

How to Create a Google Sheets Chart That Skips Blank Cells

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Creating effective data visualization is essential for communicating insights clearly. However, real-world datasets often contain missing entries, commonly referred to as null values or blank cells. When generating a chart in Google Sheets, the presence of these gaps can significantly distort the visual output, leading to misleading interpretations or fragmented graphs. Understanding how to instruct the charting engine to handle these blank cells--specifically, how to make the chart ignore them and maintain continuity--is a critical skill for any spreadsheet user aiming for clean, professional reports. This comprehensive guide details the precise methods required to manage missing data points efficiently during the visualization process.

The standard behavior of many visualization tools, including Google Sheets, is to represent missing numerical data as explicit gaps on the chart axis. For a time series or a sequence-based plot, this results in visible breaks in the line or bar representation. To overcome this common challenge and ensure a smooth, continuous flow in your visual representation, particularly in a line chart, we rely on a powerful customization option: the **Plot null values** feature. This setting allows the system to effectively disregard the empty coordinates, bridging the visual distance between the data points that precede and follow the missing entry, thereby enhancing the clarity and aesthetic appeal of the final visualization.

The Challenge of Missing Data in Spreadsheet Visualization

Missing data, or blank cells, introduce complexities when translating raw numbers into visual narratives. While sometimes a blank cell genuinely signifies zero, in many analytical contexts, it means the data was simply **not recorded** or is **not applicable**. When charting these sequences, particularly time-series data where the X-axis represents ordered progression, the charting software defaults to treating the blank cell as a lack of data point, resulting in a visible break or disconnection in the graphical element.

This fragmentation poses several problems for data visualization. First, it disrupts the flow, forcing the viewer to mentally connect the disparate segments of the chart. Second, if the missing period is extensive, it might lead to confusion regarding the dataset's continuity. Third, in aesthetic terms, segmented charts are generally less professional and harder to interpret quickly. Our goal, therefore, is to leverage built-in Google Sheets functionality to tell a complete, uninterrupted story about the data trend, even when certain values are absent.

It is important to distinguish between explicit zero values and implicit **null values**. If a cell contains the numerical value '0', the chart will accurately plot it on the axis baseline. If a cell is entirely empty, it is interpreted as a null or missing entry. The method described here specifically addresses the latter scenario, where we want the chart to effectively skip the missing month or period and draw a line directly between the last recorded value and the next recorded value.

Introducing the "Plot null values" Feature in Google Sheets

The solution to smoothing over gaps caused by missing data lies within the customization panel of the [Google Sheets](#) Chart Editor. This feature, often labeled **Plot null values**, instructs the charting engine to use a linear [interpolation](#) method to connect the known data points, rather than leaving a blank space. When this option is enabled, the chart does not strictly ignore the blank cell; rather, it visually bridges the space by drawing a straight line segment, treating the gap as a non-fatal interruption in the sequence.

Activating **Plot null values** is particularly beneficial for [line charts](#) used to track continuous metrics over time, such as sales figures, temperature readings, or stock prices. Without this setting, a single missing day might lead to a significant visual discontinuity. By enabling it, the visual representation maintains coherence, allowing the observer to grasp the overall trajectory without distraction. However, users must be mindful that this process introduces a form of visual estimation; the line connecting the points does not represent actual recorded data but rather an estimated trend.

This setting is found under the **Customize** tab of the Chart Editor, typically grouped with options controlling series appearance or data behavior. Unlike manual data cleaning where you might fill in the blank cells with interpolated numbers (which permanently alters the source data), this feature offers a visualization-only solution, preserving the integrity of the raw data stored in your spreadsheet while optimizing the chart's appearance.

Preparing the Dataset for Visualization

To illustrate the practical application of this technique, we will use a sample dataset tracking monthly product sales over a year. Critically, this dataset contains intentional gaps--months where sales data was not logged, resulting in blank cells. This mimics common reporting scenarios where data collection failures or seasonal shutdowns lead to missing entries.

Consider the following structure, which maps Months (our sequential category) against Sales (our quantitative value). Note the absence of sales figures for May and August, which represent the **null values** that we intend to handle visually.

	A	B	C	D
1	Month	Sales		
2	January	4		
3	February	7		
4	March	9		
5	April	12		
6	May			
7	June	17		
8	July	20		
9	August			
10	September	22		
11	October	26		
12	November	29		
13	December	27		
14				
15				
16				
17				
18				
19				

The dataset spans the range **A1:B13**. Column A defines the temporal progression, crucial for sequential charting, and Column B contains the numerical data. When preparing any dataset for visualization, ensure that the headers are clearly defined (Row 1) and that the data itself is contiguous, even if some numerical cells are left blank. Using explicit blank cells (rather than placeholders like "N/A" or zero, which would be plotted) is essential for triggering the specific behavior of the **Plot null values** feature.

Initial Chart Generation and Observing Gaps

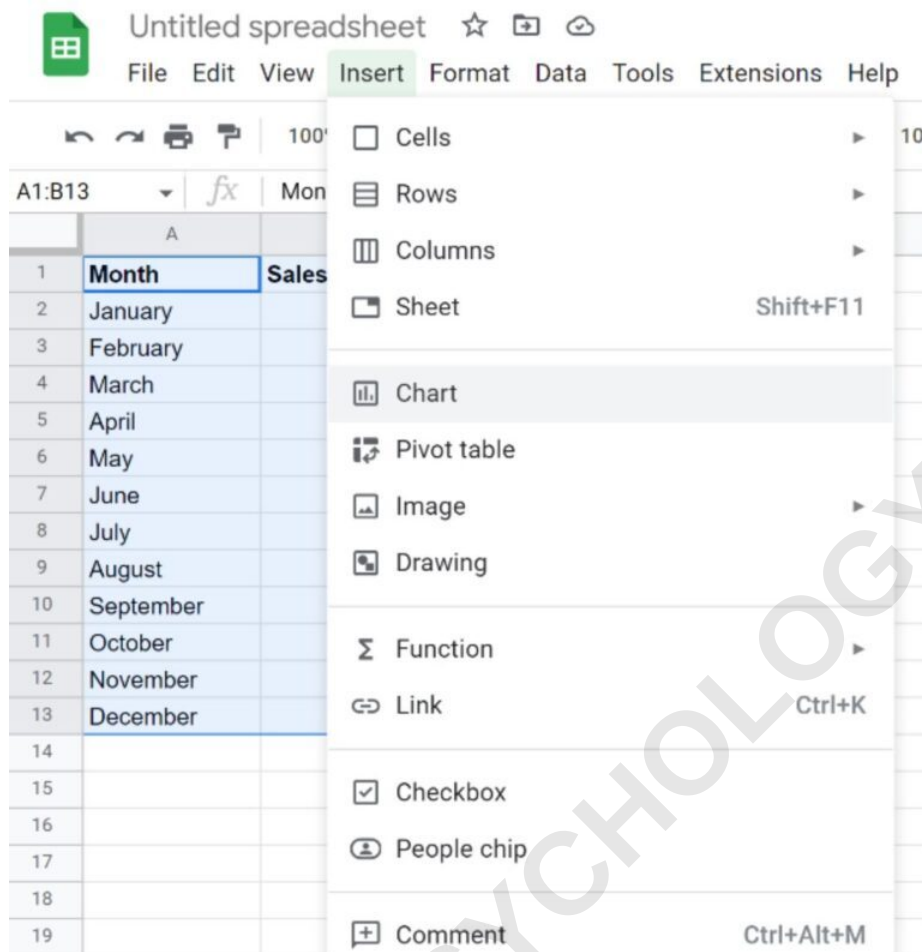
Our first step is to generate a default line chart based on this imperfect data range. This step is necessary to observe the default behavior of Google Sheets when encountering missing values, clearly demonstrating the problem before applying the solution.

Select Data: Highlight the entire data range, specifically **A1:B13**.

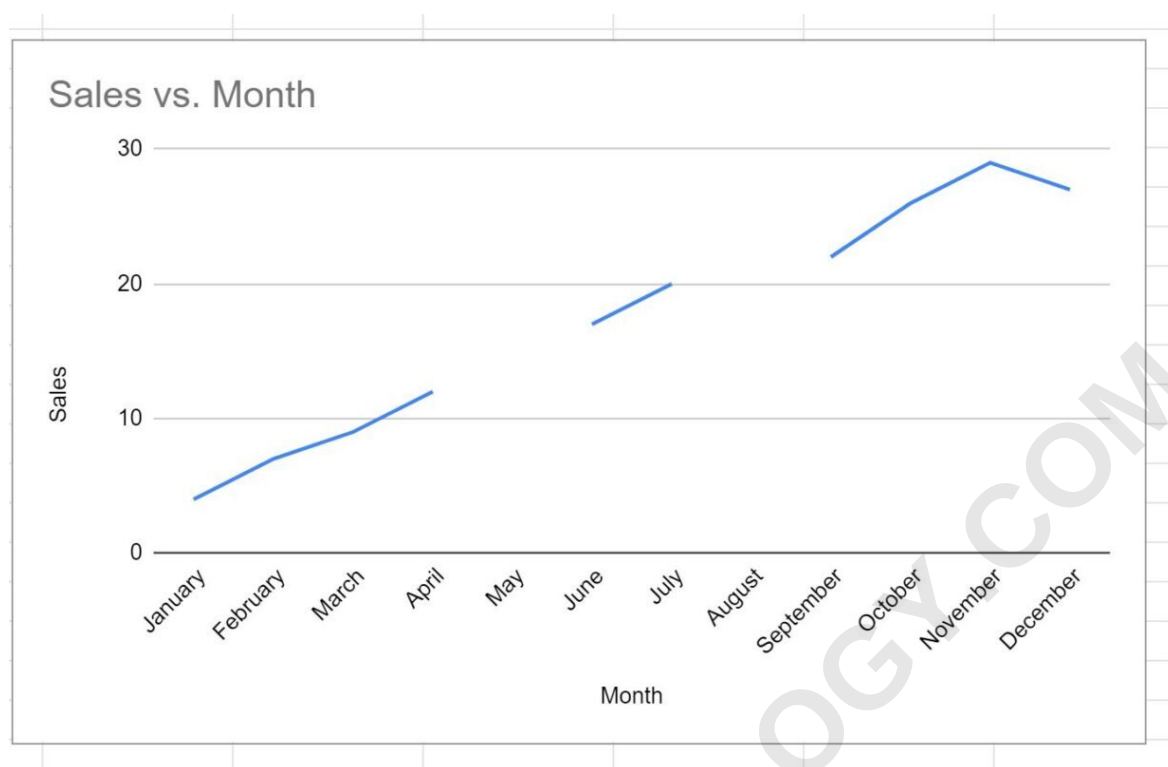
Insert Chart: Navigate to the **Insert** tab in the top ribbon menu and click **Chart**.

Upon insertion, Google Sheets automatically detects the data structure (a series over categories) and typically suggests a suitable chart type, usually a line chart in this time-series context. The resulting chart will immediately show the discontinuity resulting from the missing data points.

Notice the breaks in the line corresponding to May and August.



The visual outcome is a graph that successfully plots all recorded data but fails to maintain the appearance of a continuous trend. This fragmented view, shown below, highlights precisely the two intervals where **null values** reside. The line jumps abruptly from April to June, and then again from July to September, clearly indicating that the default setting is to omit any visualization where data points are absent.



Step-by-Step: Enabling Null Value Handling

To correct the fragmented appearance and instruct the chart to visually ignore the blank cells by connecting the remaining data points, we must access and modify the chart's specific series customization settings. This process is straightforward and only requires interaction with the Chart Editor panel, without altering the underlying data.

The procedure is as follows:

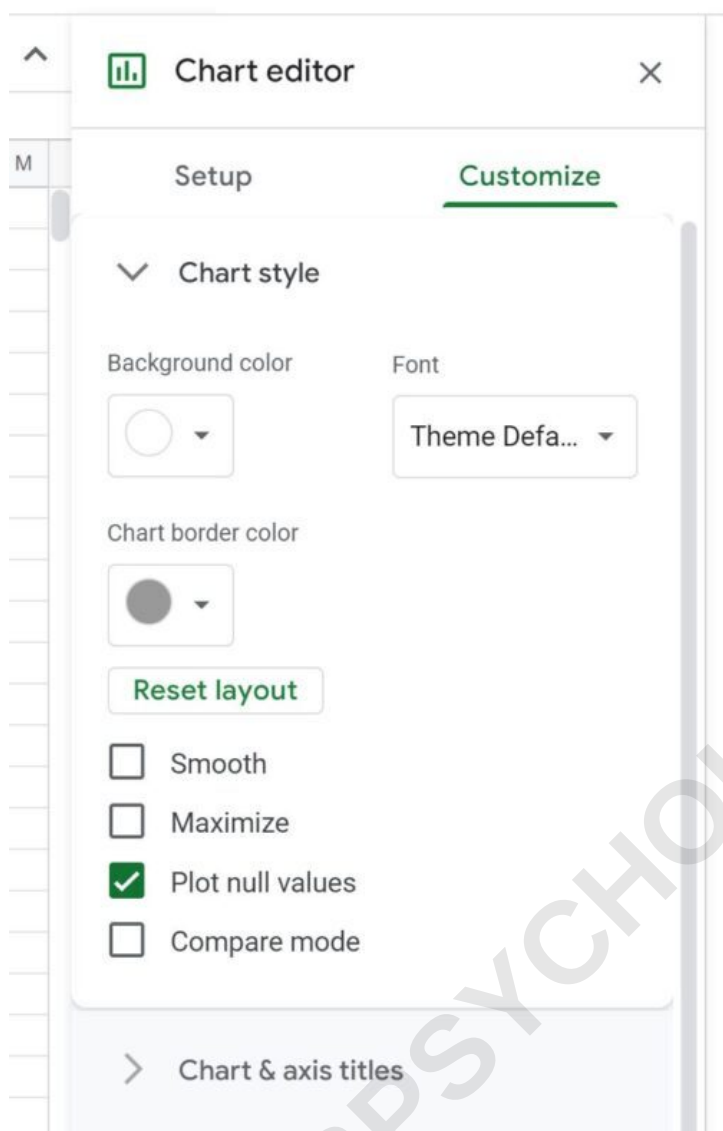
Access the Chart Editor: Double-click anywhere on the newly created chart. This action opens the **Chart editor** panel, which typically appears on the right side of the screen.

Navigate to Customization: Within the Chart editor, switch from the default **Setup** tab to the **Customize** tab. This section contains options related to the aesthetic and specific data handling characteristics of the chart, including axis scaling, title formatting, and series options.

Locate Series Settings: Within the **Customize** tab, expand the **Series** section. If your chart has multiple series, ensure you are adjusting the correct one (in this case, 'Sales').

Check "Plot null values": Scroll down within the Series options until you locate the checkbox labeled **Plot null values**. Click this checkbox to enable the feature.

The customization panel view, highlighting the specific option to be enabled, visually confirms the location of this critical setting:

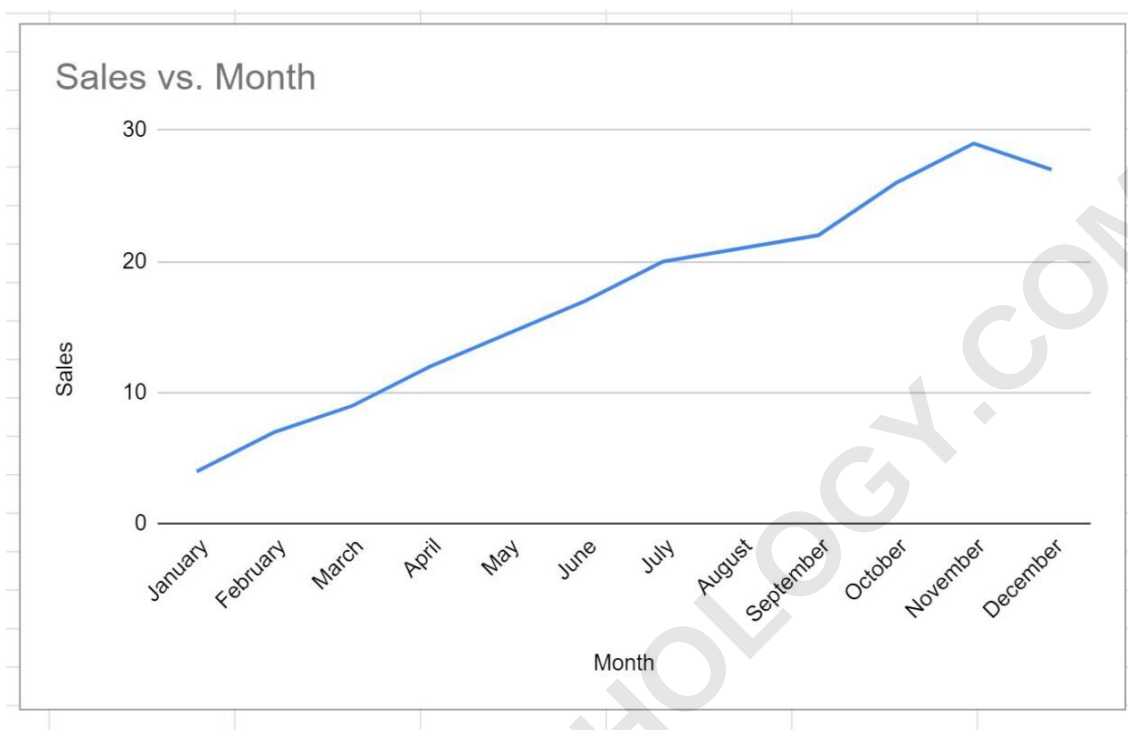


As soon as this box is checked, the chart dynamically updates, instantly resolving the gaps. The spreadsheet application now recognizes the directive to connect the dots across the intervening empty periods, resulting in a smooth, continuous line chart that implies a trajectory even where concrete data is missing.

Analyzing the Impact: Interpolation vs. Omission

The primary result of enabling **Plot null values** is the creation of a continuous line. When the chart encounters a blank cell, instead of terminating the line segment and restarting it at the next data point, it performs a linear interpolation. This means it draws a straight line between the last known data point (e.g., April sales) and the next known data point (e.g., June sales), effectively calculating the simplest path between them.

The visual transformation is striking. The gaps that previously interrupted the analysis of the sales trend are automatically filled in, allowing for a clearer assessment of the general upward or downward movement over the year. Below is the final, corrected chart:



It is crucial for professional analysis to understand the distinction: the line segments crossing May and August do not represent actual sales data; they represent a visual estimation based on surrounding values. While visually pleasing and excellent for illustrating overall trend, analysts must avoid citing the interpolated points as factual data. If the underlying mechanism were truly to "ignore" the blank cells, the X-axis would compress, meaning June would be plotted immediately next to April, effectively removing May from the sequence entirely. By contrast, the **Plot null values** feature ensures the time sequence remains accurate while using interpolation to maintain visual flow. This approach is superior for time-series data visualization.

Advanced Techniques for Handling Missing Data

While the **Plot null values** feature is the most efficient method for visual continuity in Google Sheets, there are alternative approaches, particularly when the underlying business requirement demands explicit data manipulation or filtering before visualization.

One common technique is to use the **FILTER** function or Query Language to preprocess the data, explicitly removing rows that contain **null values** in the key metric column. If we used the formula `=FILTER(A:B, B:B<>"")`, it would create a new, temporary table containing only rows where

sales data exists. When charting this filtered range, the X-axis categories (Months) corresponding to the missing sales would disappear entirely, causing the remaining months to be plotted sequentially without gaps.

```
=FILTER(A2:B13, ISNUMBER(B2:B13))
```

The downside of this filtering technique is the loss of temporal context. If May and August are removed, the viewer loses the indication that a month passed between April and June, making the rate of change look accelerated. Therefore, the **Plot null values** method, which preserves the X-axis scale (time), is generally preferred for trend analysis, while explicit filtering is better suited when focusing solely on the relationships between recorded points, irrespective of sequence.

Furthermore, in cases where zero truly signifies "no sales," manually entering '0' into the blank cells provides the most precise visualization solution. The line will drop to the axis baseline for the missing months, communicating a zero-value outcome rather than an estimation. Choosing between entering zero, using the **Plot null values** feature, or filtering the data depends entirely on the analytical question being addressed and the actual meaning of the missing data point.