# Propensity Modeling:

## Reduce Churn by Identifying At-risk Customers and Intervening Early

Predictive modeling is a powerful tool that lets you leverage customer data and machine learning to anticipate your customer's needs. Armed with this information, customer champions can nurture closer relationships with their customers. Follow these steps to set up your own predictive model that scores customers on their likelihood to churn and then shares those scores with a customer service representative via Slack.

## What you'll need:

**1**

Plenty of customer data

**2**

A messaging platform

**3**

Your Treasure Data CDP

Interested in other ways to get the most out of your customer data? Check out our catalog of use-case recipes.
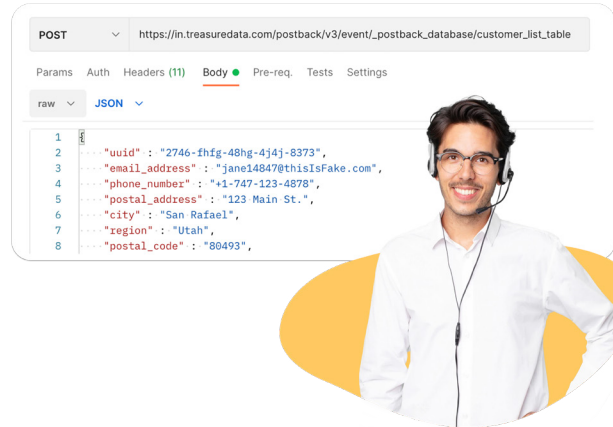
**Browse the Catalog**

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## Step 1: Collect

The first step is to collect customer data--and plenty of it. Machine Learning algorithms are notoriously data-intensive. For this particular model, make sure to collect data on which customers have churned. No matter where this data lives, you can likely capture it using one of Treasure Data's SDKs, APIs, or batch upload capabilities.

```
POST    https://in.treasuredata.com/postback/v3/event/_postback_database/customer_list_table

Params  Auth  Headers (11)  Body ●  Pre-req.  Tests  Settings

raw     JSON

1
2    "uuid" : "2746-fhfg-48hg-4j4j-8373",
3    "email_address" : "jane14847@thisIsFake.com",
4    "phone_number" : "+1-747-123-4878",
5    "postal_address" : "123 Main St.",
6    "city" : "San Rafael",
7    "region" : "Utah",
8    "postal_code" : "80493",
```

**Edit Predictive Model**
Predictive Analytics - Churn

1 Model Setup
2 Features

Name*    Likely to Churn

Description    Training Population: All Users
Scoring Target: Current Customers
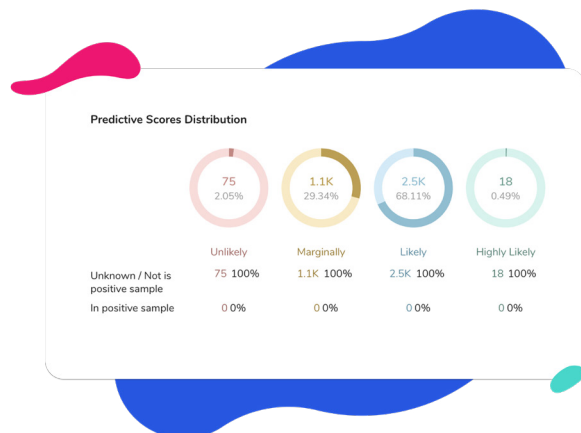Positive Sample: Previous Churns

## Step 2: Build

Once you have the data you need, the next step is to build the predictive model. Fortunately, you don't need to be a data scientist to do this with Treasure Data--predictive models are included in the Audience Studio. Once finished, each profile in your Scoring Sample will be enriched with a Propensity to Churn score.

## Step 3: Create

Conveniently, you can create a new segment of "Likely to Churn" customers from the Predictive Scores screen. Just select "New Segment" and configure the requisite details. Before you leave this screen, open the "SQL Query" screen and note the SQL code; you'll need this later.



**Predictive Scores Distribution**

| | Unlikely | Marginally | Likely | Highly Likely |
|---|---|---|---|---|
| | 75 — 2.05% | 1.1K — 29.34% | 2.5K — 68.11% | 18 — 0.49% |
| Unknown / Not is positive sample | 75 100% | 1.1K 100% | 2.5K 100% | 18 100% |
| In positive sample | 0 0% | 0 0% | 0 0% | 0 0% |

**TREASURE DATA**

```
_churners_to_slack.dig (read-only)

1   export:
2     master_segment_number: 265946
3     model_number: 15012
4     cutoff_value: 50
5     td:
6       database: cdp_audience_${master_segment_number}
7
8   +send_churn_drops_to_slack:
9     td_for_each>:
10      data: "SELECT first_name AS result_1 , last_  m  A  result_
    td_predictive_score_${model_number} > ${cutoff_ alu }
11
```
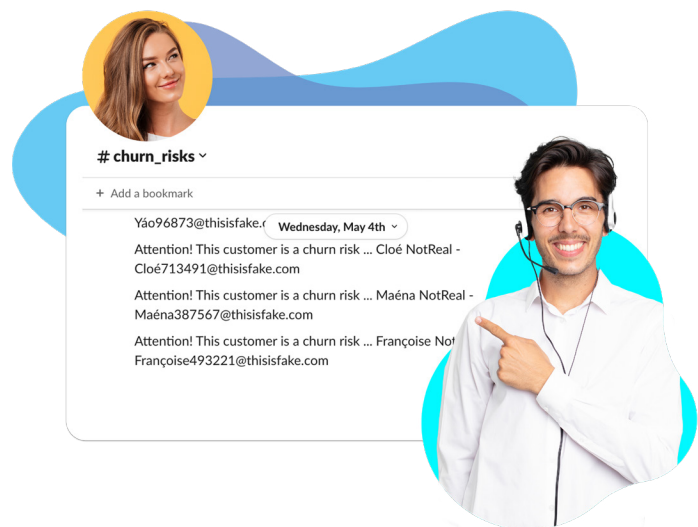
## Step 4: Implement

Of course, it's not enough to just predict who's likely to churn, someone's got to do something about it! In this case, we'll use Slack to flag new "likely churners." Slack isn't in the Integrations Catalog, but there is a Treasure Box for it. To use it, grab the code, drop it into a new Treasure Data Workflow, and update the parameters. The SQL code you generated earlier will be helpful here too.

## Step 5: Notify

Once everything is up and running, Slack messages will begin arriving, identifying which customers are likely to churn. Armed with this timely and relevant information, you can arrange interventions, thereby reducing churn rates!

**# churn_risks ˅**

+ Add a bookmark

Yáo96873@thisisfake.c   **Wednesday, May 4th ˅**

Attention! This customer is a churn risk ... Cloé NotReal - Cloé713491@thisisfake.com

Attention! This customer is a churn risk ... Maéna NotReal - Maéna387567@thisisfake.com

Attention! This customer is a churn risk ... Françoise Not Françoise493221@thisisfake.com

Read how other Treasure Data customers are leveraging propensity models to improve customer experiences.

**Learn More**

Treasure Data customers that are using machine learning models to predict customer behavior.

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## About Treasure Data

Treasure Data Customer Data Platform (CDP) empowers enterprises to deliver relevant, real-time experiences.

Technical Documentation    Learn More    Watch the Video

**TREASURE DATA**