IBM Behavior Based Fan Insight
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Solution Guide

IBM

Product Information

This document applies to IBM Behavior Based Fan Insight and may also apply to subsequent releases.

Contents

Introduction

The IBM Behavior Based Fan Insight solution enables sports teams and live event venues to personalize their communications, improve experiences, and increase ticket sales and overall revenues.

Audience

This guide is for users of the Behavior Based Fan Insight solution. It describes the insight and analysis available from the Behavior Based Fan Insight reports that you can access in the cloud.

Finding information

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Chapter 1. Overview of Behavior Based Fan Insight

IBM Behavior Based Fan Insight is a prebuilt solution that provides a 360-degree view of your fans. By understanding fan behavior and leveraging fan segmentation and analysis, you can increase ticket sales, and increase revenue from concessions and retail sources.

Information associated with fan behavior can provide a lot of value if insights from that data can be quickly and accurately attained. Behavior Based Fan Insight enables sports teams, concerts and other live event venues to provide their fans with more personalized communications by utilizing a comprehensive a suite of advanced data integration, analytical, and decision-making capabilities.

What makes Behavior Based Fan Insight different?

- Behavior Based Fan Insight analyzes unstructured data such as social media, behavioral data, email, chat, audio, video, reviews, location data, and acceleration data.
- Behavior Based Fan Insight enables you to understand how contextual content impacts engagement.
- Behavior Based Fan Insight provides increased information transparency between departments.
- Behavior Based Fan Insight helps you to understand content preferences so that you can customize promotions.
- Behavior Based Fan Insight provides real time visibility into the value of your promotions.

What questions does Behavior Based Fan Insight answer?

How can we better understand and target our fans and customers?

What are the indicators by which we can measure our customer outreach?

Who are the right customers for targeted efforts, when and how do we interact with them effectively?

How far in advance do customers buy tickets before the event itself, and where and how do they buy tickets?

What are the different behavioral groups for casual buyers compared to season seat owners?

What are the ticket purchase transaction traits for different types of customers? Day of week? Time of event? Opponent? Channel of purchase?

What is the ticket purchase history of customers and what are the changes in their ticket purchasing behavior?

Which fans visit most and least often?

How do fans, season pass holders, and walk up buyers respond to special offers?

Chapter 2. The reports

The reports in IBM Behavior Based Fan Insight help you to get insight into your customers and their purchasing behaviors.

Here's the list of available reports:

Customer Behavioral Clustering
> Provides a holistic view and better targeting opportunities for current fan base and potential fans and customers.
>
> View the customer segments, the metrics, and details about those segments. Drill down in a customer segment to view individual customers.

Customer Target Groups report
> A bubble chart that groups customers in low, medium, high, and very high probability to churn.
>
> Generate a detailed customer list of the group and save it in Excel, CSV, and other formats.

Customer Demographics
> Shows you demographic information for a customer segment. The report shows demographic characteristics such as household income, household size, education, age, and marital status.

Customer Purchase report
> A KPI bar chart that shows summaries of customer ticket purchases per event.
>
> Track the performance and effectiveness of key initiatives by customer segment.

Purchase Lead Time report
> A KPI line chart that shows summaries of purchase lead time by segment per event, or over a series of events.
>
> Track the performance and effectiveness of key initiatives by purchase lead time. Purchase lead time is the difference in days between when a customer buys a ticket and when that customer attends the event.

Entrance Lead Time report
> A KPI line chart that shows how far in advance customers arrive at an event.

Ticket Breakage By Price Level report
> A KPI bar chart that shows used and unused tickets by price level.

Ticket Breakage By Event report
> A KPI bar chart that shows used and unused tickets by event.

Customer List
> This report can be generated from many of the other reports in Behavior Based Fan Insight. It's a list report that shows specific customer information such as name, customer ID, and contact information - useful for phone or email marketing campaigns.

Predictive analytics data sources and input variables

The following data sources and key input variables are in Behavior Based Fan Insight:

Data sources
> Purchase, attendance, and demographics.

Key input variables
> Tenure, type of fan, sport and non-sport event purchased and attended, sales channel, ticket type, seating level, sales channel, purchase lead times, distance to stadium, corporate/consumer, and game characteristics.

Customer segmentation model

The customer segmentation model helps you to launch targeted marketing campaigns by grouping customers into distinct clusters. You can adapt your marketing campaigns to each cluster with minimal effort. To find the clusters, Behavior Based Fan Insight uses the purchasing behavior of your customers, which is captured in their transactional data.

The customer base of your organization consists of the following groups:

Non-sport fans
> Customers who attended only concerts in the past - no games.

Casual fans
> Customers who buy non-season tickets to attend games. They might also attend concerts.

Season seat members (SSMs)
> Customers who buy season tickets to attend games. They might also attend concerts.

To further break the previously listed groups into actionable clusters, the model differentiates between core and transient customers within each group. A core customer is one that attends multiple events, purchases multiple tickets, and spends higher than average per season. A transient customer attends fewer events and spends less. To determine whether a customer is core or transient, Behavior Based Fan Insight creates the following variables based on the transactional history of your customers:

- Most common ticket level purchased. For example, low, medium, and high.
- Average number of events and tickets purchased per season
- Number of game packages purchased per season. For example, 3-game package and 5-game package.

The customer segmentation model identifies outliers and places them into separate clusters. For example, groups, promotional customers, and ex-season seat members are considered casual fans but they are placed into separate clusters because their spending behavior is different than most casual fans.

Scoring models

Behavior Based Fan Insight also identifies the customers who are most likely to respond to certain marketing campaigns. The following classification models score your customers based on their transactional behavior:

Become SSM model
Identifies casual fans who are more likely to become season seat members.

Upsell model
Identifies casual fans who are likely to spend 10% more than what they spent in the previous season. For SSMs, this model identifies the customers who are likely to spend 15% more than they spent in the previous season.

Turnover model
Identifies customers who are most likely not to purchase game tickets.

Become fan model
Identifies the non-sport fans who are most likely to purchase game tickets.

The scoring models are built based on the events that took place in the previous two seasons. For example, to build the turnover model for the 2015 season, Behavior Based Fan Insight finds the customers who purchased game tickets in the 2013 season, but did not purchase any game tickets in the 2014 model, and analyzes their spend behavior. The scoring models are periodically updated and rebuilt to account for changes in the transactional history of your customers.

Metrics

The following list describes some of the key metrics used in Behavior Based Fan Insight.

Customer class
The way your organization groups its customers.

Ticket type
Predefined grouping options for purchase of tickets.

Game type
If the game is hot or cold based on ratings of Bronze, Silver, or Gold. A Bronze game is considered to be a lower draw than a Gold game.

New score
The likelihood that a customer who has never bought a ticket before will buy a ticket. Expressed as a percentage.

Renewal score
The likelihood that a customer who has previously purchased a ticket will buy tickets next year. Expressed as a percentage. The renewal score drops if they are likely to purchase fewer dollars of tickets than before.

Up sell score
The likelihood that a casual buyer customer will buy at least 10% greater dollars of tickets over the prior year. Expressed as a percentage. Also, the likelihood that a season seat owner will buy at least 15% greater dollars of tickets over the prior year.

Key performance indicators

The reports refer to the following key performance indicators (KPIs):

Type of consumer
Business or individual.

Ticket purchase spend or history by customer segment
Customer class, ticket level, ticket type, amount spent, date purchased, time purchased, time of event, opponent, date (historical change over time).

POS location by segment
Online tickets sales website, stadium, call in, stadium box office, or other.

Top buyers by game by segment (revenue and number of tickets)
Rank, amount spent, buyer information such as name, email address, or phone number, and number of tickets.

Frequency of ticket purchases by segment
Ticket type, location, amount spent, customer segment, and date.

Customer retention percentage per segment
By customer, segment, location, ticket type, and date.

Household distance from stadium per segment
Distance in kilometers.

Purchase lead time per game and per segment
By customer, segment, location, ticket type, and date.

Sales by event per segment
Customer class, customer segment, ticket type, price of tickets purchased, and date.

Ticket purchase performance by segment
Customer class, customer segment, ticket type, price of tickets purchased, and date.

Conversion by Segment
Customer class, customer segment, ticket type, and date.

Hot Game (Velocity of Sales)
Determined by the number of tickets bought, date purchased, date of event, and lead time.

Cold Game (Velocity of Sales)
Determined by the number of tickets bought, date purchased, date of event, and lead time.

Selecting and running a report

You can access the reports from the Behavior Based Fan Insight home page.

Procedure

1. From the home page, click the **Insights** icon .
2. Select a report from the list that displays. If the filter panel is not visible when the report opens, click the arrow on its border to maximize it. Click the arrow again to minimize the filter panel. You can also resize the filter panel by dragging its border.
3. In the filter panel, select the filters that you want to apply to the report.

   A filter can be a cascading filter, which means its values determine the values in another filter. For example, there are two filters: month and day of month. When you select February in the month filter, then the day of month filter has the values 1 through 28. If you select July as the month, then the day of month filter has the values 1 through 31.

When you can select only one value in a cascading filter, then any filters it affects are populated immediately. If you can select multiple values in a filter, then you must click **Apply** to populate the filters it affects and then select the values in the filter.

The Purchase Lead Time report contains several cascading filters, which means you'll have to select and apply several filters before you see the final report results.

4. Click **Apply** to run the report.

Exporting the Customer List report

You can export the Customer List to a file.

About this task

You can generate the Customer List report from some of the other reports in Behavior Based Fan Insight. You can export the report in the following formats:
- PDF
- Excel 2007 data
- Excel 2007
- Excel 2002
- CSV
- XML

Procedure

Right-click anywhere in the Customer List report, select **Widget Actions** > **Export to**, and then select the format to export to.

Customer Behavioral Clustering

The Customer Behavioral Clustering provides a view of the customer segments, the metrics and details about those segments. Use it as a starting point to determine the segment for which you want to view customers.

The Customer Behavioral Clustering report displays a donut chart that is divided into customer segments. You can filter the data in the report in the following ways:
- By season seat members or non-season seat members. After you select a value, the customer segment filter is populated.
- By customer segment
- By corporate or non-corporate clients

Click **Apply** to generate or refresh the report.

Hover over a segment to see the total customers in the segment.

Under **Hockey Factors** and **General Factors**, you'll see the factors used to the determine the counts for each segment.

To see a detailed customer list of the report, click **Customer List**. The customer list displays customer name, customer ID number, customer type, contact name, contact information, and other details about each customer. Click **Customer Segmentation** to return to the Customer Behavioral Clustering.

Customer Target Groups report

The Customer Target Groups report helps you to develop lead lists to improve targeting and define timing, and content and frequency of interactions with your fans. Use the analysis in the report to target the right fans or clients at the right time, with the right offer.

The Customer Target Groups report is bubble chart that shows your customers' probability to churn in four ranges. Each bubble indicates a low, medium, high, or very high probability of customers to do one of the following things: turnover, spend more, become a season seat member, or become a fan. The y-axis displays the ticket quantity and the x-axis displays the season spend amount. Hover over a bubble to see the probability range, season spend amount, ticket quantity, and customer count.

You can filter the data in the report in the following ways:

- By season seat members or non-season seat members. After you select a value, the customer segment filter is populated.
- By customer segment
- By customer type

Click **Apply** to generate or refresh the report.

After the report is generated, you can view the data in the following ways:

By probability type
> Probability to turnover, probability to spend more, probability to become a season seat member, and probability to become a fan.

By amount spent
> Total amount spent or average amount spent.

To see a detailed list of customers in a particular probability to churn range and probability type, right-click a bubble and select **Go To** > **Customer List**. The customer list displays customer name, email address, customer ID number, customer segment, probability type and range, contact information, and other details about each customer. You can view this list in Excel, CSV, and other formats and then save it in a file.

To see the factors that determine the churn prediction in a particular probability to churn range and probability type, right-click a bubble and select **Go To** > **Predictive Factors**.

Click **Customer List** to display the full list of all customers in the report. This list displays customer name, customer ID number, email address, customer segment, and probability information.

To sort the report, click the up down icon in a column heading.

Customer Demographics

The Customer Demographics report shows you key demographic characteristics of a customer segment in an at-a-glance format.

You can filter the customer segment data to focus on specific demographic characteristics. Once you have determined the demographic characteristics that you want to target, you can generate a list of customers that have those demographic characteristics.

You can filter the data in the report in the following ways:
- By season seat members or non-season seat members. After you select a value, the customer segment filter is populated.
- By customer segment
- By customer type
- By probability type
- By probability range

Click **Apply** to generate or refresh the report.

The report displays the following information for the selected customer segment (with the selected filter critieria):
- Number of households, average household income, average household size, and number of children in the household
- Donut charts that show community, age group, occupation, and education. Each chart is divided into ranges showing the percentage of customers that fall into a range. For example, the age group donut chart is divided into age ranges of 10 to 20, 21 to 30, 31 to 40, and +40.
- Bar charts that show gender, employment status, own or rent a residence, and marital status

To see a detailed list of customers for the selected filter criteria, click **Customer List**. The customer list displays customer name, email address, customer ID number, customer type, contact information, and other details about each customer. To export the **Customer List** report to a file, see "Exporting the Customer List report" on page 7.

Customer Purchase report

The Customer Purchase report shows you ticket purchases by ticket type and customer segment.

The report is a bar chart with summaries of ticket purchases by ticket measure. Ticket measure can be ticket level, ticket type, or ticket class. A customer segment is represented by a different color in a bar. The x-axis displays events by ticket measure. The y-axis displays the sum by unit of measure (ticket quantity, sales amount, or customer count).

You can filter the data in the report in the following ways:
- By season seat members or non-season seat members. After you select a value, the customer segment filter is populated.
- By customer segment
- By corporate or non-corporate clients
- By season. After you select a value, the event group, ticket class, ticket type, and ticket level filters are populated.
- By ticket class
- By ticket type
- By ticket level

- By event group. You can select multiple values in this filter. After you finish your selections, you must click **Apply** to populate the day of week filter.
- By day of week. You can select multiple values in this filter. After you finish your selections, you must click **Apply** to populate the event filter.
- By event

Click **Apply** to generate or refresh the report.

After the report is generated, you can view the data in the following ways:
- By ticket type, ticket level, or ticket class.
- By ticket quantity, sales amount, or customer count.

To see detailed information about each customer in the report, click **Customer List**. The customer list displays customer name, customer ID number, customer type, contact name, contact information, and other details about each customer.

Click **Customer Purchases** to return to the Customer Purchase report.

Purchase Lead Time report

The Purchase Lead Time report shows you how far in advance ticket purchases are made by customer segment or by event.

This report is a line chart with summaries of purchase lead time by customer segment or event. Each line represents a customer segment or event. The y-axis shows the number of tickets purchased. The x-axis shows the lead time of ticket purchase by customer segment or event.

You can filter the data in the report in the following ways:
- By season seat members or non-season seat members. After you select a value, the customer segment filter is populated.
- By customer segment
- By corporate or non-corporate clients
- By season. After you select a value, the event group, ticket class, ticket type, and ticket level filters are populated.
- By ticket class
- By ticket type
- By ticket level
- By event group. You can select multiple values in this filter. After you finish your selections, you must click **Apply** to populate the day of week filter.
- By day of week. You can select multiple values in this filter. After you finish your selections, you must click **Apply** to populate the event filter.
- By event

Click **Apply** to generate or refresh the report.

After the report is generated, you can view the data by customer segment or event.

To see detailed information about each customer in the report, click **Customer List**. The customer list displays customer name, customer ID number, customer type, contact name, contact information, and other details about each customer.

Click **Purchase Lead Time** to return to the Purchase Lead Time report.

Entrance Lead Time report

The Entrance Lead Time report shows you how far in advance customers enter the venue for an event by customer segment.

Each line in the report represents a customer segment. The y-axis shows the number of tickets used. The x-axis shows the lead time of entry up to a maximum of 2 hours prior to and after the start of the event in 15 minute intervals.

You can filter the data in the report in the following ways:
- By season
- By event
- By season seat members or non-season seat members. After you select a value, the customer segment filter is populated.
- By customer segment

Click **Apply** to generate or refresh the report.

After the report is generated, you can view the data by customer segment or event.

Ticket Breakage By Price Level report

The Ticket Breakage By Price Level report shows you used and unused tickets by price level.

Each bar represents a section, which is divided into used and unused tickets. The y-axis shows the total number of tickets. The x-axis shows the price level.

You can filter the data in the report in the following ways:
- By season
- By event
- By season seat members or non-season seat members. After you select a value, the customer segment filter is populated.
- By customer segment

To see detailed information about each customer in the report, click **Customer List**. The customer list displays customer name, customer ID number, email address, if the customer is a season seat member, ticket class, ticket level, name of service representative, number of used tickets, number of unused tickets, total tickets the customer has, and the used tickets expressed as a percentage. To return to the Ticket Breakage By Price Level report, click **Ticket Breakage**.

Ticket Breakage By Event report

The Ticket Breakage By Event report shows you used and unused tickets by event.

Each bar represents a section, which is divided into used and unused tickets. The y-axis shows the total number of tickets. The x-axis shows the event.

You can filter the data in the report in the following ways:
- By season
- By ticket level

- By season seat members or non-season seat members. After you select a value, the customer segment filter is populated.
- By customer segment

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