Insights Predictive Scoring

Insights Predictive Scoring: Engagement and Churn

A predictive score is a ranking assigned to each account or user to provide quantitative contrast and focus on derived metrics that can indicate or reveal increased probabilities for a future outcome.

Insights includes a standard set of predictive scores designed to predict renewal and churn for each active account.

Scores for Engagement and Churn Probability are calculated using an algorithm derived from a custom analysis for each Insights implementation using the metrics identified by the customer as the most important measures affecting customer satisfaction and success. Those measures are analyzed for correlation with subscription renewals and churn and given weights according to how applicable those measures may be.

This document describes what the scores mean and provides suggestions on how to use them.

Engagement Score and Churn Probability

The Engagement Score and Churn Probability are closely related with the obvious difference that they rank customers in opposite directions. Engagement Score is a calculation that brings together multiple metrics to rank accounts and users according to their tracked usage or contacts with your product. Churn Probability is the inverse of the Engagement Score and it represents the likelihood that the account will not be renewed. The more subtle difference between the Engagement Score and the Churn Probability is that the Engagement Score is always distributed over the range from 1 to 100, but Churn Probabilities may be clustered in certain ranges of probabilities, depending on the unique qualities of the data.

Some Insights users with a customer success focus find the Engagement Score easier to work with than the Churn Probability because Engagement Scores are always distributed over a 1 to 100 range.

Engagement Score

How well engaged are your users and accounts? The Engagement Score quantifies customer interactions with your resources based on the metrics you identify and with an analysis for correlation weighting based on Zuora collected historical data.

The Insights Engagement score is not a simple count of logins or just a couple of metrics with weights, but rather it is a quantitative and integrated view of the enterprise account backed with historical data. It is a customized, aggregated
measure of metrics correlated with real subscription data that shows retention and churn and how different types of usage and other tracked measures affect and contribute to the accounts’ propensity to churn or to renew.

Zuora Insights analyzes data from usage and account actions to determine how well they predict renewal. Accounts with the lowest predicted probability to renew will receive scores nearest to 1, and those with the highest predicted probability to renew will get scores closer to 100.

### Churn Probability

Churn Probability is the likelihood that a subscription account will not be renewed, and it can be used for strategic activities like forecasting recurring revenue losses and comparing relative risks. Churn probability is the literal opposite of predicted renewal probability. Churn probability is defined as 100% minus the renewal probability. The average predicted churn probability is a useful metric because it corresponds directly to observed churn rates, and the predicted churn probability is an account specific forecast.

For example, if the true churn rate is 6%, the predicted churn probabilities for your accounts may range from 1% to 13%, with 6% the average and renewal probabilities range from 87% to 99%. In that case, a 13% Churn Probability corresponds to an Engagement Score of 1 and a 1% Churn Probability becomes a 100 Engagement Score. Note that if accounts are sorted by the Engagement Score the ordering will be the exact opposite as when they are sorted by Churn Probability.

### Score Decomposition

Insights provides more than just a ranking of accounts. It also provides visibility into the reasons behind the prediction. Every score is decomposed into a contribution from all metrics that were used in the analysis.

### Example

Consider the example of a project tracking service. Account health is measured with just three metrics:

- Sessions per Month
- Numbers of projects tracked
- Number of contributors per project

Suppose the Engagement score is 64. That score might be derived from an addition of points awarded for each metric:

- 21 points for the number of sessions in a month,
- 33 points based on a score plus the number of active projects over ten, and
- 10 points - one point for every tenth of a point the average number of contributors for all projects per project climbs over 1.0.

Next to each component score, Insights shows whether it is Low, Normal or High. The relative scores reveal strengths and weaknesses of the accounts when context to measures from peers.

You can see more details on the right. First, how does the relative Engagement score translate into the likelihood of churn?
Below that, the engagement score dependencies, or the underlying metrics are shown. Decomposition and attribution provide an insightful view into the health of all your accounts. It points the way to effective action.

<table>
<thead>
<tr>
<th>Engagement Score</th>
<th>64</th>
<th>Normal</th>
<th>Churn Probability</th>
<th>7%</th>
<th>Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sessions per Month Score</td>
<td>21</td>
<td>Normal</td>
<td>Sessions per Month</td>
<td>901</td>
<td>Normal</td>
</tr>
<tr>
<td># of Projects Tracked Score</td>
<td>33</td>
<td>High</td>
<td># of Projects Tracked</td>
<td>146</td>
<td>High</td>
</tr>
<tr>
<td>Contributors per Project Score</td>
<td>10</td>
<td>Low</td>
<td>Contributors per Project</td>
<td>3</td>
<td>Low</td>
</tr>
</tbody>
</table>

**Supporting Renewals**

The most common use case for the Engagement Score is to help discover accounts that are at risk of churning. Segments or groups can be defined to identify accounts that pose varying degrees of risk of churn combined with filters for other account criteria like Total Contract Value greater than some amount, and then proper thresholds for corrective responses or other remediation can be considered. As efficient and effective resource management is always a consideration, the Churn Probability can be used to define targeted campaigns that balance the cost of resources to increase customer satisfaction versus the quantified potential for churn.