

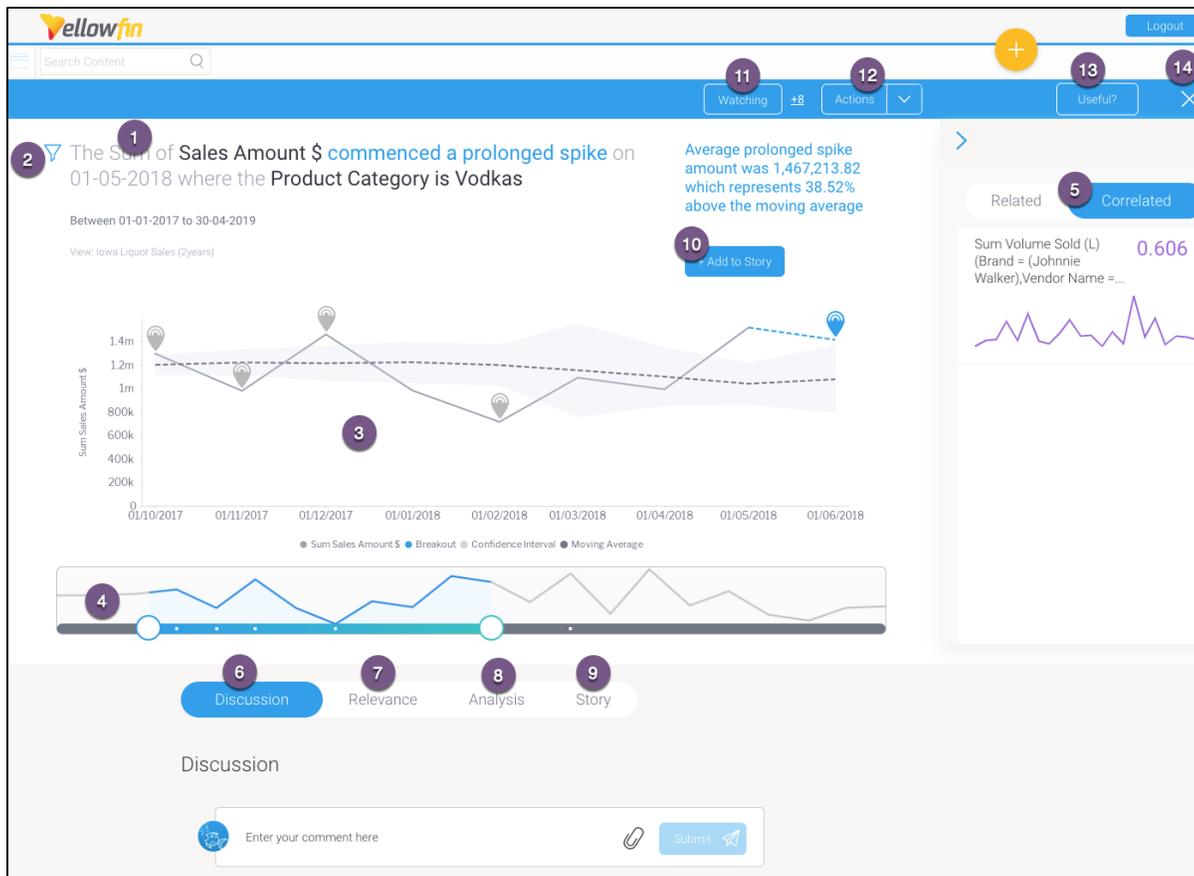
Exploring a Yellowfin Signal

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Section Overview

Open a Signal alert to explore its analysis in detail. (You can access this page via the Signal alert in your Timeline, or through the Signal list screen.) The main Signal is represented as an annotation in the time series chart. (See [here](#) for further info on this.) This section covers how to interact with a Signal's detail page.

Below is an example of an outlier detection signal. Note that the main Signal chart and some other details will differ according to the different types of Signals.



Number	Signals function
1	The auto generated narrative describes the nature of the Signal, along with the time window in which it occurred. Tip: Color foreshadowing is applied to highlight good (as blue) or bad (orange) results.
2	This filter icon shows that this Signal is filtered, meaning it's a result of a subset of the filtered data. Click on it to view the filter values.
3	This is the Signal time-series chart that shows the history of the specific metric - dimension combination. It displays the main Signal annotation, along with other related Signals that have occurred during that time line. You can use the annotations to learn about each of these Signals, and even explore the previous ones. (These time series charts will differ depending on the type of analysis.) Click here for more information.
4	The time slider that lets you expand or reduce the time window of the time-series chart. Signal annotations appearing in the time series chart are also visible in the time slider (presented as white dots).
5	This right side panel offers options to compare the main time-series chart with other related or correlated data charts. Click here to learn more.
6	The Discussion tab lets you leave comments and collaborate with other users on this Signal.
7	The Relevance chart depicts the importance of the Signals data in relation to all other data that the user has access to.
8	The Analysis tab provides automatically-generated visualizations and narratives about possible underlying causes. Yellowfin Assisted Insights functionality is utilized here to perform additional analysis on the Signal to explain why a signal has occurred.
9	The Story tab displays all the stories that the current Signal's main time series chart is added to; there could be any number of linked stories. Readers can read published stories, or if in draft mode, users with collaboration access can view or edit these stories. Note: Must have Yellowfin Stories to see this feature. Click here to learn more about it.
10	The +Add to Story button takes a screenshot of the time series chart (in its current state) and adds it to a specified story. Learn more about this process below . Note: Must have Yellowfin Stories to see this feature.
11	This Watch button lets you watch/unwatch the Signal. This adds the Signal to your watch list, and sends alerts when other users interact with this Signal.
12	This Actions buttons lets you perform a number of actions on this Signal, such as owning or assigning it, sharing it, dismissing or closing the Signal. These interactions are covered here in detail.
13	Rate the usefulness of the Signal. Click here to learn more.
14	Exit the Signals detail page.

Signals time series chart

The Signal time-series chart shows the history of the specific metric - dimension combination. These time series charts will differ depending on the type of analysis.

The Sum of Pageviews **commenced a prolonged spike** on 08-10-2019 where the Page Title is Insights that find you with Yellowfin Signals. - Yellowfin BI

Average prolonged spike amount was 36.67 which represents 156.08% above the moving average.

Between 01-09-2019 to 31-10-2019

View: GA (Copy)

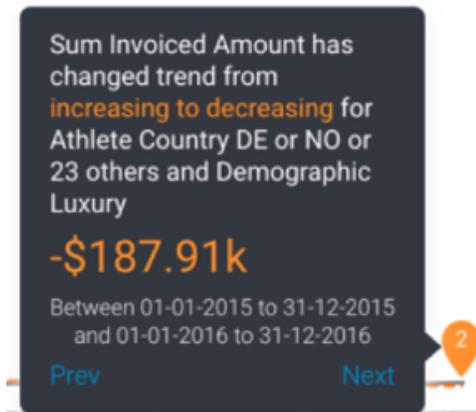


Sum Pageviews **commenced a prolonged spike** on 08-10-2019 for Page Title Insights that find you with Yellowfin Signals. - Yellowfin BI
+156%
Between 01-09-2019 to 31-10-2019

Signal annotations

Main annotations

Hover over the **main Signal annotation**; this will bring up a tooltip that displays information on the Signal.



Other Signals annotation

Other previously generated Signals are also visible as annotations on the time series chart. These are Signals that occur in the same time window, for the same dimension granularity. You can view the detail of that signal by hovering over the signal annotation. You can click on the Explore button to open the Signal page for that Signal.

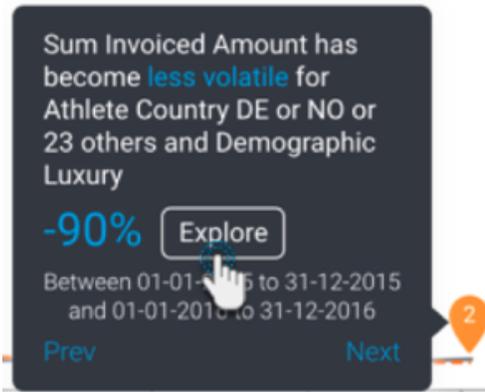


Chart analysis

The time series chart displays different types of analysis based on the nature of the Signal.

Moving Average

The moving average calculated for Signals follows a particular calculation, and therefore will be different from the moving average calculated on a report. This is because the Signal algorithms incorporate a smoothing mechanism to limit the impact of outlier values (such as Spike, Drops) on the shape of the moving average curve. So the curves are unlikely to ever look the same, especially in the presence of one or more outliers.

Compare Related or Correlated Charts

Yellowfin offers options to allow you to compare the main time-series chart with related or correlated data charts.

Related

Time-series line charts for other metrics from the same data view.

Correlated

The Signals engine looks at all of your data (in different views and databases) to see if there are data patterns similar to the current time series. This lets you know of possible relationships in your business, even if the matching patterns in data are not from the same data set, not even the same metrics or dimensions. These correlation lines will let you compare and explore these relationships in data. Clicking on a correlated line will bring it up on the main time series chart to show you the two lines together.

For admins: Correlation analysis can be disabled through algorithm parameters in Signals analysis configuration.

Note: The Related and Correlated data charts are placed in a specific order, the more closely related or correlated a chart to the Signal, the higher up in the panel it will be.

Correlation factor

The value in this panel shows the correlation factor against each correlated metric. This allows users to understand the *strength* of a correlation. To understand how correlated a correlated chart is to the main signals data, the following rules apply:

- A value closer to **1** means it is more correlated.
- A value closer to **0** is less correlated.
- A value closer to **-1** is oppositely correlated (that is, correlated but opposing each other).



Here's how to compare either of these charts:

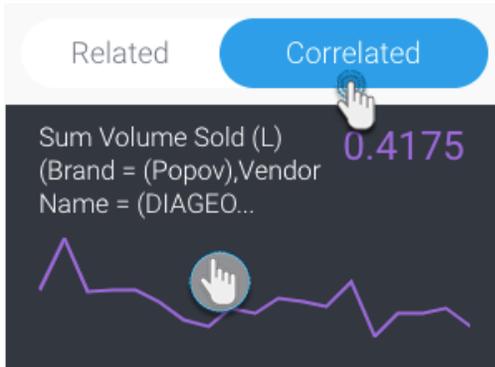
1. Bring up the panel on the right side, by clicking on the expand icon.



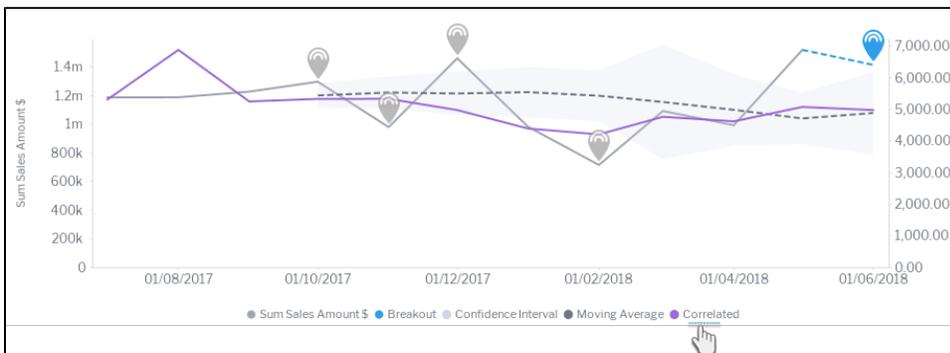
2. You can hide this panel by clicking on the icon on its top-left corner.



3. To compare related charts, click on any one of the charts under the **Related** section.
4. Or click on **Correlated**, and select a chart from that section to compare with the main time-series chart.



5. The chart line will appear on the main time-series chart for comparison.

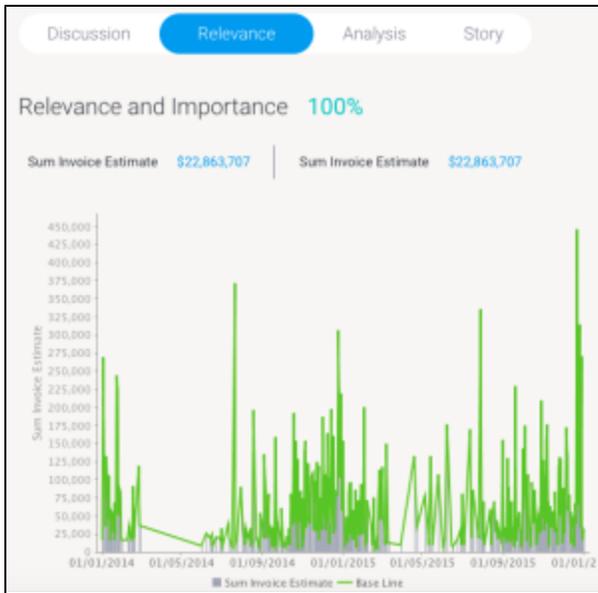


Relevance

The Relevance chart compares the Signals time series data, that is the metric being analyzed (represented with grey lines) with that of the baseline data (green lines). Baseline refers to the overall dataset in which the Signal is generated, along with any access filters if applied. If Signal filtering is applied, then the baseline will include these filters as well.

Note that Relevance information is not available where the metric being analyzed contains a mix of positive and negative signed values. However if all values are either positive or negative, then relevance will be calculated.

Click on the **Relevance** tab to understand the relevance and importance of this Signal in relation to all your other data.



Analysis

The Yellowfin [Assisted Insights](#) provides an automated analysis of your data through visualizations and natural language narratives. It is used here to suggest the cause of a signal, and provide underlying reasons for why it occurred.

Discussion Relevance **Analysis** Story

Analysis Open Draft Analysis

The analysis below is built using detailed data from the view that this Signal was generated from. It identifies what contributed to the change by comparing two periods across multiple dimensions. The period in which the Signal occurred and a compare period. The biggest changes are generally the best explanations of what caused the Signal to occur.

The most relevant results have been grouped by one, two, and three variable combinations and then listed in order of importance.

Charts

Metric over time
Higher values are good

Variance by Camp Region
Higher values are good

Explanations

This chart measures Sum Invoiced Amount by Invoiced Date (01/01/2015 to 01/01/2016) and (01/01/2016 to 01/01/2017)

- The average Sum Invoiced Amount was \$1,846,916 with a standard deviation of \$5,396,018.
- The largest single increase on a percentage basis for Sum Invoiced Amount, which was 116973.17% from \$28,561 to \$33,436,800, occurred between 20/12/2015 and 20/12/2015.
- The smallest value for Sum Invoiced Amount occurred on the Days 2015/12/07 - 2015/12/07 (\$28,561) and the largest on the Days 2015/12/21 - 2015/12/21 (\$33,436,800) a difference of \$33,408,239.
- Total Sum Invoiced Amount was \$84,958,141 across 46 Days

This chart measures variance of Sum Invoiced Amount by Camp Region highlighting the relative change in contribution between Invoiced Date (01/01/2015 to 01/01/2016) and (01/01/2016 to 01/01/2017)

Camp Region is the variable that best explains the difference in Sum Invoiced Amount

- The largest negative variance in Sum Invoiced Amount by Camp Region between (01/01/2015 to 01/01/2016) and (01/01/2016 to 01/01/2017) was Asia (\$-72,711,323). Interestingly it had the highest relative change (3.96%) indicating that its percentage of total Sum Invoiced Amount was much higher in (01/01/2015 to 01/01/2016) than (01/01/2016 to 01/01/2017).
- From (01/01/2015 to 01/01/2016) to (01/01/2016 to 01/01/2017) Australia had the second largest drop of Sum Invoiced Amount of \$-5,778,980. It also had the highest negative relative change (-51%) indicating that its percentage of total Sum Invoiced Amount was much lower in (01/01/2015 to 01/01/2016) than (01/01/2016 to 01/01/2017).
- The minimum value of Variance is \$-72,711,323 Asia and the maximum of Variance is \$-5,778,980 Australia, a difference of \$66,932,343.
- Total negative Variance was \$-78,490,303 across 2 Camp Region

The automated analysis results are only provided if there is data available to generate useful results, otherwise a message will appear, providing the exact reasoning the analysis was not generated.

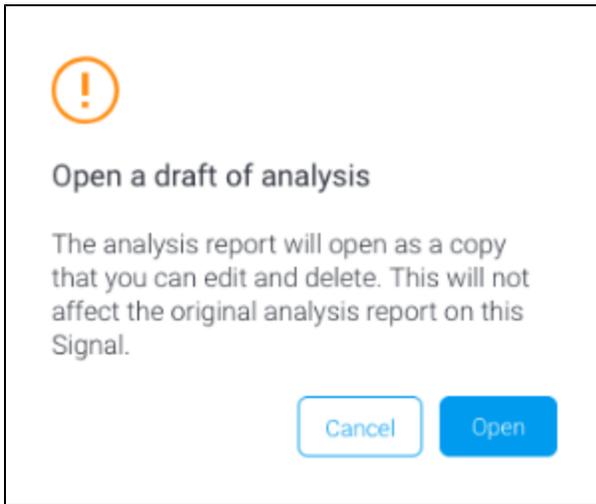
Discussion Relevance **Analysis** Story

No Analysis is available for Signal Type Volatility

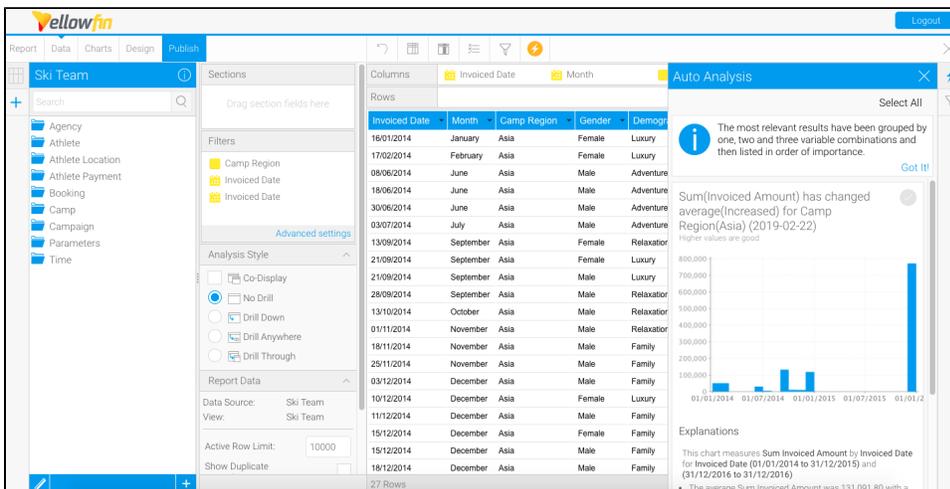
Draft of Analysis

You can also create a separate copy of this analysis report, and make alterations to the selected data and visualizations.

1. Click on the **Open Draft Analysis** button to view the automated analysis in the report builder. This always creates a separate draft version of the analysis report, meaning the original report will not be changed if you made alterations.
2. Click **Open** when the pop up appears.



- The report will open in the report builder, ready to be updated or saved.



Signal Stories

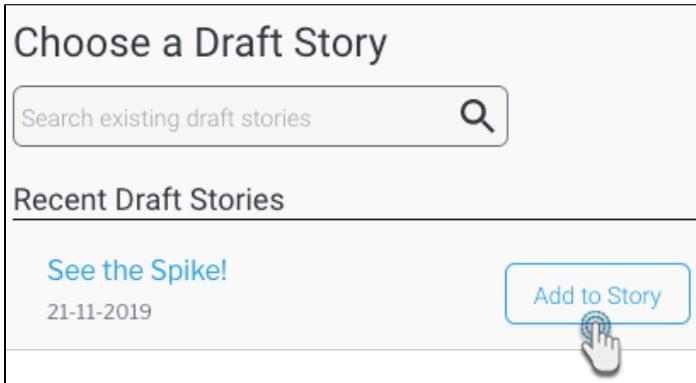
You can add the Signal chart to multiple Stories, and manage them via the Signals section.

Adding Signal to Story

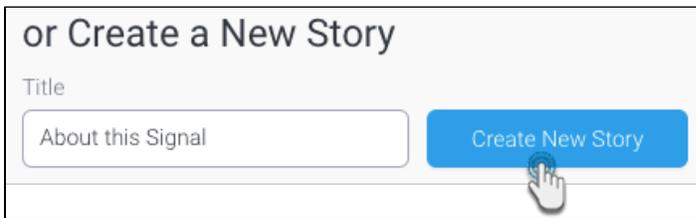
- To embed the Signal chart into a Story, click on the **+Add to Story** button on the top-right corner.



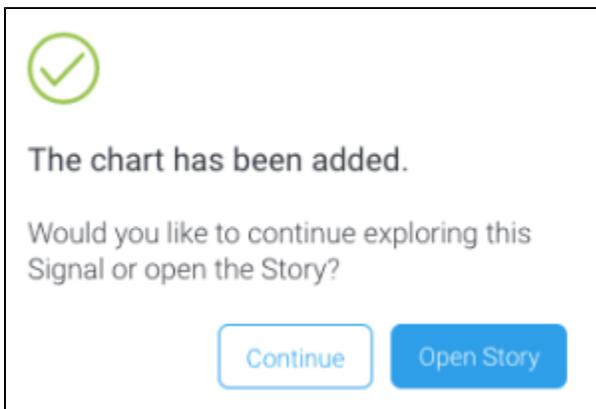
- In the popup that appears, add the chart to an existing draft story by clicking on its **Add to Story** button.



- Alternatively, you can also create a new story and add the chart to it. Enter a name for the story, and click the **Create New Story** button.



- On adding the chart to a story, the following popup will appear.



- You can either open the story now, or click **Continue** to stay on the Signals page (and work on the story later). To learn more about Yellowfin Stories and how to create one, click [here](#).

Manage Stories

Click on the **Story** tab on a Signals page to view and manage each story that the current Signal chart is added to.

Discussion Relevance Analysis **Story**

Story

Title	Status	Actions
See the Spike!	Published	Read Edit
About this Signal	Draft	Edit

You can perform the following actions on these stories.

- **Read** - if the story is published (or in draft), click **Read** to open it.
- **Edit** - if a story is still a draft, and you have author, or colla