

# Churn prediction

Predicting the likelihood of customer churn

Customer churn is a challenge faced by all organizations. A model that analyzes past client lifecycles can help organizations reduce the probability of customers discontinuing a product or service.

## The Challenge

Preventing churn is a core driver for a company's growth, and retention demands far fewer resources than acquisition. The ability to predict churn should be on every organization's agenda, especially companies with a subscription service or long-term customer relationships.

For example, if you have a 30% churn rate on a client base, you will need to increase the customer base with at least 43% to make up for it. This shows how important it is for organizations to retain customers.

## Data Describing Your Customers

Building a predictive model that classifies customers requires data on the current customer base, the services they bought, and which class they belonged to. This information includes:

- Customer profile information
- Subscribed services and details to it
- Churn status (yes or no)

Variables should be available in the historical data, but they also have to be generated each time the

customer's value is computed. It is essential to select variables that can generate for each customer.

The historical data is usually supplied in databases via a connection, an API, or as .csv files (especially for PoC's). Predictions are generated by sending a JSON request to the model's API and receiving a prediction list.

## Model – Churn

For churn prediction, we use a supervised classification model trained from historical data to recognize assigned labels. The model is deployed using our auto-deployment functionality within our enterprise AI platform, Grace. After deployment, the data are sent via a POST endpoint of an exposed API to the model.

The churn model is frequently used as a Grace Standard Model and is a fast track to your first AI model implementation without sacrificing future flexibility or extensibility for multiple AI models' strategic scaling across your organization. We maintain algorithms that are 70% ready-made and fitted to your data.

## 3 Facts About The Model

1

Churn prediction as a standard model is a fast track to AI model implementation.

2

The model uses customer data to predict the likelihood of a customer discontinuing a product or service.

3

The model enables you to prevent customers from churning.

### Predictions Of Customer Behavior

When buying the Grace churn model, historical predictions and model insights are stored alongside the predictions and visualized in a BI-tool. The Grace Standard Model for churn also delivers the reason for the given prediction, which can help you understand why a customer may discontinue a product or service. In this case, 2021.AI can help set up the BI dashboards to give customer service an updated overview (e.g., in PowerBi).

### Our Solution

2021.AI offers churn prediction using a supervised algorithm. The mathematical model is trained on a data set that describes the customers and their bought services, together with a label (supervised) that classifies the case as a churning case or not.

The model stores which customer profile is associated with churning, and which of the descriptive variables are most likely to classify the cases. While predicting the probability of churn, the model also produces insights for each prediction. The model is no longer a black box, but instead, we know which variables drive the prediction and the main reasons for the customer to churn. In our standard model, we store these insights alongside the predictions to be re-used and displayed in a BI dashboard for further analysis.

### The Business Outcome

Using the Grace Standard Model for churn, you can accurately predict churn and direct its retention effort to those customers who have a higher risk of discontinuing. Your company also has access to what drives churn and, with this information, can lower the churn rate by improving the customer experience.

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