustering which bring a high degree of business knowledge. It helps to obtain profiles, behaviour patterns, multidimensional crosses, comparison diagrams, etc.

Adding Value to Data
It includes the tools for creating data as you move along in order to add value to native data, with self-government and with no need of reloading the database. The creation of stretches, ranks, quantiles, decodings, metrics; which add new perspectives and enrich the vision of the information.

Dynamism and Immediate Response
Dynamic Data Web does not require modeling, nor dimensional cubes nor metadata.
Its distinctive logistics allows an immediate starting-up process. All the loaded data are ready for their exploitation just because of them being loaded.

Ergonomics and Users Self-government
User is self-governing in the data exploitation. He can put all his business knowledge into practice when exploiting, exploring, investigating and simulating with full self-government.