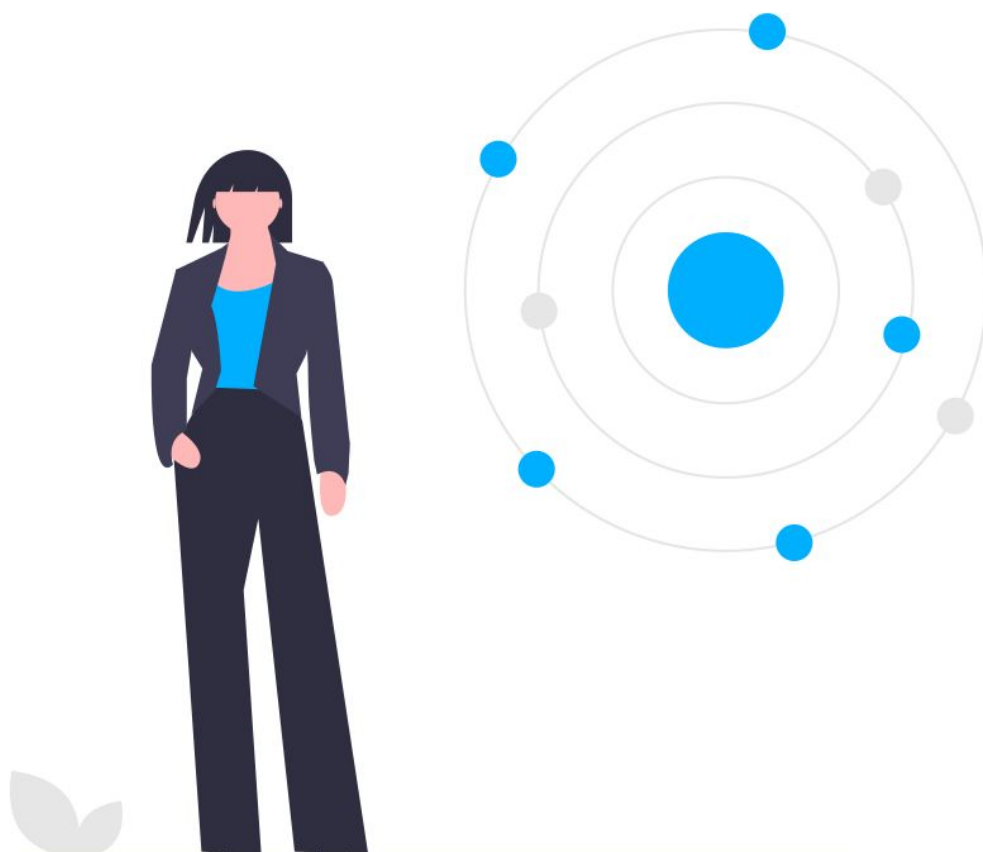


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Definitive Guide to Churn Prediction



Introduction

*Everything You Need To Know About Churn Prediction.
What it is, why it is important and how to calculate churn
factor*

Separation is hard. Especially if it's between you and your customers.

Churn, the rate at which customers leave your services or products, is an important metric of your business' vitality.

In this guide we'll make sure that you have all the information required to correctly measure churn and use it to inform your future strategies.

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Focus Areas

This whitepaper series is a practical guide to developing your understanding of Churn Prediction.

It is organised around 9 key topics:



Chapter One:

What is What Is Churn, Churn Rate & Churn Factor?

Chapter Two:

Why Do Businesses Use Churn?

Chapter Three:

What Is Churn Prediction?

Chapter Four:

How & Why Do Businesses Use Churn Prediction?

Chapter Five:

How to Calculate Churn Rate

Chapter Six:

Churn Rate, Factor & Prediction FAQs

Chapter Seven:

How Do You Build A Churn Prediction Model

Chapter Eight:

How To Analyse Churn

Chapter Nine:

What Is The Difference Between Churn Rate And Growth Rate?

1 What is Churn?

A business is facing churn when customers cancel their subscription to a service they have been using.

When measuring churn, we usually care about the percentage of customers left - knowing that 1% of your customer base unsubscribed from your services last month is much more informative than knowing that 100 customers left.

This is why churn is most commonly referred to as the churn rate.

Churn is an unavoidable element of every living business. But keeping it at healthy, low values is important.

2 Why Do Businesses Use Churn?

There are many reasons why a business would put in the extra effort required to measure churn:

- The churn rate clearly indicates whether customer retention improves on a regular basis.
- By capturing the company's health and long-term prospects, the churn rate can help forecast and advise future policies.
- Identifying changes that had a negative effect becomes easy.
- A thorough analysis of churn can help identify which customer profiles work best with certain products and inform marketing strategies.

3 What is Churn Prediction?

Churn prediction is the process of using data science to predict churn.

In other words, a churn prediction mode can help you identify which customers are most likely to leave your services and focus on them.

For this, you need historical data of past churn events. Typically, this data comprises a binary variable, indicating whether a customer churned, and features that can help characterise a customer.

For example, information about the socio-demographic profile, their online behaviour and interaction with the company are likely to explain their choice to stay or go.

4 How & Why Do Businesses Use Churn Prediction?

Generally, it costs more to acquire a customer than it does to retain an existing customer. This is because it costs money to market to and attract new customers, while existing customers are already familiar with your company and its products or services.

Once you can identify those customers that are at risk of cancelling, you should know exactly what marketing action to take for each individual customer to maximise the chances that the customer will remain.

At the same time, churn prediction is arguably the most important application of data science in the commercial sector. Compared to applications where data science has a delayed or indirect effect, the effects of data science- informed churn prediction are tangible and directly target customer retention, the heart of a business' objectives.

5 How to Calculate Churn Rate

Understanding churn is simple. So should be the method you use to estimate it.

In most cases, a simple ratio of the number of customers who left your service divided by the number of customers in a certain time period will do the job.

However, you need to always keep in mind that churn is a statistical metric; when and how you measure churn determines the conclusions you can draw with it.

So, before your team writes down your formula, make sure you understand that:

- Sample size matters. If your company is new and growing, churn can be misleading as you don't have enough data to correctly measure it.
- New customers churn more. This means that, if your business is growing, higher churn rates do not necessarily indicate that you are doing something wrong.
- You need to choose the appropriate time frame. Depending on your business model, you may want to measure churn rate over a week, a month or a year. Ideally, your churn estimation should be robust to the time frame.
- Customers churn differently. For example, you may have a consumer plan and an enterprise plan, with customers in the different plans following wildly different strategies. If you aggregate all customers in a single metric, you not only risk losing information but may also draw an entirely wrong conclusion.

To sum up, your churn rate calculation should take into account the features of both your customers and your business model and be versatile enough to cover various cases.

6 Churn Rate, Factor & Prediction FAQs

Why do businesses measure churn?

Churn is a direct indicator of a company's health and long-term prospects and can help understand its customer base to advise future strategies.

Why do businesses predict churn?

Acquiring new customers costs more than retaining existing ones. Churn prediction helps you identify which customers are more likely to leave and focus on them.

What is a negative churn rate?

A negative churn rate occurs when added revenue from new customers (expansion revenue) surpasses lost revenue from churned customers. A negative churn rate is usually caused by activities such as upgrades and add-ons.

What is a good churn rate?

According to our churn rate studies, average churn rates are everywhere from 2% - 8% of MRR. Therefore, a churn rate at the low end (2%) would be considered “good”.

By company age, 10+-year-old companies have a 2-4% churn, whereas younger companies range from 4% - 24%. This varies from industry to industry and company to company.

There are many factors that go into what makes a good churn rate for your industry. For example, if your cost of acquisition is high, you need a lower churn rate to be profitable, but if your cost of acquisition is low, you can afford a higher churn rate and retain high-profit margins.

Other factors include overhead costs, cost of goods sold, and lead generation costs. For instance, software-as-a-service (SaaS) companies can afford a higher churn rate, since they usually don't have to deal with the costs of purchasing physical goods and handling logistics.

Does churn rate affect retention?

Yes, the churn rate is in the inverse of retention. When customers are not retained, they churn by default.

7 How Do You Build A Churn Prediction Model

Step 1 - Collect your churn prediction dataset

When is a customer considered churned?

This will depend on how you calculate churn rate. We discussed this at length in Chapter Five and concluded that there is no one-size-fits-all businesses.

Which features will you include to predict churn?

Certain features of a customer, such as gender, age and nationality may help predict their churn rate. Take a look at Chapter Eight for more examples.

Step 2 - Explore and discover patterns

After the data collection and before jumping into predictions, it is important to discover patterns in your dataset.

While a powerful machine learning model can directly analyse immense amounts of data, there are two important reasons why you should not skip this step:

- Familiarising yourself with your customer base can help you understand better the predictions of a model.

This can make the difference between a black-box and a well-informed tool. The benefits of discovering these patterns can extend beyond your churn prediction model, to other business functions such as market basket analysis.

- Discovering what matters in your dataset can help you save time and resources for deploying and maintaining your model and database.

Step 3 - Train a machine learning model

There is a wide variety of machine learning models and software to choose from. Make sure that your choice matches your team's expertise and business needs.

8 How To Analyse Churn

In order to get the most out of your churn prediction model, you need to analyse your customers in segments.

Putting all customer in the same basket can harm your churn analysis in two ways:

- It may fail to reveal useful information. For example, if the churn rates of two demographic groups cancel out, you may miss the opportunity of boosting your retention rate in the group with positive churn.
- It may lead to false conclusions. For example, churn rates may be very high in a certain product but very low in other ones. In this case, you will wrongly conclude that this product is performing well.

Customer segmentation is the process of grouping your customers with various similar traits. Common practices are to group customers by gender, age, geography and industry. The tenure of your customers, which shows how long they have been using your service, is also an important feature.

9 What Is The Difference Between Churn Rate And Growth Rate?

While the churn rate tracks lost customers, the growth rate tracks new customers. If the growth rate is higher than the churn rate, the company experienced growth. When the churn rate is higher than the growth rate, the company experienced a loss in its customer base.