

An Introductory Primer to the Google Analytics 4 Analytics Web Interface

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v 1.1.0

Contents

Account Setup	3
Google Analytics Data Structure	3
Other Data Properties	3
The Google Analytics Demo Data.....	5
Google Analytics GUI Basics.....	6
Reports.....	9
Segmenting	12
Secondary Dimensions.....	14
User Acquisition	17
Engagement reports	19
Demographics.....	21
Explorations	25
Creating a simple Exploration.....	25
Path Explorations.....	36
Reverse pathing	40
Funnel Explorations	41
Contact.....	45

Introduction

This guide is intended for anyone who wishes to learn basic functions and view sample analyses possible using Google Analytics.

Account Setup

The URL below can be used to log into Google Analytics:

analytics.google.com

If you have no access to a website installed with Google Analytics tags, you can log in with either a previously existing Google account, otherwise a new account can be created through the interface.

In order to connect to a website property that already has Google Analytics tags installed into it and is currently gathering information, log in with either the Google Analytics admin account that created the Google Analytics tag, or log in with an account that has been given access by this admin account.

Google Analytics Data Structure

Google Analytics structures its data sources in a hierarchy between Properties and Streams

Property

A label that represents a single conceptual data source (e.g. a promo website, an e-commerce website, or a mobile app)

Stream

specific data sources (e.g. the Android version and Apple App store version of an app, or the web browser version and app version of an e-commerce store)

Other Data Properties

Event

The data recorded is referred to as an "event". An event is any user interaction on the site, for example, clicking a link, loading a page, submitting a form.

Attribute

Attributes of an event can be recorded as well. These attributes are called "parameters" and include examples like below:

- the page location of a viewed page
- the title of a viewed page
- the screen resolution of someone's browser
- how long a user spent on a page

Metrics

Google Analytics counts the number of similar events to create metrics, an aggregate count or calculation (sum, percentage, average, etc.) of a specific event.

Segment

A label for users sharing a similar activity or characteristic.

E.g. 1: A group of users who used a promotional link on Facebook to get to the site.

E.g. 2: The group of users reported being from the United States

Conversion

A conversion is the act of a user performing a particular action or set of actions. Conversions are used to represent business goals and are a measure of how successful marketing and sales efforts are (e.g. "out of users who arrived on the page through campaign link 'xyz.com', how many purchased product A?") Website user behavior analysis refers to "conversion rates", the ratio of which users perform the task in interest out of all the users that arrived on the same page or are under the same conditions (e.g. have item x in their shopping cart). Simple, predefined conversions are available for immediate use within Google Analytics, however custom conversions can be created as well.

Session

A session is defined as a period of activity that begins with the user opening any page on the website property. An "engaged session" is a session that has some activity to it (as opposed to a user opening the page and doing nothing on it). Google Analytics engaged sessions as session that "lasted 10 seconds or longer, or had 1 or more conversion events or 2 or more page or screen views".

The Google Analytics Demo Data

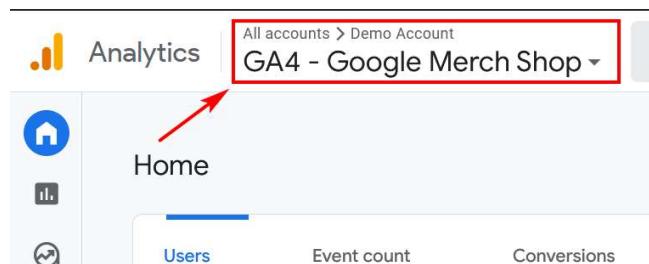
A set of demo data is available to see examples of analyses from Google Analytics. Two properties (website groups) are available to view: "Google Merch Shop" and "Flood-it!"

- "Google Merch Shop" is a demonstration of tracking customer behavior on an e-commerce website.
- "Flood-it!" is a game app. This property tracks user activity on the app.

Instructions to access the demo account are available through the URL below:

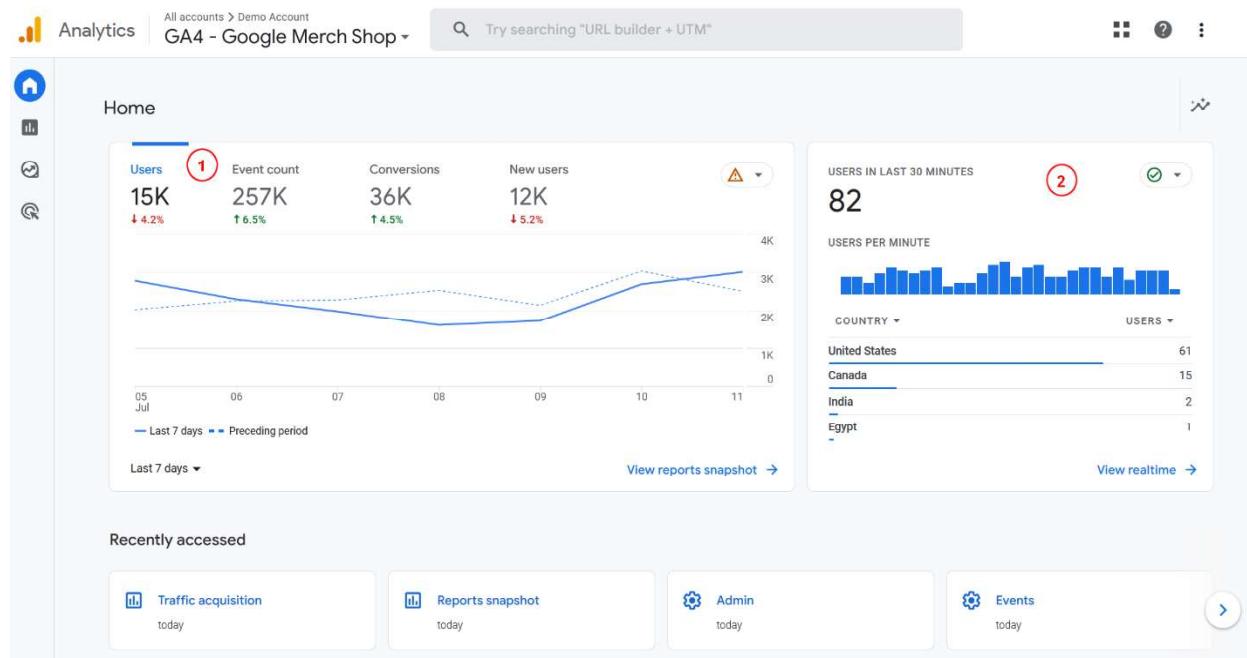
<https://support.google.com/analytics/answer/6367342>

After logging in, in order to change between the Google Merch Shop and the Flood-it! app, click on the account selector in the upper left of the interface.



Google Analytics GUI Basics

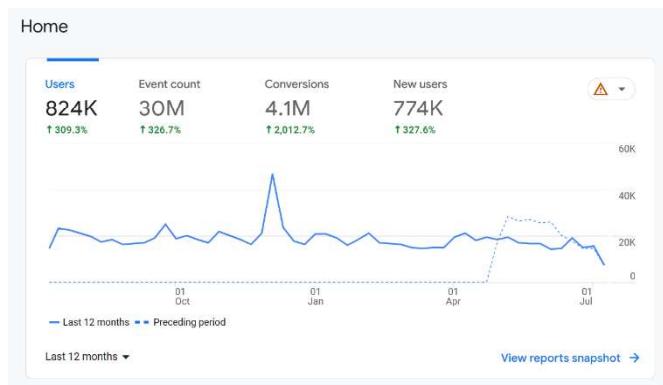
This is the homepage to the Google Analytics page:



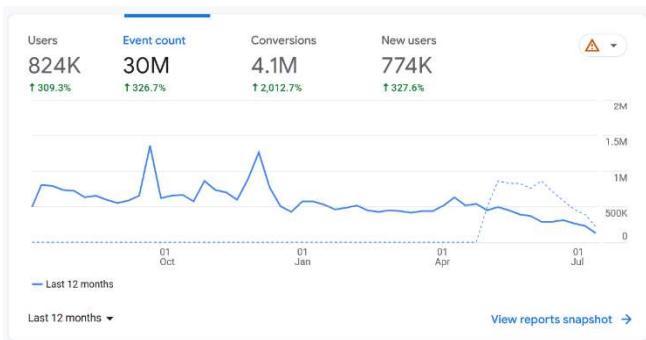
The homepage has a simple dashboard that shows high-level metrics collected across the chosen property. The example above shows the Google Merch Shop.

Chart 1 ("1" in the red circle) shows a trendline of high-level metrics. In the case above, it shows the number of users visiting the property across time.

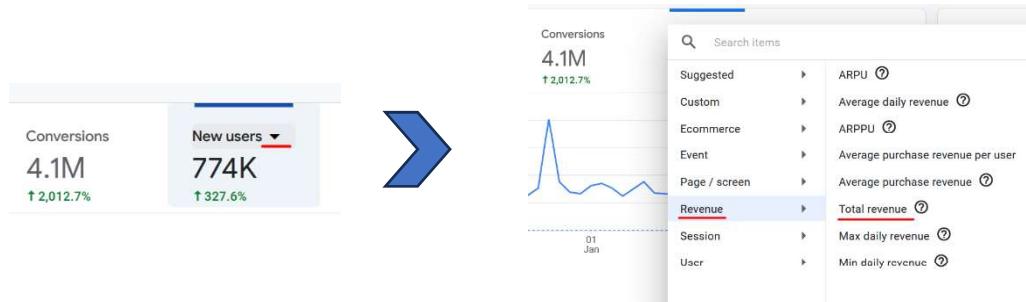
Almost all charts on the website are interactive. This chart can quickly be changed to view different time frames by clicking the current time frame (by default "Last 7 days") on the bottom left of the chart. Below shows a 1-year period to date:



The displayed metric can also be quickly changed. Clicking on "Event count" will show a trendline of all events that took place in the property over the selected period of time:



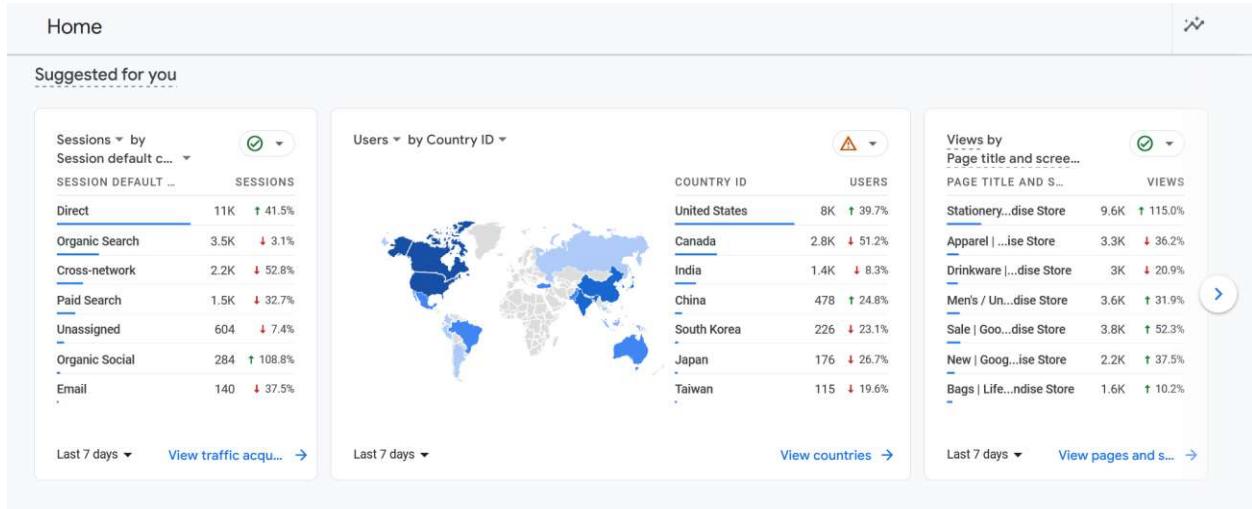
If the customer register/checkout areas of the website are configured with the GA(Google Analytics) tags, metrics on purchases and revenue are also provided. Other metrics than the four shown on the chart can be viewed by clicking on the arrow to next to a metric label, clicking on a category and then clicking on a metric. The example below changes "New users" to "Total revenue":



The resulting trendline:



Further down the page are more high-level example metrics. The ones below show internet sources and countries of origins of users, as well as the most viewed pages:



The traffic acquisitions chart (far left) shows different sources the user came from to come to a page on this property. Below are some definitions of the named sources:

- Direct: Traffic from users entering the URL directly into their browser
- Organic Search: Traffic from search engines
- Cross-network: Traffic that comes from specific Google Ads campaign:, Performance Max and Smart Shopping
- Paid Search: Traffic from paid search engine campaigns (e.g. Google Ads)
- Organic Social: Traffic that comes from a social media website
- Email: Traffic that comes from emails sent from your domain

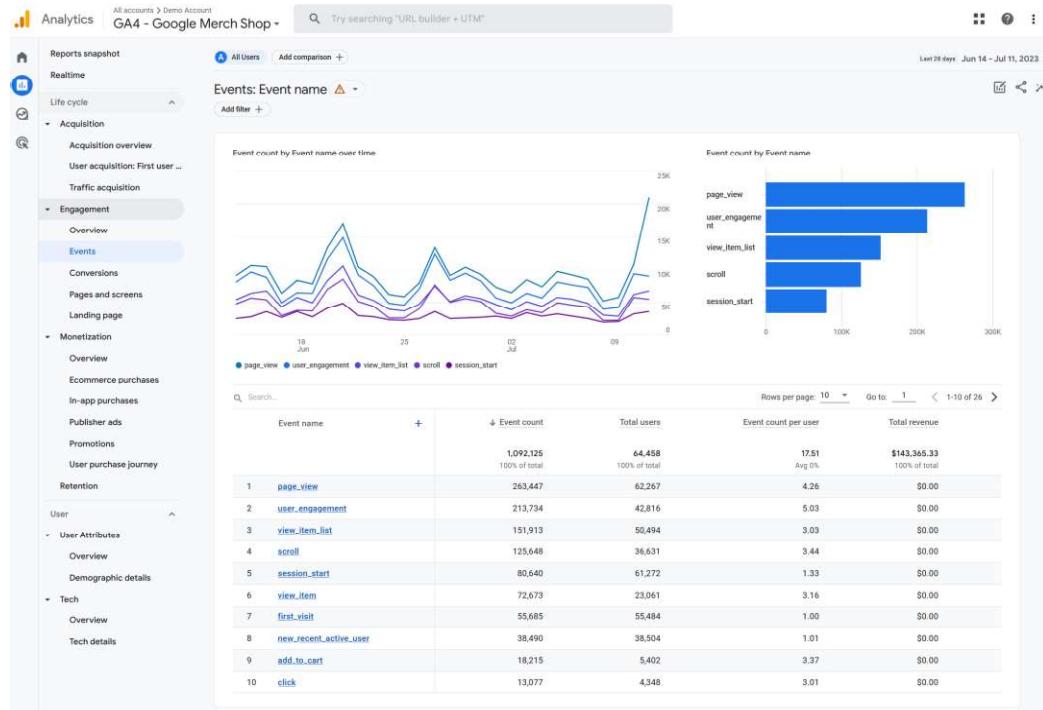
Reports

Groups of more detailed reports that focus on specific metrics are found in the "Reports" section within the left navbar:

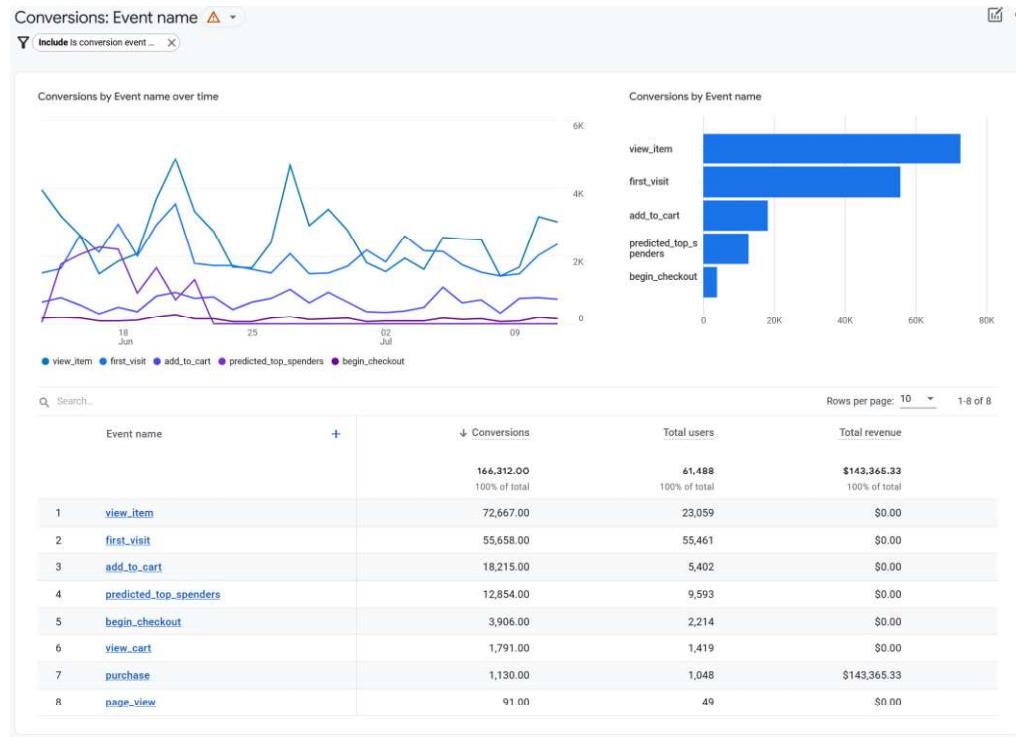
The image shows a screenshot of the Google Analytics interface. On the left, there is a navigation bar with icons for Home, Reports (which is selected and highlighted in blue), Explore, and Advertising. The main content area displays a summary card with the text "Event count 30M ↑ 326.7%". A large blue arrow points from the Reports section in the navigation to the detailed Reports section on the right. The right side of the interface shows the "Reports snapshot" view under the "All accounts > Demo Account GA4 - Google Merch" header. The sidebar on the left lists categories: Realtime, Life cycle, Acquisition, Engagement, Conversions, Pages and screens, Landing page, Monetization, Overview, Ecommerce purchases, In-app purchases, Publisher ads, Promotions, User purchase journey, Retention, User, User Attributes, and Tech. The "Reports snapshot" card shows various metrics like "Users 6.1M", "Sessions 1.2B", etc.

The Reports section is a quick way to view high-level metrics of common interest in web traffic analysis. Various metrics can be viewed here, including:

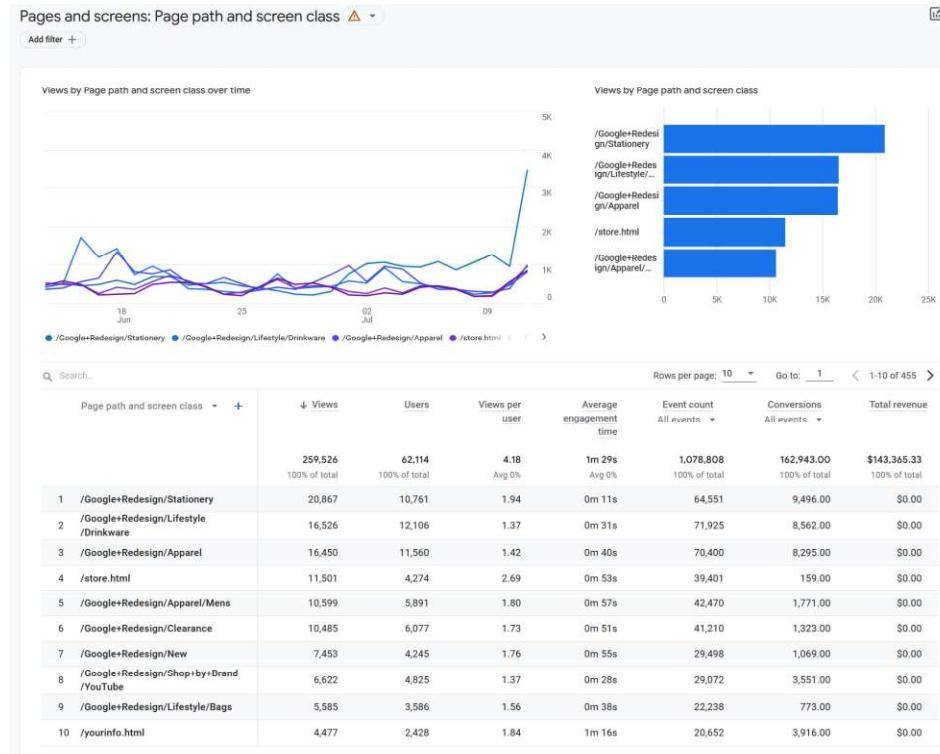
Events:



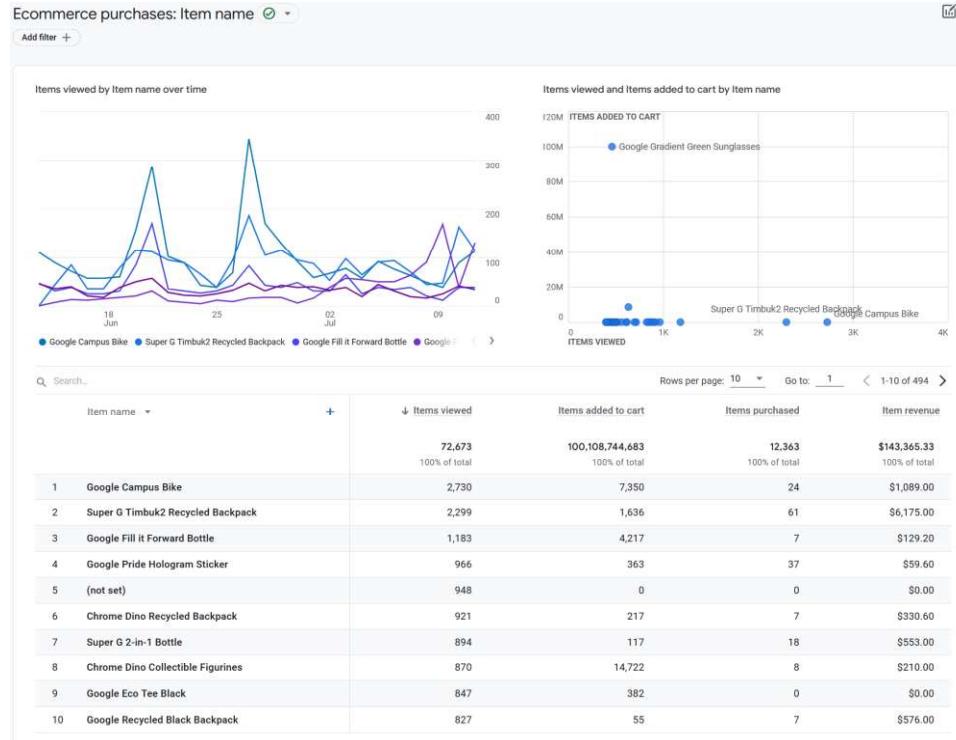
Conversions:



Pages viewed:



Ecommerce purchases:

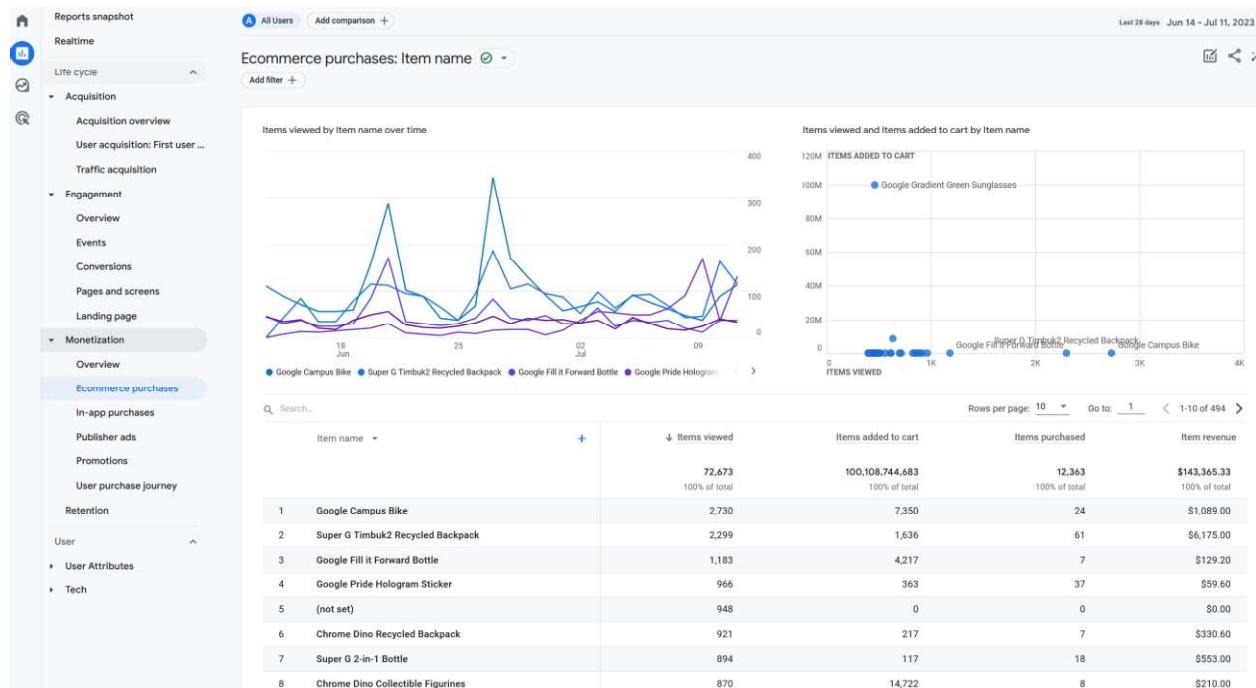


Segmenting

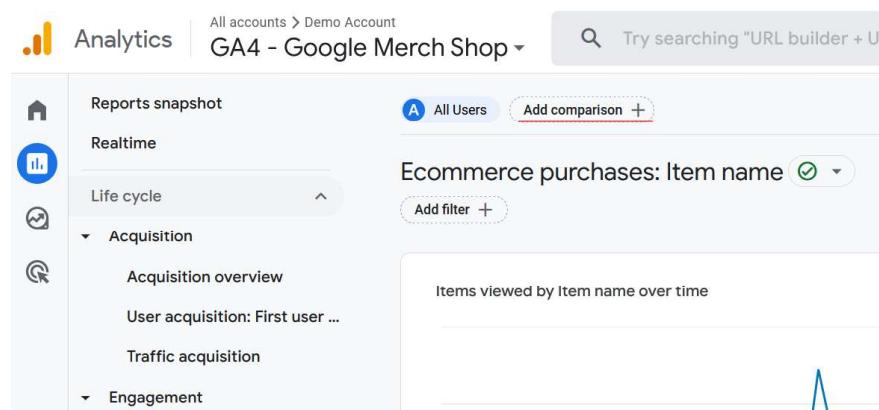
Trends between demographics can be viewed by adding "comparisons" in a report. An example might be viewing which countries account for which ecommerce purchases. Comparisons can be added with the "Add comparison" button at the top of a report page. Suppose the business question is asked, "Out of all purchases made, how many does the United States account for?"

The example below can be navigated to through the following steps:

From the left navbar > "Reports" > "Monetization" > "Ecommerce purchases"



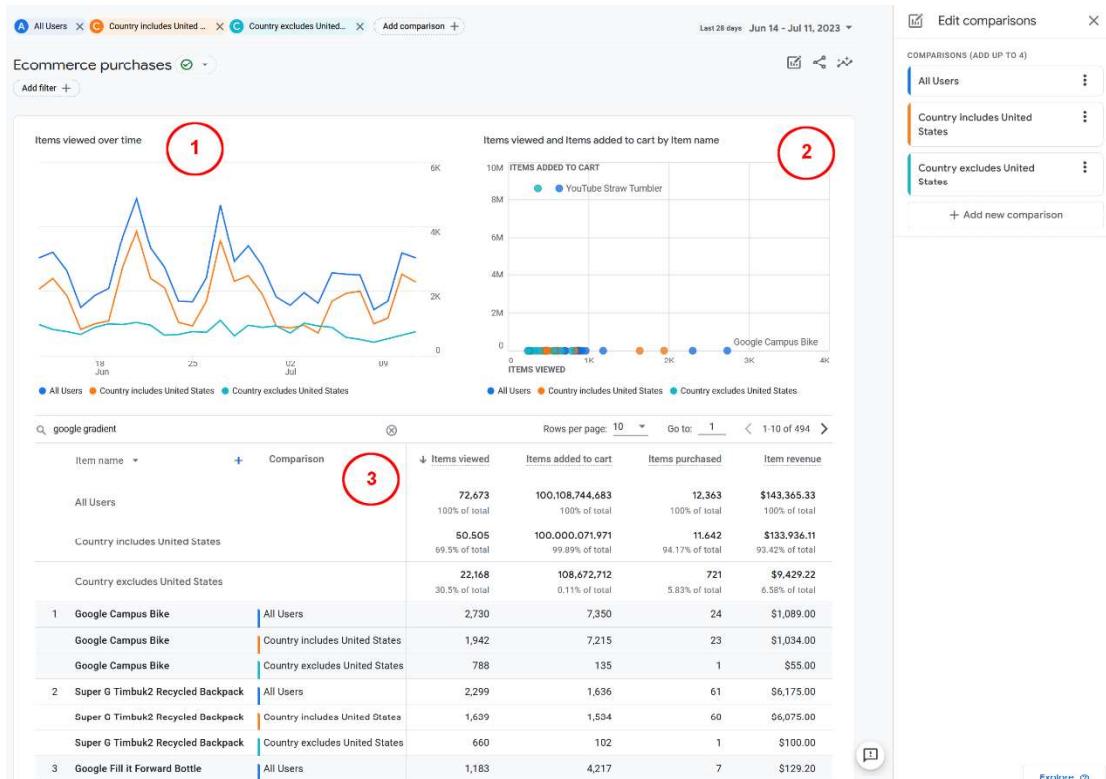
Click on "Add comparison +" at the top of the report:



A pane to the right of the report opens, where a dimension and a specific value can be chosen to filter on.

The image shows a transition between two interface states. On the left, a 'Build comparison' pane displays a chart with a legend for 'All Users' (blue), 'Country includes United States' (orange), and 'Country excludes United States' (teal). A blue arrow points to the right, leading to a more detailed 'Build comparison' pane. In this detailed view, a dropdown menu under 'CONDITIONS (BUILD UP TO 5)' is open, showing 'Dimension' selected. A sub-menu for 'country' is displayed, listing 'Geography' and 'Country'. The right pane shows a 'Conditions (Build up to 5)' section with 'Include Dimension' selected, and a dropdown for 'Country' which has 'United States' checked. Other options like Canada, India, Japan, and South Korea are listed with checkboxes.

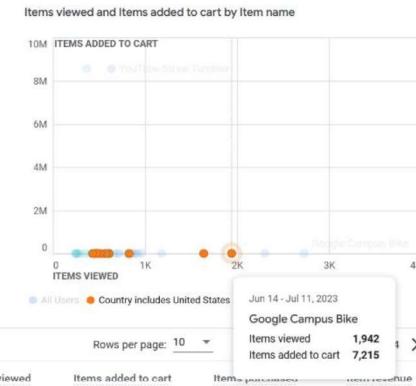
After adding 2 groups; a group that includes only purchases from the United States and a group that excludes any purchase from the United States, the charts below are produced:



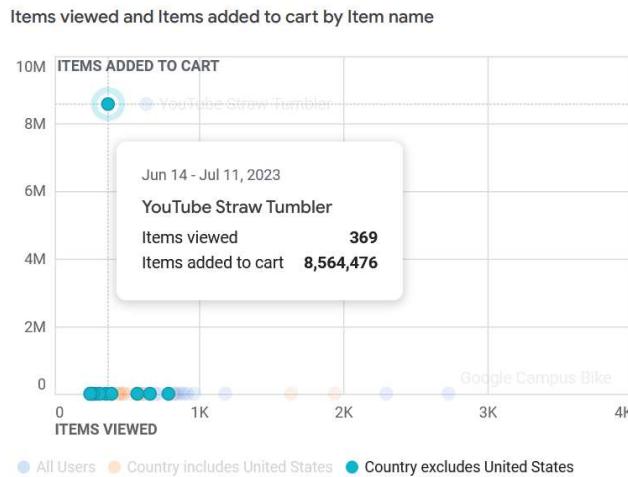
The trendline (chart 1) shows that roughly over the past month, users from the U.S. account for most of the purchases made.

The scatterplot (chart 2) shows various products with the number of times they have been viewed (the x-axis) and the number of times the item has been added into a user's cart (the y-axis). Data points that represent users from the United States are colored orange and any other countries are colored in teal. Two outliers exist on the chart:

To the right, "Google Campus Bike" has had a remarkably large number of views within one of the two groups. A mouseover of a nearby point, shows that around 2,000 of the 3,800 views are attributed to users from the United States.



The outlier at the top is the YouTube Straw Tumbler, with about 350 views, but has been added to a cart over 8 million times, remarkably more than any other item. By mousing over this data point, the chart shows that this point is attributed to a country outside of the Untied States.



A question that might come to mind after reviewing these outliers may be, "From which country are users adding the tumbler to their carts so many times?". This will be answered in the following section.

Secondary Dimensions

It is possible to view the data in smaller groupings with the addition of comparisons. This process divides a primary dimension (e.g. an item name from the ecommerce store) into a secondary dimension (e.g. various countries). This is one approach to answering the question posited above, "From which country are users adding the tumbler to their carts so many times?"

A primary dimension can be changed in a report by clicking on the name of the primary dimension or the arrow next to it on the summary chart at the bottom of the report.

The screenshot shows a report interface with a summary chart on the left and a dimension list on the right. A large blue arrow points from the summary chart to the dimension list.

Summary Chart (Left):

Item name	Items viewed	Items
	72,673 100% of total	100
1 Google Campus Bike	2,730	
2 Super G Timbuk2 Recycled Backpack	2,299	
3 Google Fill it Forward Bottle	1,183	
4 Google Pride Hologram Sticker	966	
5 (not set)	948	

Dimension List (Right):

- Item name
- Item ID
- Item category
- Item category 2
- Item category 3
- Item category 4
- Item category 5
- Item brand

This example will use "Item name" as the primary dimension.

To subdivide the items on the chart into separate countries for each item add a secondary dimension "Country" to the chart. This can be done by clicking on the "+" mark to the right of the primary dimension name.

The screenshot shows a report interface with a summary chart on the left and a dimension list on the right. A large blue arrow points from the summary chart to the dimension list.

Summary Chart (Left):

Item name	Items viewed
	72,673 100% of total
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3 Google Fill it Forward Bottle	1,183
4 Google Pride Hologram Sticker	966

Dimension List (Right):

- Custom ► City
- Demographics ► Country
- General ► Region
- Geography ►
- Page / screen ►
- Platform / device ►
- Time ►

After the "Country" secondary dimension has been added, the chart will show a second column to the right of the primary dimension, representing a country for the given item.

The screenshot shows a report interface with a summary chart on the left and a dimension list on the right. A red box highlights the "Country" column in the summary chart.

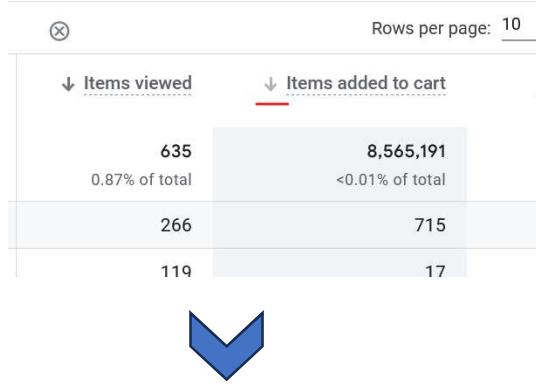
Summary Chart (Left):

Item name	Country	Items viewed	Items added to cart	Items purchased	Item revenue
		72,673 100% of total	100,108,744,683 100% of total	12,363 100% of total	\$143,365.33 100% of total
1 Google Campus Bike	United States	1,942	7,215	23	\$1,034.00
2 Super G Timbuk2 Recycled Backpack	United States	1,639	1,534	60	\$6,075.00
3 Google Pride Hologram Sticker	United States	828	281	37	\$59.60
4 (not set)	United States	716	0	0	\$0.00
5 Google Fill it Forward Bottle	United States	611	4,117	1	\$15.20
6 Super G 2-in-1 Bottle	United States	611	82	16	\$483.00
7 Google Eco Tee Black	United States	582	309	0	\$0.00
8 Chrome Dino Recycled Backpack	United States	567	38	7	\$330.60
9 Google Recycled Black Backpack	United States	517	28	3	\$216.00
10 Chrome Dino Collectible Figurines	United States	477	14,696	7	\$186.00

To narrow down the items to only a specific item, enter the item name in the search bar:

Item name		Country	Items viewed	Items added to cart	Rows per page:
			635 0.87% of total	8,565,191 <0.01% of total	
1	YouTube Straw Tumbler	United States	266	715	
2	YouTube Straw Tumbler	Canada	119	17	
3	YouTube Straw Tumbler	India	109	195	
4	YouTube Straw Tumbler	South Korea	22	5	
5	YouTube Straw Tumbler	Indonesia	16	11	

By reordering the chart to show the top values for "Items added to cart", the country with the highest values (i.e. the countries contributing most to the large count of adding the tumbler to a cart) will be displayed. This can be done by clicking on the arrow that appears when hovering over the metric label.



Item name		Country	Items viewed	Items added to cart	Items purchased	Item revenue	Rows per page:	Go to:	1	<	1-10 of 38 >
			635 0.87% of total	8,565,191 <0.01% of total	252 2.04% of total	\$2,426.40 1.69% of total					
1	YouTube Straw Tumbler	Brazil	5	8,564,201	0	\$0.00					
2	YouTube Straw Tumbler	United States	266	715	252	\$2,426.40					
3	YouTube Straw Tumbler	India	109	195	0	\$0.00					
4	YouTube Straw Tumbler	Canada	119	17	0	\$0.00					
5	YouTube Straw Tumbler	Indonesia	16	11	0	\$0.00					
6	YouTube Straw Tumbler	Japan	8	11	0	\$0.00					
7	YouTube Straw Tumbler	Mexico	6	8	0	\$0.00					
8	YouTube Straw Tumbler	Pakistan	10	6	0	\$0.00					

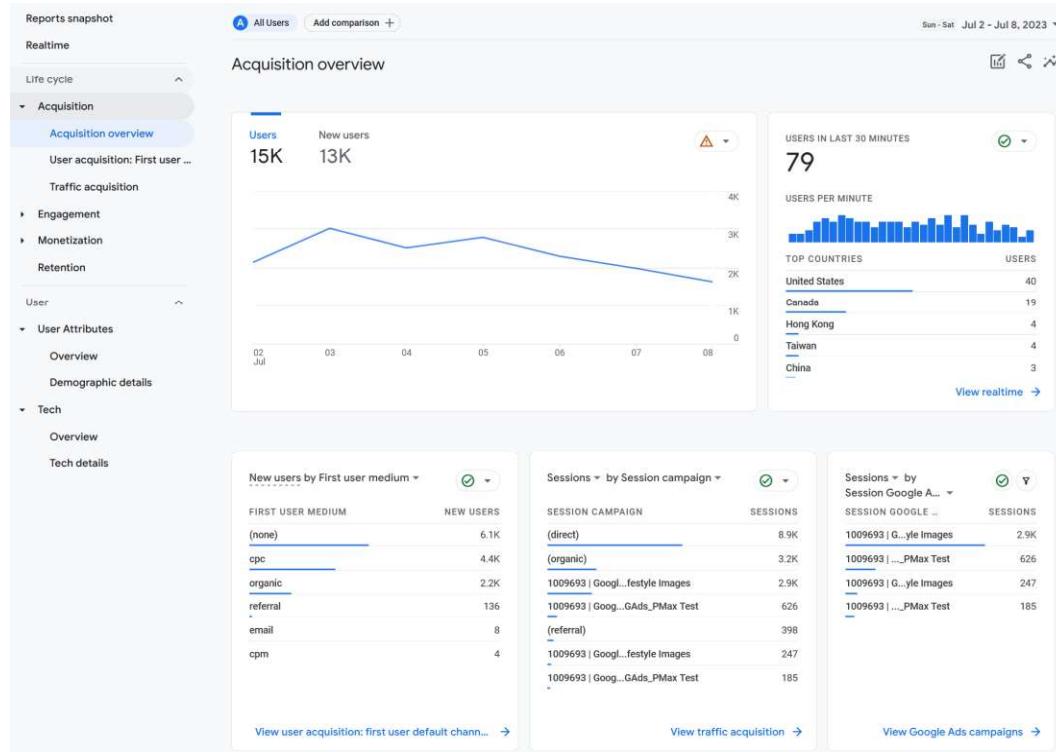
We now see in the chart that users reported as accessing from Brazil contributed to almost all the additions for the tumbler.

User Acquisition

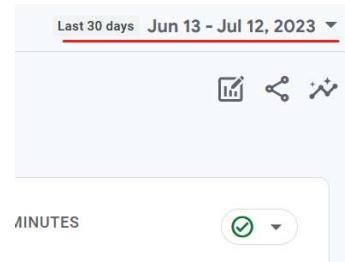
Google Analytics can help answer questions about user traffic including examples like:

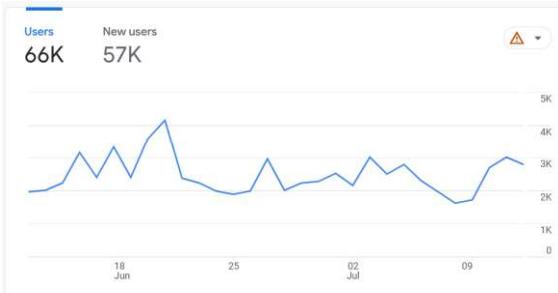
- How many users visited the site within the past month?
- How did they arrive at our website?
- How much value does each new user bring in?

Information on user acquisition can be accessed through the Acquisition subsection of the Reports section from the left navigation pane.



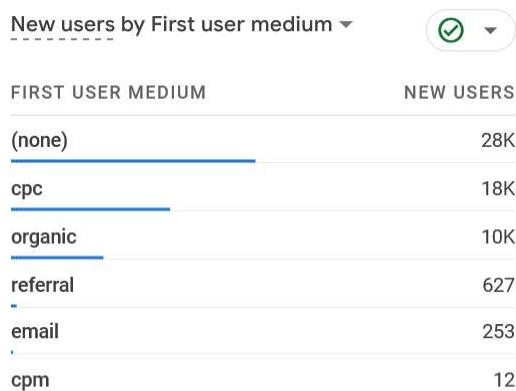
Change the date range on the top right of the report to see the number of users that came to the property in the past month.





A visual assessment shows users coming to the site at a steady rate of around 3,000 throughout the past 30 days.

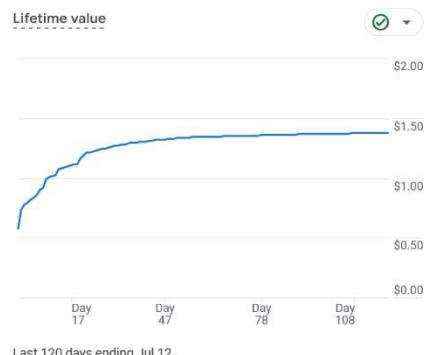
The type of medium accessed by a user to travel to the site can be viewed under the "New users by First user medium" chart within the report:



- cpc: "cost per click" i.e. through a paid search
- organic: clicked on a search result through a search engine
- referral: clicked on a hyperlink from another website domain

The Lifetime Value report at the bottom shows the amount of value a new user brings on average, over time.

At about 100 days, on average, a new user to the property brings in \$1.50 in value.



Engagement reports

Core questions about users might include how they engaged with the property content or if they converted in a way that generates value. The Engagement reports provide information on user activity within the property, including the number of conversions made such as adding an item to a cart or executing a purchase. This report can be accessed through the Engagement subsection in the Reports section.

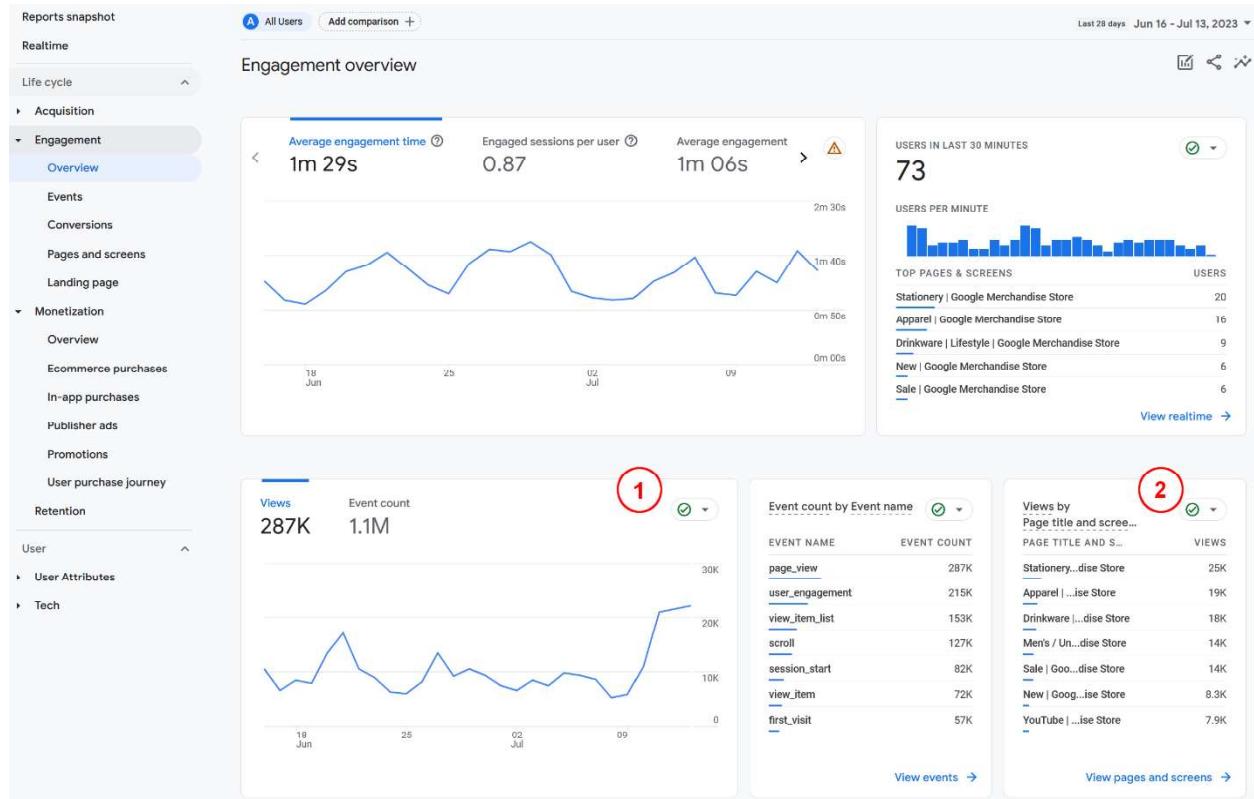
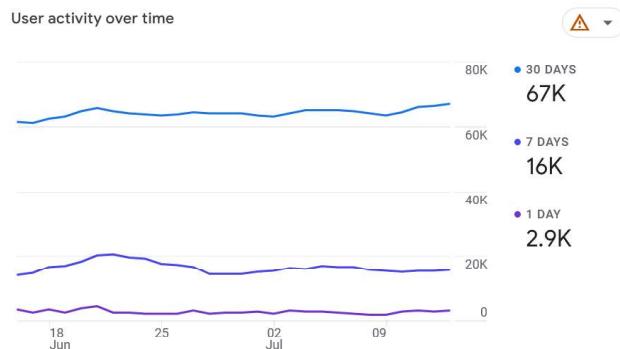


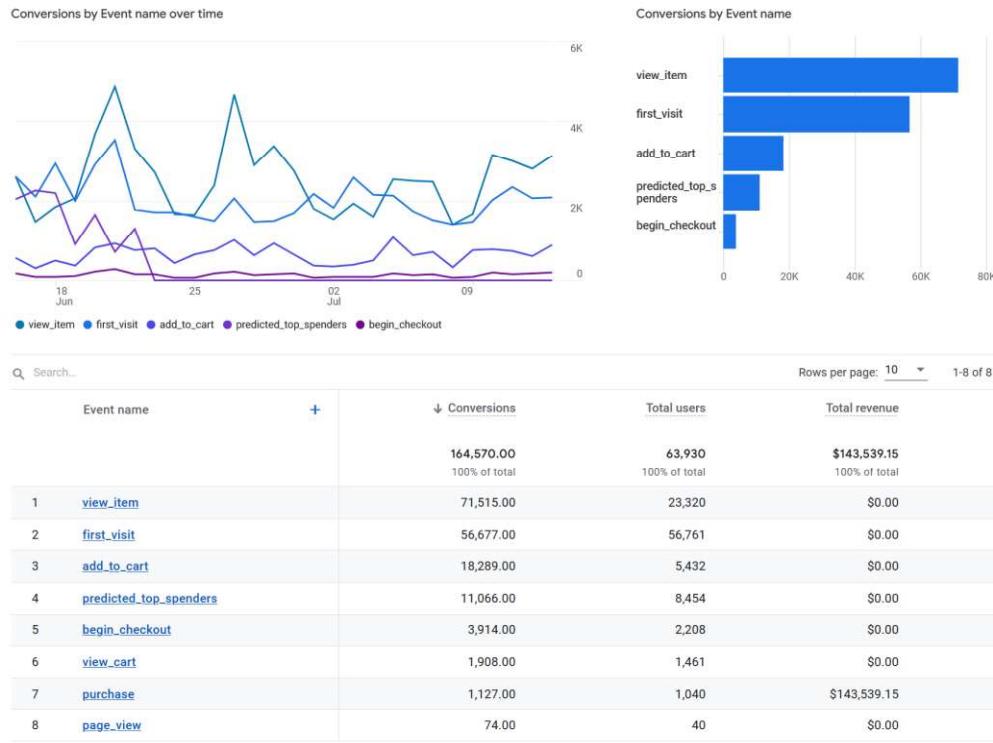
Chart 1 above shows the number of page views on the property over time, which can be used to review if any news or marketing events have had an impact in user traffic.

Chart 2 shows which pages have had the most views.

Similarly to the page views trendline (Chart 1 above), activity over time can be viewed in order to review if any spikes in user activity exist at a certain point in time.



Conversions can be reviewed in the Conversions subsection of the report, which shows a trendline of the events with the highest conversion rates. This can be analyzed similarly to the user activity trendline to see if specific events in time are affecting conversion rates of a particular action (e.g. purchases).



Selecting a single event name from the table below the trendline offers more granular information on that event, including where users came from, making it possible to identify if they followed social media or a campaign link.

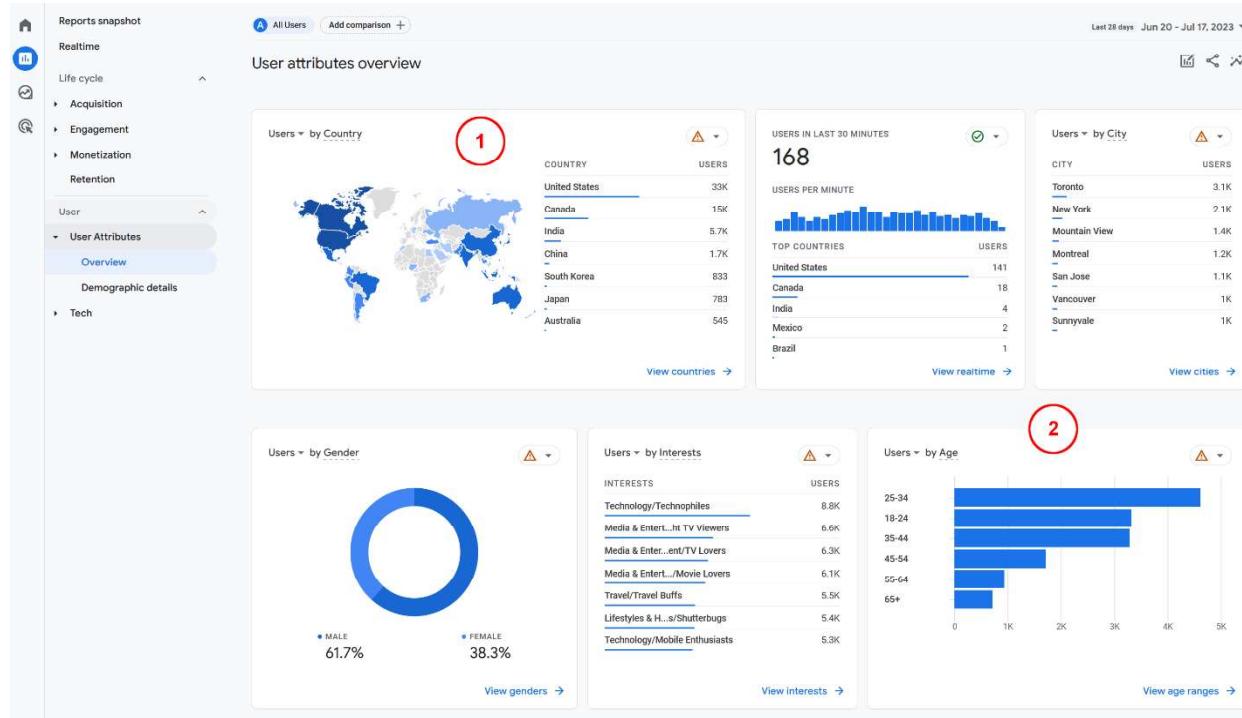
Demographics

Demographics information about users can be viewed through the Demographics report. This report includes insight on what geographical locations of the world users are from, gender, spoken language and personal interest Google has attributed to these users. Most of this information is collected with pre-existing data associated with Google accounts and activities on Google services.

Some question to ask might be:

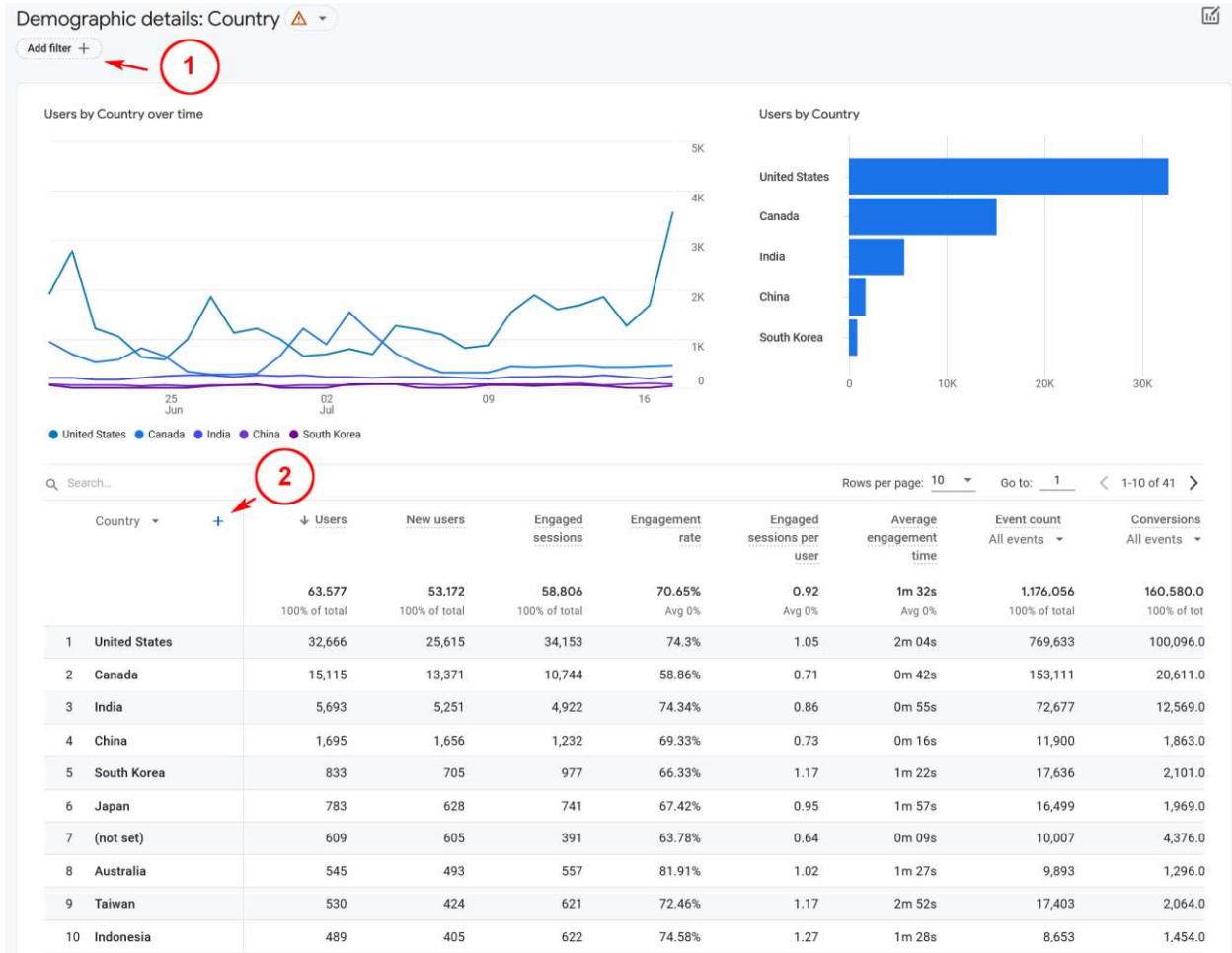
- What time of day are users from a particular region most active?
- What age group is most engaged on our website?

Below is the "User attributes overview" page and provides summary reports on some primary user attributes, such as geographic location, gender, age and interests.



A map that shows relative numbers of users between countries is provided in chart 1 above. Clicking the "View countries" link on the bottom right of the chart connects to a breakdown of countries that show several metrics.

Suppose we want to know what time of day are users from Australia most active on the website in order to synchronize real-time social media marketing events in that specific region.



First, a filter should be added to filter out other countries. This is done through the "Add filter +" button at marker 1 in the image above. Fill out "Country" and "Australia" under "Dimension" and "Dimension values" respectively in the frame that appears to the right, then click "Apply" below.

The 'CONDITIONS (BUILD UP TO 5)' dialog box contains the following settings:

- Include Dimension**: Set to "Country".
- Dimension values**: Set to "Australia".
- Add new condition**: A button to add more conditions.
- SUMMARY**: Shows the applied condition: "Include Country = Australia".

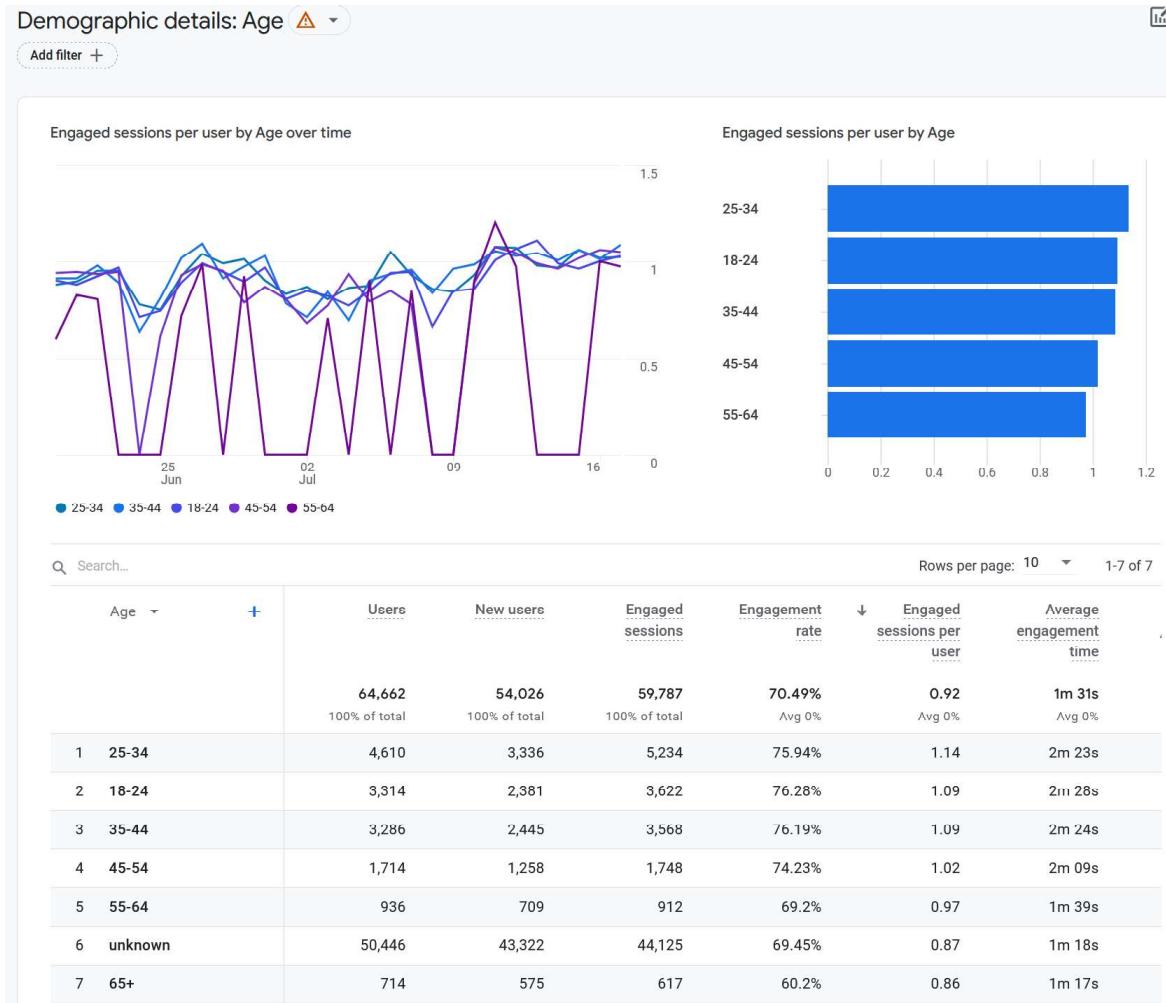
Next, segment the table at the bottom of the page to hours by adding a secondary dimension using the "+" to the right of the primary dimension name "Country" at marker 2 above.

Select "Time" then "Hour" in the menus that appear.

The chart then breaks down to show different metrics for different hours in the day. In the example below, users reported as being from Australia are most active between 10PM to 11PM in United States Pacific Daylight Time (3PM to 4PM in Australia Time).

Country	Hour	Users	New users	Engaged sessions	Engagement rate
		327 100% of total	274 100% of total	307 100% of total	80.5% Avg
1 Australia	22	62	45	51	78.4
2 Australia	23	52	31	38	67.8
3 Australia	21	47	37	35	72.9
4 Australia	0	45	31	39	82.9
5 Australia	18	45	35	37	78.7
6 Australia	3	44	34	38	82.6
7 Australia	20	43	30	33	77.4
8 Australia	17	41	31	36	8

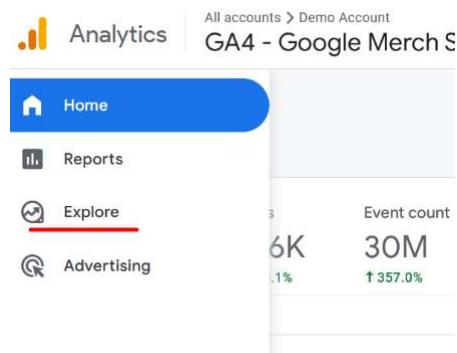
To answer the question "What age group is most engaged on our website?" we can review the detailed view of the "Age ranges" bar chart from the User attributes overview:



The chart at the bottom of the report can be ordered by how many engaged sessions a user in a particular age group has on average, by clicking the arrow that appears when the mouse cursor hovers over "Engaged users per session". In the example above, age groups 25-34 have the highest engaged sessions per user.

Explorations

The reports seen in the Reports section of Google Analytics are all pre-made charts that provide a broad, high-level overview of user activity on the property. Through the Explorations section of Google Analytics, analysts can create custom charts based on the data provided by Google. This is where most analysis work will be executed on the platform.



The Explorations section can be found in the left navbar.

Creating a simple Exploration

Below is the landing page of the Explorations section:

A screenshot of the Google Analytics Explorations landing page. At the top, it shows "Analytics" and "All accounts > Demo Account" with the property name "GA4 - Google Merch Shop". There's a search bar with placeholder text "Try searching 'add web stream'". Below the search bar, the title "Explorations" is displayed. On the left, there's a vertical sidebar with icons for Home, Reports, Explore (selected), and Advertising. The main area has a heading "Start a new exploration" and four template cards: "Blank" (Create a new exploration), "Free form" (What insights can you uncover with custom charts and tables?), "Funnel exploration" (What user journeys can you analyze, segment, and breakdown with multi-step funnels?), and "Path exploration" (What user journeys can you uncover with tree graphs?). To the right of these cards is a "Template gallery" button with a right-pointing arrow. Below the templates is a table listing previous explorations:

Type	Name	Owner	Last modified	Property	Actions
Behavior Flow Path	Behavior Flow Path	Demo	Jan 29, 2021	GA4 - Google Merch Shop	⋮
Checkout Behavior Funnel	Checkout Behavior Funnel	Demo	Jan 29, 2021	GA4 - Google Merch Shop	⋮

An option to create a new chart, an "Exploration", is offered in the upper left of through the "Blank" label (and the thumbnail above it). To the right are a pre-made chart templates where analysts can change out metrics and dimensions as necessary. Below the templates is a list of Explorations previously made by accounts connected to this property.

Click on "Blank" to begin creation of a new exploration. The Exploration creation page below appears:

The screenshot shows the 'Variables' panel on the left and the 'Tab Settings' panel on the right. The 'Variables' panel includes sections for Exploration Name (Untitled exploration), Custom date range (Jun 20 - Jul 17, 2023), Segments (None), Dimensions (None), and Metrics (None). The 'Tab Settings' panel shows 'TECHNIQUE' set to 'Free form', 'VISUALIZATION' icons for table, bar chart, pie chart, line chart, scatterplot, and funnel, and 'SEGMENT COMPARISONS' with a placeholder 'Drop or select segment'. The main workspace under 'Free form 1' shows a placeholder icon and the message 'No data available'. The 'ROWS' section has 'Start row' at 1, 'Show rows' at 10, and 'Nested rows' set to 'No'. The 'COLUMNS' section has 'Start column group' at 1, 'Show column groups' at 5, and 'VALUES' with a placeholder 'Drop or select metric'. The 'FILTERS' section has a placeholder 'Drop or select dimension or metric'.

Here are some definitions of the various parts of the interface

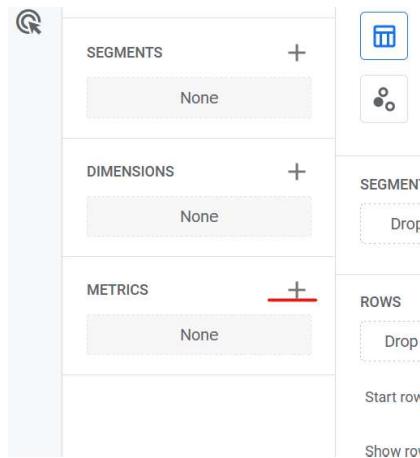
- Exploration Name: Enter a customized title for this Exploration here
- "Custom": The time period to include for the analysis
- Segments: Settings to filter in/out certain data
- Dimensions: What attributes to include in the chart
- Metrics: The measure to include in the chart (e.g. total number of users, total revenue amount).
- Technique: Enable a specific analysis technique to be used (such as Path or Funnel explorations, to be explained later)
- Visualization: Select from various visualizations such as table/bar chart, pie chart, line chart, scatterplot, etc.

If a table visualization is chosen, the following parameters for the table will become available in the interface to customize under the "Tab Settings" dropdown:

- Rows: Decide which dimensions will be the rows of the table
- Columns: Decide which dimensions will be the columns of the table
- Values: Decide what metrics to show on the table
- Filters: Any dimension or metric to filter

Suppose we wish to know how many active users there are in each age group, divided by which country they come from and we want to show this in a simple table.

Prepare the metric for active users by clicking the "+" to the right of "METRICS"



On the pop-up that appears, select the "User" dropdown and click "Active users", then click "Import" on the upper right.

Select metrics 1 of 164 selected

All 164 Predefined 163 Custom 1

Import

Revenue

Session

User

- 1-day repeat purchasers
- 2-7-day repeat purchasers
- 30-day paid active users
- 31-90-day repeat purchasers
- 7-day paid active users
- 8-30-day repeat purchasers
- 90-day paid active users
- Active users
- Average daily purchasers
- Average engagement time per session
- DAI / MAU

Next, prepare the dimensions. Similar to preparing the metric, click the "+" to the right of "DIMENSIONS", and select "Demographics" > "Age" and then "Geography" > "Country" in the following pop-up window and click "Import" in the upper right of the pane.

The screenshot shows the 'Select dimensions' pane with the following details:

- Header:** Select dimensions 2 of 182 selected, Search dimensions, Import button.
- Filter Bar:** All 182, Predefined 167, Custom 15, Collapse all, Expand all compatibles.
- Custom Section:**
 - Demographics:** Age (selected), Gender, Interests.
 - Ecommerce:**
 - Event:**
 - Gaming:**
 - General:**
 - Geography:** City, City ID, Continent, Continent ID, Country (selected), Country ID, Region, Region ID.

Most user sessions are unable to provide an age and country of the user, possibly because they have not logged into their Google account, have disabled cookies or other various reasons. These will usually appear as "(not set)" as a metric. In order to show only users who are defined into these demographics, a Segment must be created. Segments filter in or out data from specified attributes.

Click the "+" to the right of SEGMENTS.

The screenshot shows the 'Variables' pane with the following configuration:

- Variables:** Exploration Name: Untitled exploration, Date Range: Jun 20 - Jul 17, 2023.
- SEGMENTS:** None (highlighted with a red border).
- DIMENSIONS:** Age (highlighted with a green border).

A new pop up will appear for building a Segment. To create a segment that filters users by a demographic, choose "User segment" under "Create a custom segment".

X Build new segment

Create a custom segment
Select the type of segment you want to create

- User segment** For example, users who have previously purchased a product.
- Session segment** For example, all sessions originating from Campaign A.
- Event segment** For example, all events that took place at a particular location.

Use a reference
Prebuilt audience suggestions for you to consider.

General **Shopping** **Templates** **Predictive**

- Recently active users** Users that have been active in a recent period
- Non-purchasers** Users that have not made a purchase
- Purchasers** Users that have made a purchase
- 7-day inactive users** Users who were once active, but have not been active for the last 7 days
- 7-day inactive purchasers** Purchasers who were once active, but have not been active for the last 7 days

A new window appears, where analysts can customize how to filter in/out users or other data points. Add a condition to filter on by clicking on the arrow to the right of "Add a new condition"

Untitled segment Help center Cancel Save and apply

Provide a short description

Include users when:

- Include users when:**
- Exclude users when:**

Add new condition Or X

And

+ Add condition group to include | i Add sequence to include

○ Add group to exclude

Build an audience

Summary

USERS IN THIS SEGMENT FROM JUN 20 TO JUL 17

100% of all users

INCLUDE **EXCLUDE**

TOTAL SESSIONS

100% of all sessions

To add a filter on user age, click on "Demographics" dimension and then "Age".



To ensure "(not set)" does not appear in the chart, select "+ Add filter" next to the new dimension for the Segment that appears.

The screenshot shows the 'Include users when:' section with an 'Age' filter selected. Below it, a modal window is open for adding a condition. The condition dropdown is set to 'is one of' and shows a list of age ranges: 18-24, 25-34, 35-44, 45-54, ..., 65+. Several checkboxes are checked for these ranges. The 'And' button is visible below the condition dropdown.

Under "Condition" in the new window, ensure "is one of" is chosen and enter check marks into all age ranges for the possible values, then click "Apply".

The screenshot shows the 'Include users when:' section with the 'Age' condition applied. The condition dropdown now shows 'is one of' with the value '*18-24, 25-34, 35-44, 45-54, 55-64, 65+'. The 'And' button is visible below the condition dropdown.

Add another condition to remove "(not set)" for countries, by clicking "And" below the age filter:

The screenshot shows the 'Include users when:' section with an additional 'Country' condition. The 'Country' dropdown is set to 'Country'. The condition dropdown shows 'does not contain' with '(not set)' as the value. The 'And' button is visible below the condition dropdown.

Add the condition "does not contain" and "(not set)" as the value to filter out:

Name the segment in the upper left of the segment creation window and click "Save and apply" in the upper right.

The metric and dimensions just prepared can now be added to the chart. Drag the "Active users" box from "METRICS" to the box under "Values" that reads "Drop or select metric".

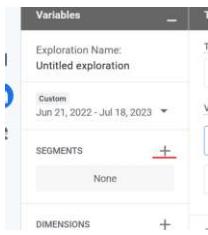
Do the same for both Dimensions and drag their boxes into "Drop or select dimension" under "ROWS".

Segment	Defined Users	Totals
Age	Country	Active users
Totals		12,309 100.0% of total
1	25-34 United States	2,746
2	35-44 United States	1,993
3	18-24 United States	1,898
4	45-54 United States	999
5	55-64 United States	570
6	35-44 Canada	563
7	25-34 Canada	537
8	65+ United States	453
9	18-24 India	449
10	45-54 Canada	380

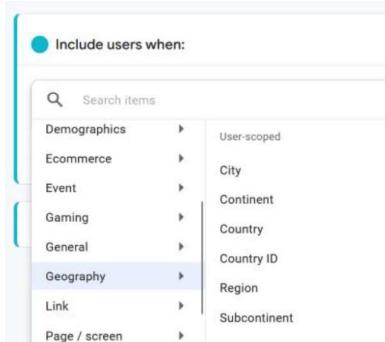
A custom created chart of the most user segments, broken down between both ages and countries, now displays in the output to the right:

Another question to answer might be "what products on our website are users from country x viewing?" The application of the value "Event count", the dimension "Page title and screen name" and the following segments create a table that shows trends for products viewed in Indonesia. Begin by selecting a blank template from the Explorations page

1. Begin from a blank exploration
2. Define the time frame (e.g. 1 year to date)
3. Create a segment to filter in only users reported as being from Indonesia:



On the "Build new segment" window, select "User segment" > "Geography" > "Country"



Name this segment "Indonesia".

4. Create a new segment to exclude most non-product pages

Create an "Event segment".

Create a custom segment
Select the type of segment you want to create

User segment
For example, users who have previously purchased a product.

Session segment
For example, all sessions originating from Campaign A.

Event segment
For example, all events that took place at a particular location.

Name this segment "Exclusions"

Create a condition to exclude the "Title page and screen name" with the value "(not set)".

The screenshot shows the Google Analytics Segment builder interface. On the left, a sidebar lists categories like Gaming, General, Geography, Link, Page / screen, Platform / device, Publisher, Session, Time, and Traffic source. Under 'Page / screen', 'Page title and screen name' is selected. A large blue arrow points from this state to the right panel. The right panel shows a 'Include events when:' section with a dropdown for 'Page title and screen name'. A modal window is open over the main interface, titled 'Include events when:', containing a condition builder. The condition is set to 'does not contain' with the value '(not set)'. There are buttons for 'And', 'Or', and 'Not' at the bottom of the condition builder. A 'Cancel' and 'Apply' button are at the bottom right of the modal.

Use the "And" button at the bottom left of the condition to add another condition.

This screenshot shows the segment builder after adding the first condition. A blue arrow points from the previous state to this one. The 'And' button is highlighted in the condition builder. Below the condition builder, there is a link '+ Add condition group to include'.

This screenshot shows the segment builder after adding a second condition using the 'And' button. The 'And' button is now disabled, indicating that another condition has been added. The condition builder shows 'Page title and screen name' with 'does not contain (not set)'. Below the condition builder, there is a link '+ Add condition group to include'.

Add conditions similarly to the first condition to match the following example:

This screenshot shows a complex segment configuration. It starts with a 'Page title and screen name' condition 'does not contain (not set)'. This is followed by three nested 'AND' groups. Each 'AND' group contains a 'Page title and screen name' condition with values: 'Google Merchandise Store', 'Shopping Cart', and 'does not exactly match (#) Home'. Each of these conditions has an 'Or' button to its right, which is currently active. Below the conditions, there is a link '+ Add condition group to include'.

* Note that the conditional on "Home" is "does not exactly match".

5. Add the "Page title and screen name" dimension under the "DIMENSIONS" variable
6. Add the "Event count" metric under the "METRICS" variable
7. Drag/drop all variable blocks to their appropriate tab settings

Variables	Tab Settings
Exploration Name: Product by Country	SEGMENT COMPARISONS Indonesia Exclusions Drop or select segment
Custom Jun 21, 2022 - Jul 18, 2023	Pivot First column
SEGMENTS + Indonesia Exclusions	ROWS Page title and scre... Drop or select dimension Start row 1 Show rows 50 Nested rows No
DIMENSIONS + Page title and scre...	COLUMNS Drop or select dimension Start column group 1 Show column groups 5
METRICS + Event count	VALUES Event count Drop or select metric Cell type Bar ch... FILTERS Drop or select dimension or metric

8. Change "Show rows" to 50 to display more results

Following these settings results in the table below:

Segment	Exclusions	Indonesia	Totals
Page title and screen name	Event count	Event count	↓ Event count
Totals	7,130,442 98.53% of total	106,675 1.47% of total	7,237,117 100% of total
1 Google Online Store	513,696	1,624	515,320
2 Store search results	487,263	3,524	490,787
3 Checkout Your Information	417,394	477	417,871
4 Lifestyle	317,648	1,002	318,650
5 Payment Method	219,963	6	219,969
6 Page Unavailable	146,863	593	147,456
7 Pixel Superfans	116,162	164	116,326
8 Checkout Confirmation	97,636	0	97,636
9 家	82,135	10	82,145
10 Google Campus Bike	77,300	245	77,545
11 Chrome Dino Collectible Figurines	73,300	1,002	74,302
12 Google Unisex Eco Tee Black	62,151	947	63,098
13 Google RIPL Ocean Blue Bottle	49,562	190	49,752
14 Chrome Dino Dark Mode Collectible	46,109	258	46,367
15 Google Adventure Backpack Black	44,547	187	44,734
16 Frequently Asked Questions	42,888	184	43,072
17 Home	0	43,029	43,029
18 Google Cloud Journal	42,540	29	42,569

first product appears at result 10, the Google Campus Bike.

There are several pages that are not products within results 1-9, and can be quickly filtered out by right-clicking on the page name and selecting "Exclude selection". These will be added as entries in the "FILTERS" section under the "Tab Settings".

The screenshot illustrates the process of filtering data in a Google Data Studio report. On the left, a table shows 18 rows of data. Row 10, 'Google Campus Bike', is highlighted. A context menu is open over this row, with the 'Exclude selection' option being selected. A large blue arrow points from this action to the 'Tab Settings' interface on the right. In the 'Tab Settings' interface, under the 'FILTERS' section, a new filter is being applied with the condition 'Page title and screen name does not exactly match Google Online Store'. This filter is highlighted with a red box.

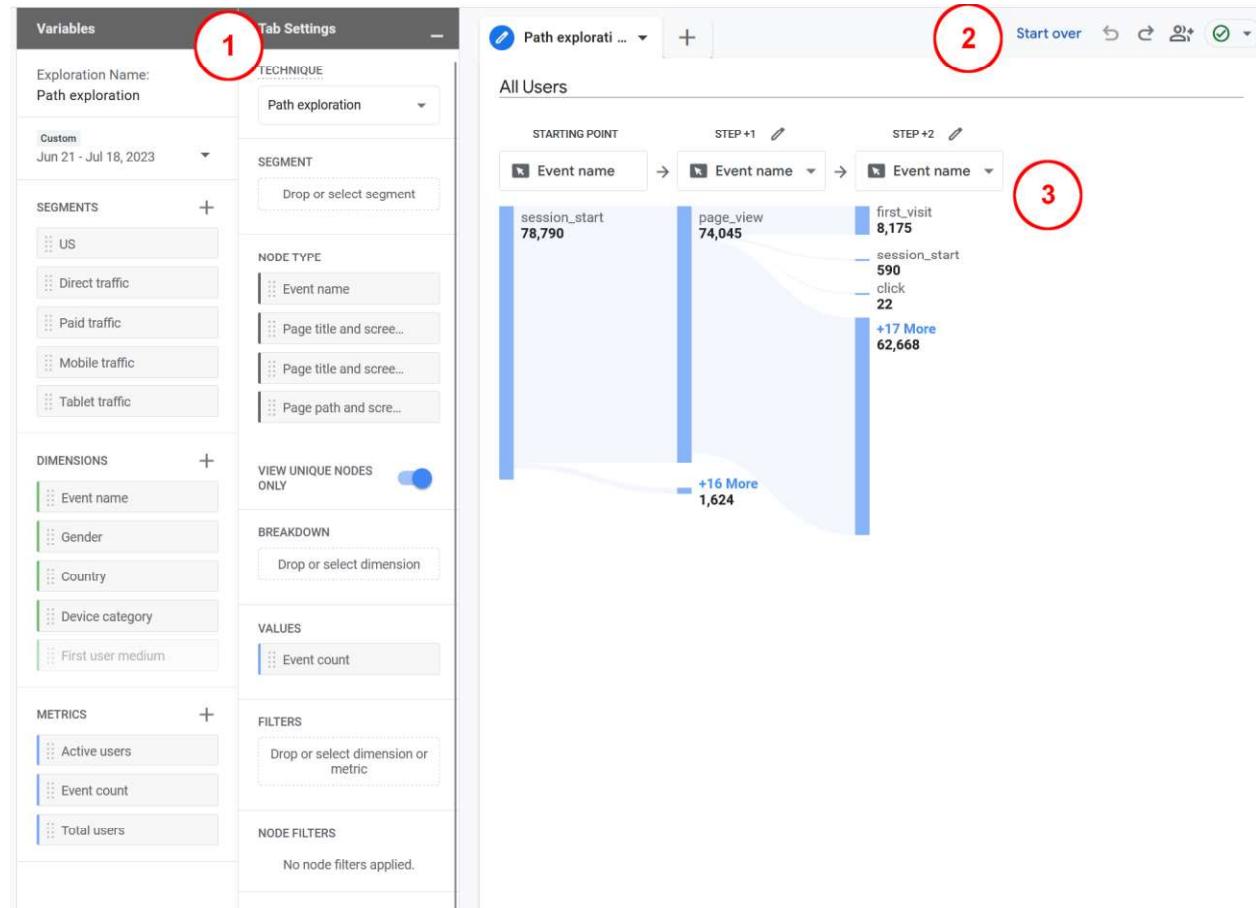
Path Explorations

A path analysis visualizes how population sizes break down between actions users have taken on the website. This type of analysis is primarily exploratory, designed to explore currently unknown user behavior: "Considering start point A, where do users go?"

An example exists on the Explorations landing page. Click the thumbnail above "Path Exploration" to view the example.

The screenshot shows the 'Explorations' interface. At the top, there's a search bar and filters for 'Type', 'Name', 'Owner', 'Last modified', and 'Property'. Below the search bar, there are four thumbnails: 'Blank', 'Free form', 'Formal exploration', and 'Path exploration'. The 'Path exploration' thumbnail is highlighted with a red box. The main area displays a table with columns for 'Type', 'Name', 'Owner', 'Last modified', and 'Property'.

The example Path exploration opens:

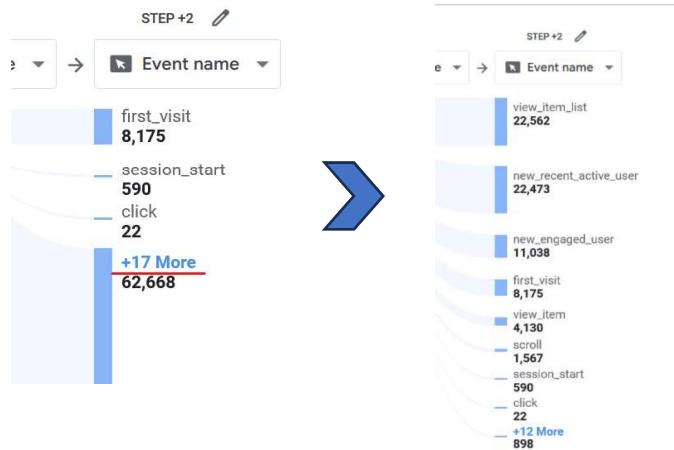


Options to customize dimensions and metrics are available in the columns to the left of the interface ("1" in the image above) under the "Variables" and "Tab Settings" drop downs.

Navigation options related to customizing the chart are available in the upper right of the canvas ("2" in the image above):

- Start over: Removes all steps, dimensions and metrics in order to build a new chart from scratch
- Left/Right curved arrows: Undo/Redo customization step or expansion of groups

The chart itself is to the right of the interface ("3" in the image above). The graphic is arranged into columns, called "nodes", representing different events the user takes. The nodes start with the session_start event, a label for the start of any user session, and continue on to the next two steps users may have taken, labeled "STEP +1" and "STEP +2". The graphics below these labels represent groups of the population from the previous step, separated by which event took place for that user. Some group labels may be hidden to save space on the canvas and can be expanded by clicking "+## More".



Suppose we wish to explore what pages users start a session on and where they go in the first few page views.

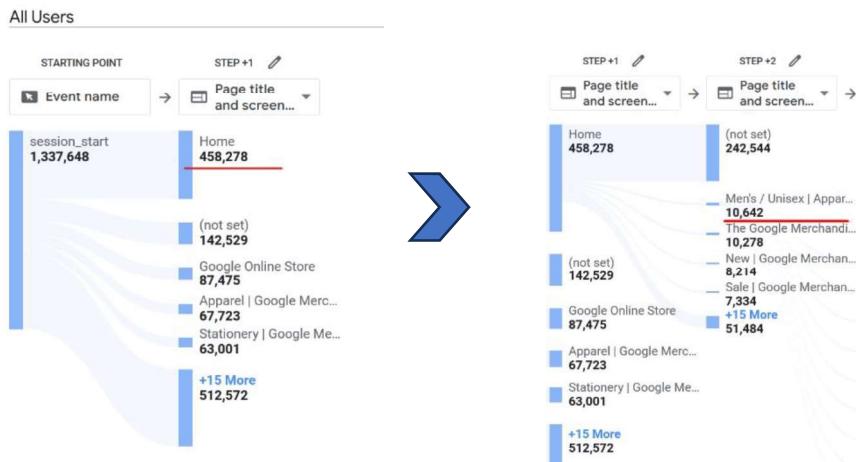
First, set the time frame to capture more data points (a timespan of a year is used in this example). This can be done by clicking on the time frame within the Variables drop down.

Variables	Tab
Exploration Name: Path exploration	TECI Pa
Custom Jun 21, 2022 - Jul 18, 2023	SEGI
SEGMENTS US	NOD

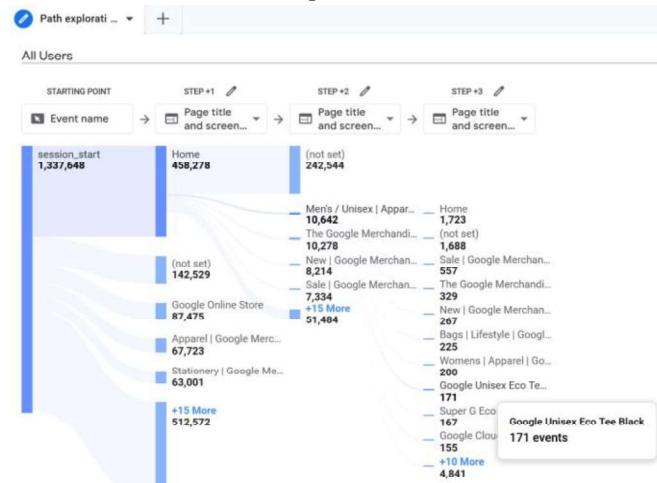
Next, change the node type under STEP +1 from "Event name" to "Page title and screen class" by clicking on "Event name" under "Step +1".



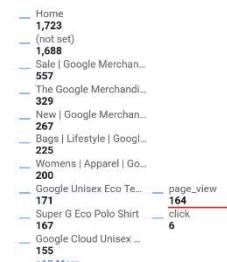
The Path exploration chart then changes to show the pages that users start their session on. Many users are starting on the Home page of the store. Clicking on this node will break down all these users to the next pages they navigate to.



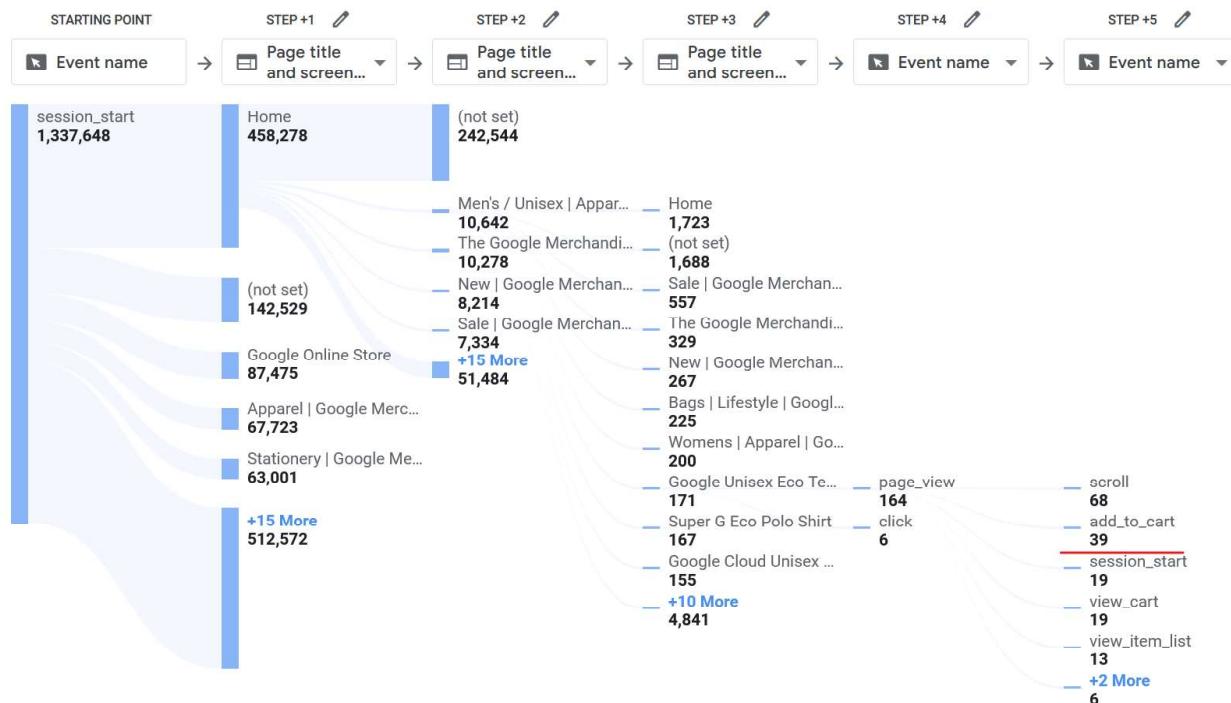
We see the first defined page is the "Men's / Unisex" category page of the store, implying many users might be interested in purchasing men's shirts. We might be curious if anyone viewed a particular item page at this point. After clicking "+## More" to expand the list, we see that the product page viewers viewed most after coming to the home screen is the "Google Unisex Eco Tee Black" product.



At this point we might be curious how many users added this product to their cart. Clicking on the page will expand the chart to the next node, "STEP +4". Change the node type from "Page title and screen class" to "Event name". Then click on the "page_view" event to see what actions users make after the page has been loaded.



All Users

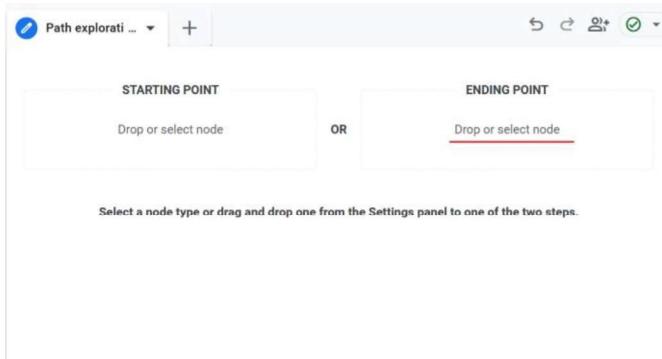


The analysis shows that 39 users have added the product to their cart. We have now explored one possible path users take on the website, from moving from the home page, seeing which product is viewed most from there and how many people end up adding it to their cart.

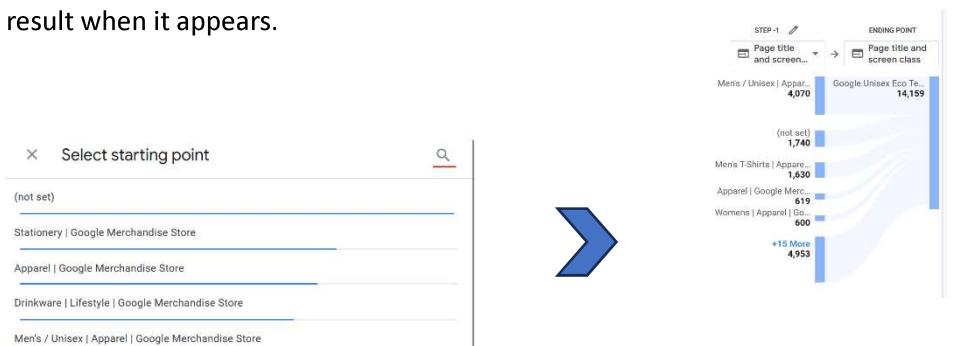
Reverse pathing

Reverse path analysis is another useful technique to see user behavior. As opposed to the previous pathing analysis example, reverse path analysis begins from the end of a path of user events and from there origin points of possible paths are explored.

Click "Start over" on the path exploration interface to clear the canvas.

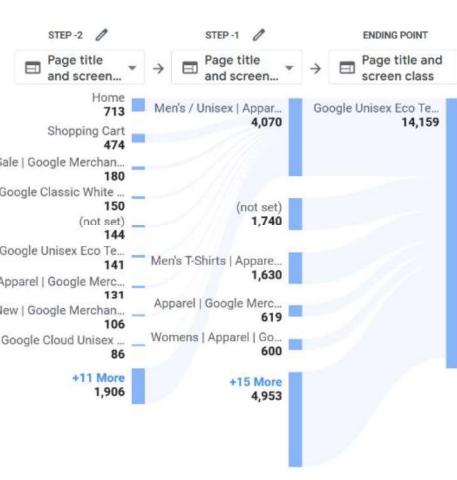


The canvas will clear, giving options to begin the exploration from the beginning of a path or the end of a path. Click on "Drop or select node" under "ENDING POINT" and select "Page and screen class". A window pane appears to select the page to serve as an ending point of a user path. Suppose we are curious where users come from who view the product "Google Unisex Eco Tee Black". Click on the search icon in the upper right of the pane, enter the product name into the prompt and click on the search result when it appears.



We now see 4k of those users have arrived from the "Men's / Unisex" apparel page. Clicking on this node will expand the path to their page previous to the "Men's / Unisex" apparel page.

The resulting chart shows that most users reach the product page, moving directly from the home screen to the Men's / Unisex category page. Many others continue browsing into the Men's / Unisex category page after viewing their cart.



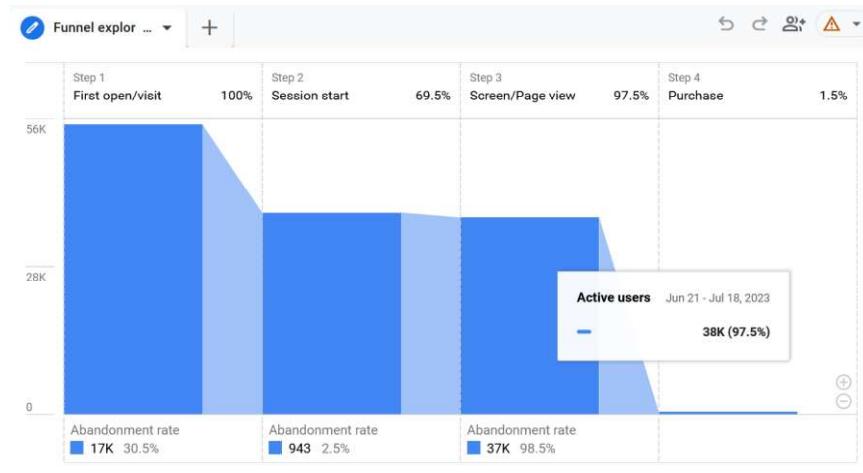
Funnel Explorations

A funnel analysis is used in understanding how well business goals are reached. They are visualizations of how many users successfully convert after a series of events.

While path analysis is an exploratory analysis that asks "If users start at point A, where do they go?", funnel analysis focuses on reviewing the efficacy of a path, asking "how successful are we in getting users to get from point A to point B?"

An example funnel analysis is provided in the Explorations homepage through the thumbnail above "Funnel exploration".

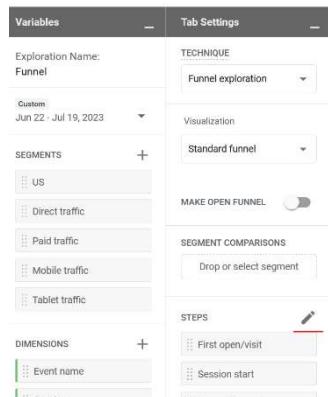
The example template shows the percentages of users between steps taken from first visiting the web property to making a purchase.



Out of 17k who visit the site, about 70% begin a session. Out of those who begin a session, 97.5% successfully load a page. From those who loaded a page, 1.5% make a purchase.

Suppose we wish to know "out of all users who view the sale page, how many make a purchase?"

Begin with the example template and edit the steps to the funnel, clicking on the pen next to "STEPS" under the "Tab Settings" section.



The "Edit funnel steps" panel opens, showing all the steps to the funnel and options to edit them. Remove all the current steps by clicking on the menu icon to the upper right of each step and selecting "Remove step".

The screenshot shows the 'Edit funnel steps' interface. It displays two funnel steps: Step 1 (First open/visit) and Step 2 (Session start). Step 1 has conditions: 'first_open' and 'first_visit'. Step 2 has a condition: 'session_start'. A context menu is open over Step 1, with the 'Remove step' option highlighted. The summary on the right shows 'THIS FUNNEL 21 TO JUL 18' for 'all users', with 'TOTAL EVENTS 553' (0.05% of all events).

The interface will have a single new, undefined step:

The screenshot shows the 'Edit funnel steps' interface with a single step titled 'New Step'. A context menu is open over this step, with the 'Remove step' option highlighted.

Change the title of the step to "Sale page".

In order to define the start of the funnel as the sale page, add a condition by clicking on "Add new condition". Click on "Events" and then "Page title and screen class" on the following window.

1 Step 1 New Step

Search items

Gaming	Page path + query string and screen class
General	Page path and screen class
Geography	Page referrer
Link	Page title
Page / screen	Page title and screen class
Platform / device	Page title and screen name
Publisher	Session-scoped
Session	Landing page + query string
Time	Other
Traffic source	Content group

Add a filter to filter in only users who land on the sale page.

1 Step 1 New Step

Page title and screen class

+ Add filter

And

Ensure the condition is "contains" and search for "sale" in the box below. Select "Sale | Google Merchandise Store" from the search results.

1 Step 1 New Step

Page title and screen class

Condition* contains

sale

Sale | Google Merchandise Store

Sale | Sale-Accessories

And

Add step

Add a second step for displaying an item page, with the condition "item_views" under the "Events" category. Add a third step for adding items to a user's cart with the condition "add_to_cart" under the "Events" category. Below is what the resulting settings will end up as:

Edit funnel steps

Help center **Apply**

Step 1 Sale page

Page title and screen class contains Sale | Google Merchandise Store

And

is indirectly followed by

Step 2 Item view

view_item

And

is indirectly followed by

Step 3 Add to cart

add_to_cart

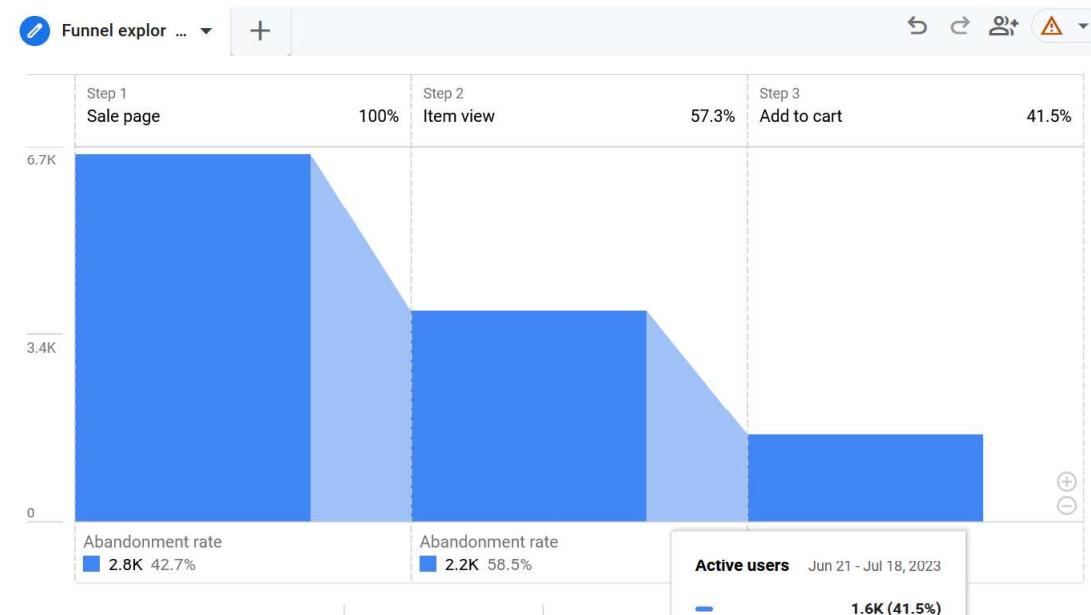
Add step

Summary

USERS IN THIS FUNNEL FROM JUN 21 TO JUL 18
1.6K
2.36% of all users

TOTAL EVENTS
1.6K
0.13% of all events

Applying the new steps creates the chart below:



Out of all users who landed on the Sale page, 57% viewed an item. Out of all users who viewed an item after coming from the sale page, 41% added an item to their cart.

Contact

If you have any questions, please kindly reach out to me with any questions at the following methods below:

E-mail: sanabuwashizuka@gmail.com

LinkedIn: www.linkedin.com/in/sanabuwashizuka

Portfolio: <https://sanabuw.github.io/>