Understanding Location Metrics in GA4

Making Sense of Location Data in Google Analytics 4

GA4 allows clients, analysts, and PFMs to understand where users are located geographically via location metrics. Understanding where website visitors come from can reveal incredible insights for any business eager to deepen their connection with their audience. While this information can be useful, it also has its limitations. In order to effectively use location data and speak to client concerns, it's imperative to understand which location metrics are reliable and which are not.

If you or your client are seeing traffic from unexpected or unwanted cities or are concerned about traffic from other states or countries, this resource should help you better understand how these metrics work and be able to speak to those concerns.

To find out where the majority of the users on your website are visiting from, you can navigate to Reports > User Attributes > Demographic Details to see location breakdowns for all users. Bear in mind, there are limitations to this data. They are outlined in more detail below.

When looking at this report, the default breakdown is **Country**. The next breakdown would be **Region** (this is the dimension for State if you are located in the US). Unless the user has opted out of location sharing all together, Google can typically identify what state users are in. We consider both **Country** and **Region** to be accurate data. However, Region/State is the most granular location data you can use while still ensuring accuracy.

The next level you can drill down to is **City.** This is the least reliable location breakdown with many users getting rolled up into the nearest large city instead of their actual city. We recommend using caution when doing any analysis based on the **City** dimension.

The Limitations of Location Data

GA4 is sophisticated, but several factors can complicate the accuracy of location data:

- Privacy Preferences: Many visitors choose not to share their location or use tools like VPNs and incognito browsing obscuring their real whereabouts.

- Mobile Movements: As mobile users move, connecting from one cell tower to another without updating their IP address, their reported location may not accurately reflect their current position.

- Small Towns and Big Cities: It's not uncommon for GA4 to group users in nearby, major cities like New York, Los Angeles, or London, rather than their actual small towns or suburbs.

- Bot Traffic: It can be baffling to see traffic from places like Tokyo, Paris, or Sydney when your business is firmly rooted in Chicago. These anomalies, often the result of bot traffic or the mobile issues mentioned above, can skew the data.

Think Twice Before You Filter

The temptation to filter out anomalous data or IP addresses is understandable, but we suggest fully considering the effects this will have on your data before adding any filters.

When it comes to filters on GA4 properties, it's important to note that there is NO WAY to retrieve filtered data once a filter is added. With Universal Analytics, we had the luxury of having a raw (unfiltered) view that was reliable for unfiltered data. However, with GA4, since any data manipulation (i.e. adding an IP filter) is conducted on the raw property itself, there is no way to retrieve this data.

Taking a closer look at the data can reveal the real story behind these discrepancies, offering valuable insights and maintaining your data integrity and robustness.

Getting the Most from GA4's Location Data

Keep in mind it's very common for websites to get traffic from other states and regions and internationally. This can be due to where the brand itself is located, the exclusivity of the vehicles the dealer carries, and even SEO content that is not specific to a certain area but to an entire Make and Model.

When addressing client concerns about Location Metrics, it's important to:

- Weigh the impact of the traffic from the locations that are concerning. What percentage of users are coming from concerning location? Is it a negligible amount of users?
- Open a dialogue. Talk to your customers or users about the intricacies of location data. Clarifying its importance and the need for careful interpretation can dispel confusion and improve data utilization.
- Look at the bigger picture. Focus on larger geographic categories like countries or states rather than city-level data. This approach is typically more reliable and useful for strategic decision-making.
- Be a Detective. Encountered something unusual in your data? Instead of dismissing it, investigate to uncover the truth behind the anomaly. Is the out-of-state traffic due to strong SEO content that Google is ranking in the top three search results? Does this dealer carry exclusive makes, models, or trims?

Navigating GA4's location data demands thoroughness and patience. Although it's easy to take every data point at face value, remember that the reality of location information is complex. Adopting a thoughtful strategy towards data analysis and acknowledging its intricacies and limitations allows you and your clients to make informed decisions.