



All the good stuff about Google Analytics 4.

Google Analytics 4 (GA4)

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Agenda

- Introduction to GA4
- Terminology
- Structure Breakdown
- Setting Up GA4
- Default Reports Overview
- Key Events to Track (Automatically and Custom)
- Conversion Tracking
- Explore: Custom Reports (Explorations)
- Connecting GA4 to Google Tools

What is GA4?

Google Analytics 4 (GA4) is the latest version of Google Analytics that allows you to collect data across websites and apps, replacing Universal Analytics. Unlike Universal Analytics, which was session-based, GA4 is **event-based**, meaning every user interaction (click, scroll, purchase) is tracked as an event.

Why GA4?

- Free!
- Cross-platform tracking (web and app)
- Enhanced privacy features
- Machine learning insights
- GA4 is more flexible and focused on user behavior. You'll track event, not just pageviews.

Terminology

- **Event:** Any user interaction (click, scroll, video play, etc.)
- **User:** An individual visitor, identified via device or User ID
- **Session:** A group of user interactions within a given time window
- **Engagement:** Tracks user interaction depth (scrolls, time on page, etc.)
- **Conversions:** Events you've marked as important for your goals (like purchases, sign-ups)
- **Parameter:** Extra details about an event (e.g. button_name = "Sign Up")
- **Dimension:** Attributes of your data (e.g. Country, Device Type)
- **Metric:** Quantitative measurements (e.g. Pageviews, Users)

Structure Breakdown

GA4 is structured into:

- **Account:** Your Google Analytics account
- **Property:** Your GA4 tracking instance (1 per website or app)
- **Data Stream:** Where your data comes from (Web, iOS, Android)

Each property has its own settings and dashboards.

Setting Up GA4

Steps to Set Up a New GA4 Property:

1. Go to Google Analytics
2. Click Admin
3. Under "Account," choose or create your Account
4. Under "Property," click + Create Property
5. Fill in property name, timezone, and currency
6. Click Next, and choose your industry and size
7. Click Create
8. Choose Web data stream and enter your URL
9. Copy the Measurement ID (G-XXXXXXX)

Install the Tracking Code:

- Use Google Tag Manager or paste the code directly into the <head> of your site.

Demo Account: GA4 - Google Merch Shop

We will be using the data in the **Google Analytics demo account** from the **Google Merchandise Store**.

The Google Merchandise Store is an ecommerce site that sells Google-branded merchandise.

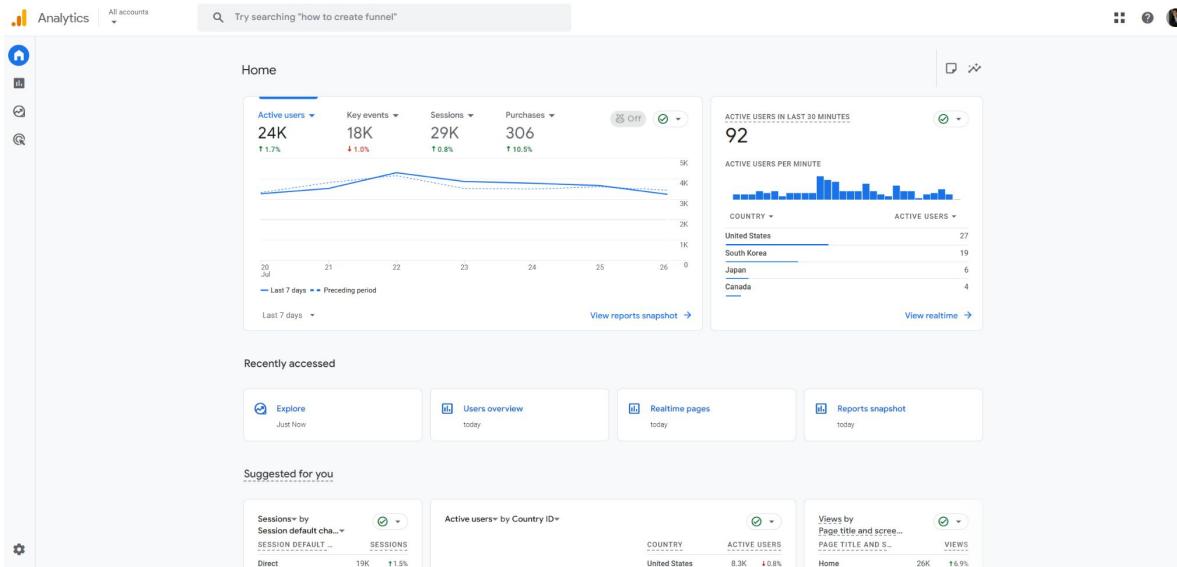
This property contains data in the account that is typical of what you would see for an ecommerce site, and include the following kinds of information:

- **Traffic source data:** Information about where website users originate. This includes information about organic traffic, paid search traffic, and display traffic.
- **Content data:** Information about the behavior of users on the site. This includes the URLs of pages that users look at, and how they interact with page content.
- **Transaction data:** Information about the transactions that occur on the Google Merchandise Store website.

Home Page

This is the Home page. It's a personalized overview of your most important metrics, insights, and setup tips.

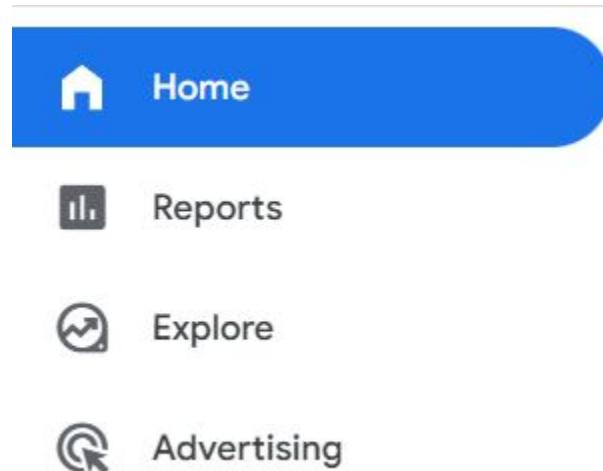
Next, see where to find your reports, complete setup, get help, and more.



Main Menu

Use the main menu to find:

- **Reports:** information about your users and their engagement with your website and/or app.
- **Explore:** a tool offering advanced analysis techniques for you to examine your data.
- **Advertising:** attribution, ad campaign performance, and publishing reports.



Admin

Use Admin to manage your account, user, and property settings, including:

- Measurement ID and tagging instructions
- Setup assistant to help you get started
- Events and audiences
- Product links
- User permissions
- Personal preferences like Analytics language and emails



Accounts

If you have access to more than one Analytics account or property, use the selector at the top of the page to switch between properties.

The screenshot shows the Google Analytics Platform Home page. At the top, there is a dropdown menu labeled "All accounts" with a downward arrow. Below the dropdown are three tabs: "All" (which is selected), "Favorites", and "Recents". To the right of the tabs is a search bar with a magnifying glass icon and the placeholder text "Search". Further to the right is a link "Visit Platform Home". In the main content area, there are two sections. On the left, under "Analytics Accounts", there is a card for "Testing Demo" with the ID "362212010". On the right, under "Properties & Apps", there is a card for "All accounts". Both sections have a small blue and yellow icon above their respective labels.

Search Bar

From anywhere in Analytics, you can search for specific metrics, ask a question about your data, find admin settings, or search for help.

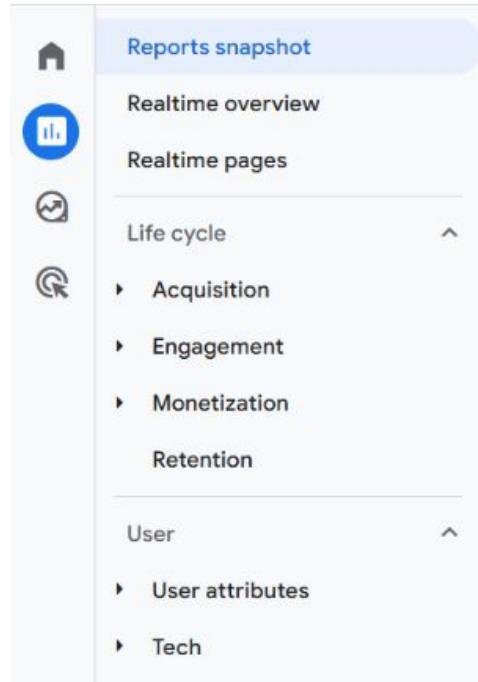
For example, type “Device” to view a list of top device models by users, get relevant insights, or navigate to related reports.



Try searching "how to create funnel"

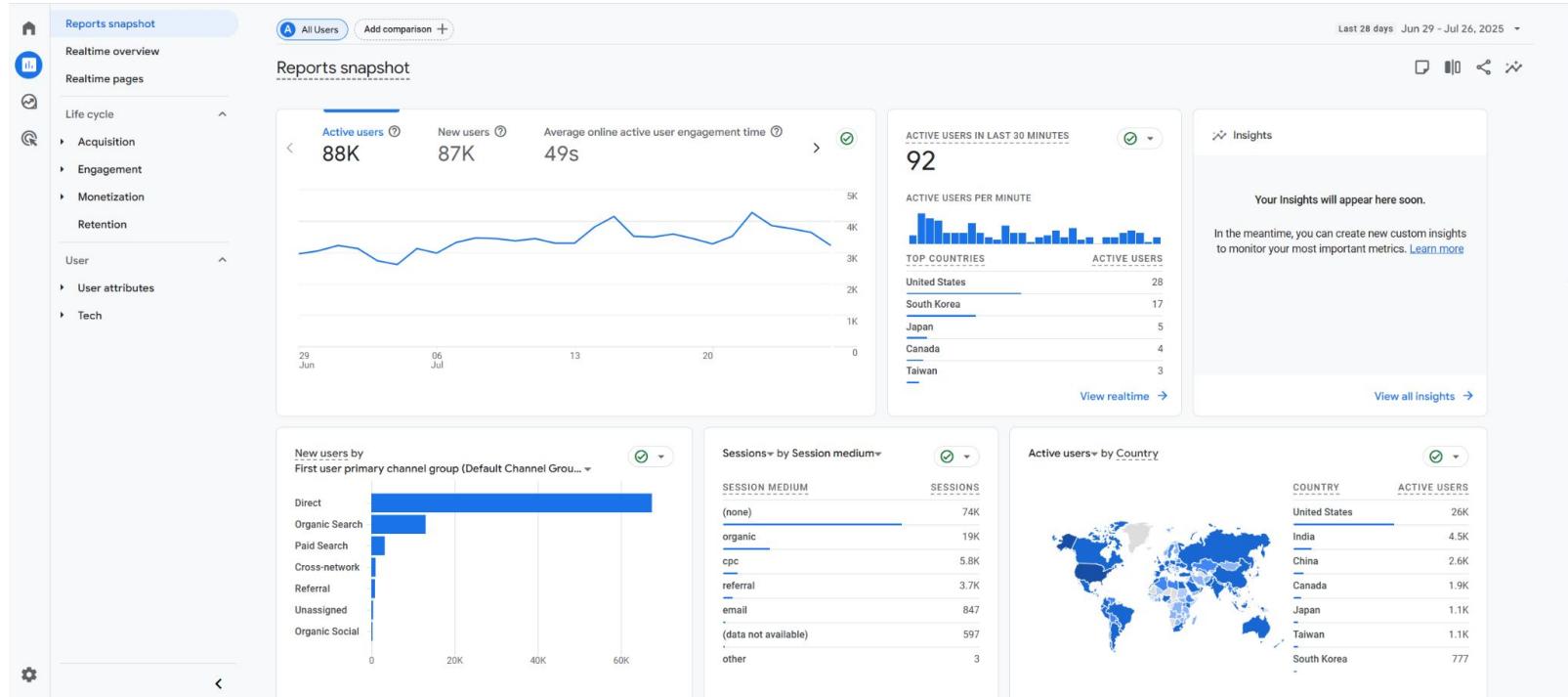
Default Reports Overview

- Reports snapshot
- Realtime overview
- Realtime pages
- Life cycle
 - Acquisition
 - Engagement
 - Monetization
 - Retention
- User
 - User attributes
 - Tech



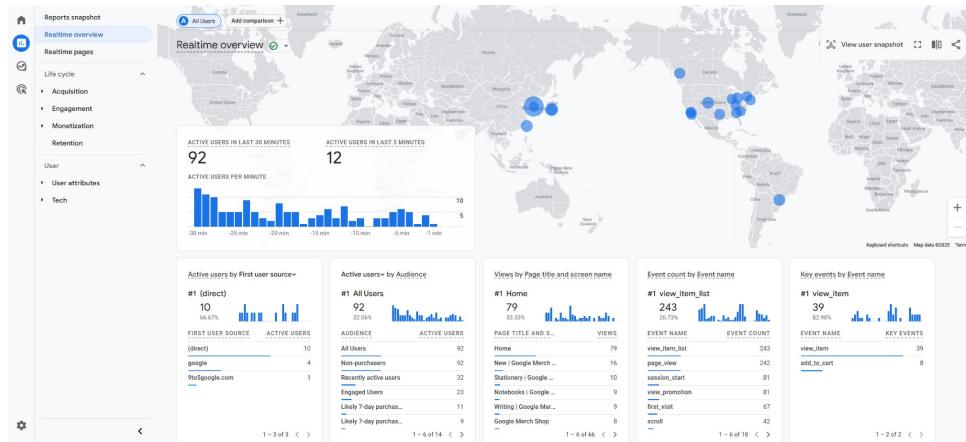
Reports Snapshot

A high-level dashboard of user engagement, sessions, retention, top pages, and conversions.



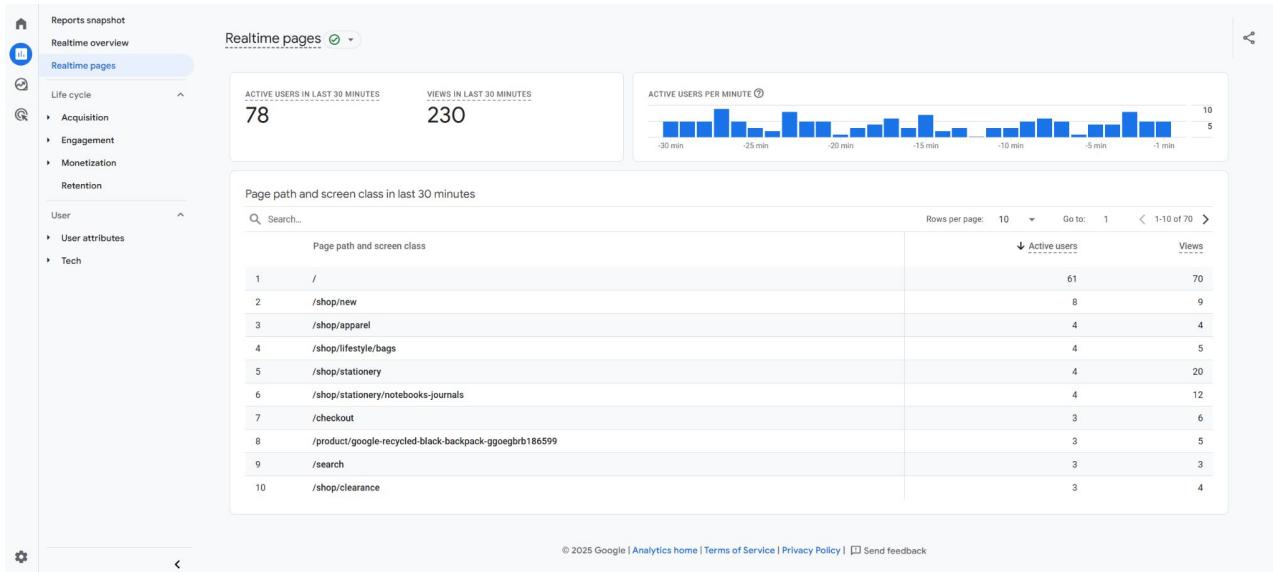
Realtime Overview

- Active users in the past 30 minutes (updated live)
- User locations (map view by country/city)
- Device types (mobile, desktop, tablet)
- Traffic sources (direct, organic, referral, social, etc.)
- Top pages/screens currently being viewed
- Events triggers in real time (e.g. clicks, scrolls, form submits)
- Conversions happening live (e.g. sign-ups, purchases)



Realtime Pages

- Top pages currently being viewed (by Page Title or URL)
- Active users on each page (within the last 30 minutes)
- See how users are navigating your site in real time
- Drill down by device, location, or traffic source



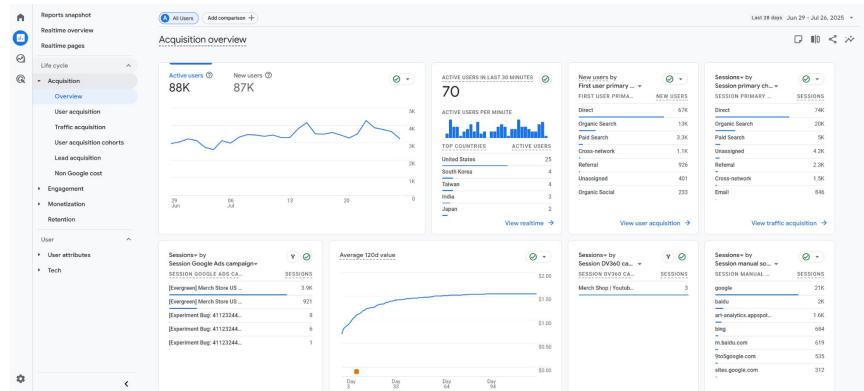
Life Cycle Reports

- **Acquisition:** Where your users came from (traffic sources)
- **Engagement:** What users do on your site/app
- **Monetization:** Ecommerce performance (if applicable)
- **Retention:** How often users return to your site



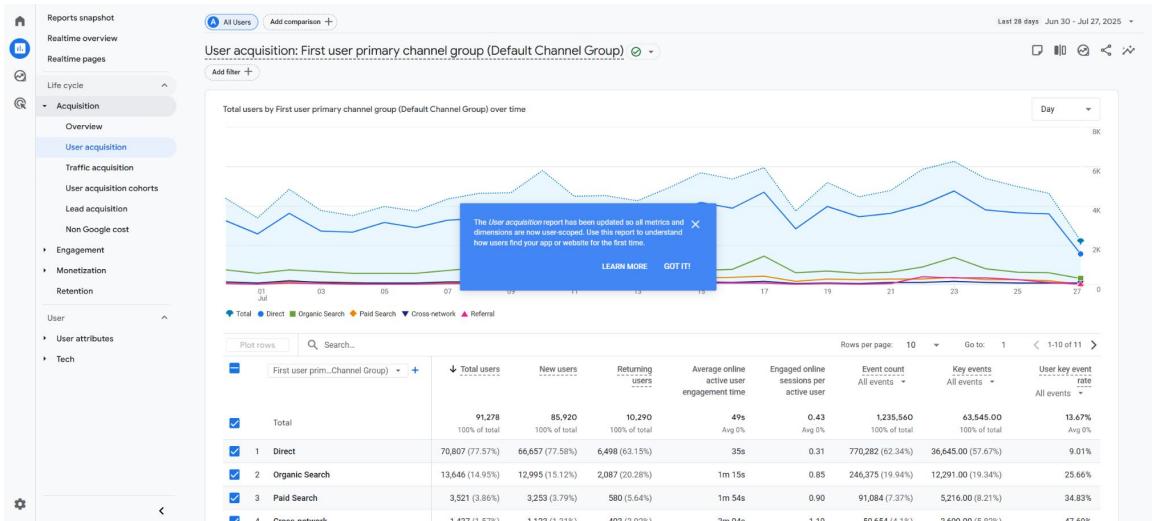
Acquisition > Overview

- Tracks how users arrive at your site or app via channels like organic search, direct, referral, paid search, social, etc.
- Breaks down acquisition by user type:
 - **User acquisition:** where new users came from
 - **Traffic acquisition:** where all sessions originated
- **KPIs** - Shows key performance metrics for each channel:
 - Users, new users, sessions, engagement rate and average engagement time, conversions



Acquisition > User Acquisition

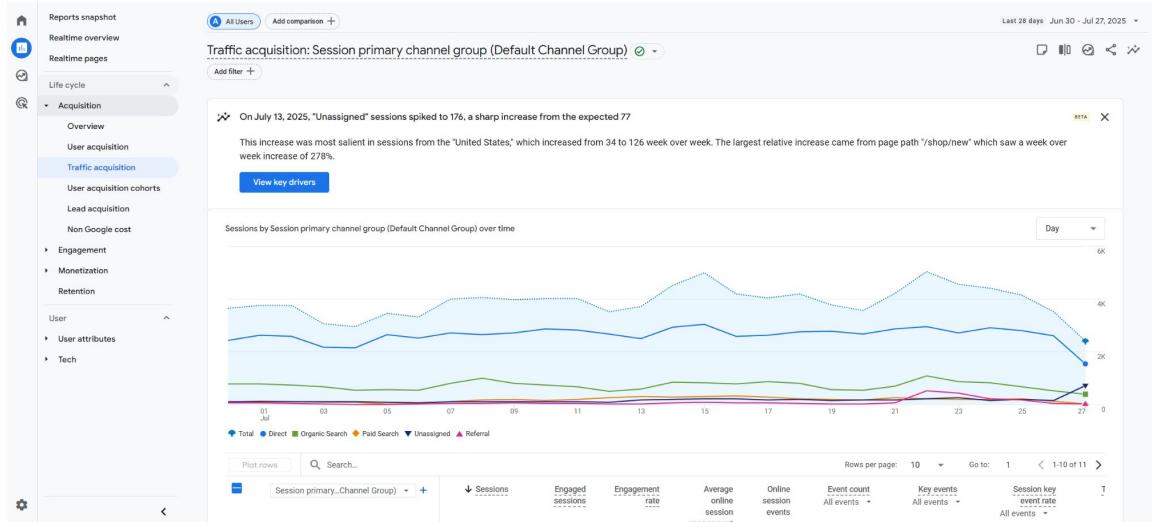
- Focuses on new users only, tracking where first-time users came from (first touchpoint)
- Breaks down by source/medium/channel
- **KPIs** - Shows performance metrics for each acquisition source:
 - New users, engagement rate and average engagement time, conversions, revenue (if applicable)



Use this report to help identify which marketing channels bring in new audiences so you can refine acquisition strategies and grow your reach.

Acquisition > Traffic Acquisition

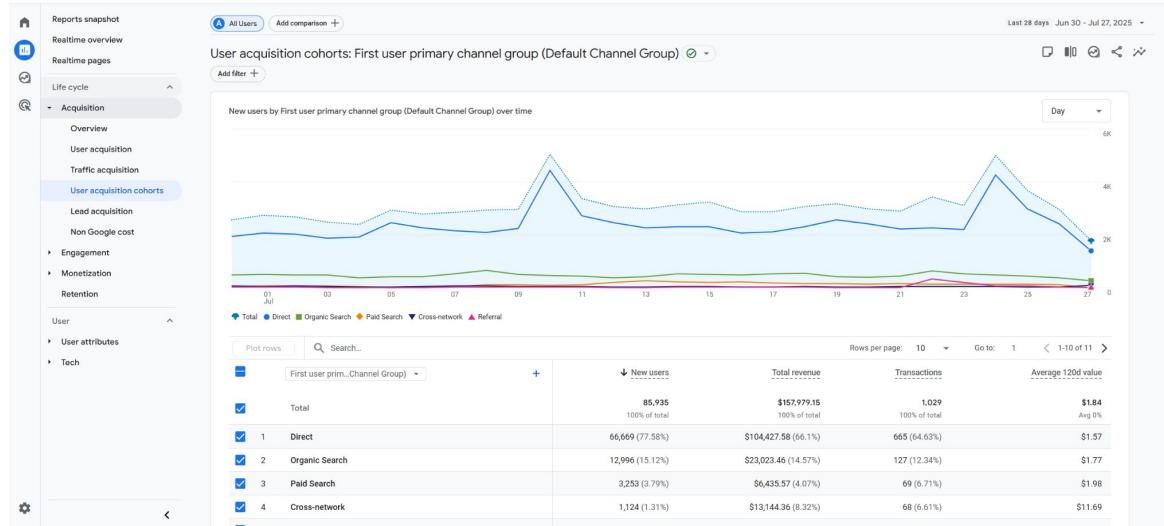
- Focuses on all sessions, tracking how all users (new + returning) arrived at your site/app
- Breaks down by traffic source by source/medium and default channel group
- **KPIs** - Shows session-level metrics:
 - Sessions, users, engagement rate and average engagement time, conversions, revenue (if applicable)



Use this report to help evaluate the effectiveness of traffic-driving efforts across all marketing and referral channels.

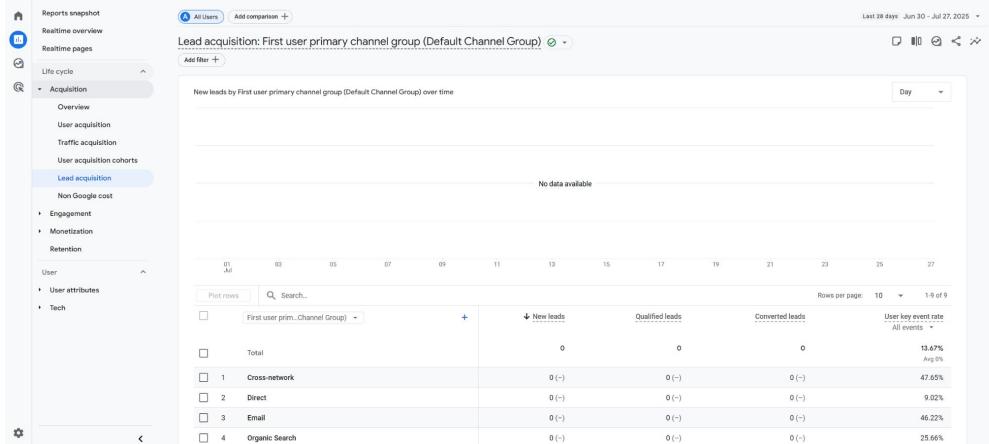
Acquisition > User Acquisition Cohorts

- Groups users into cohorts based on when they first visited
- Tracks user behavior over time, seeing how each cohort returns and engages in the following days/weeks
- **KPIs** - Compare retention and engagement across cohorts:
 - Returning users, sessions per user, engagement time, conversions



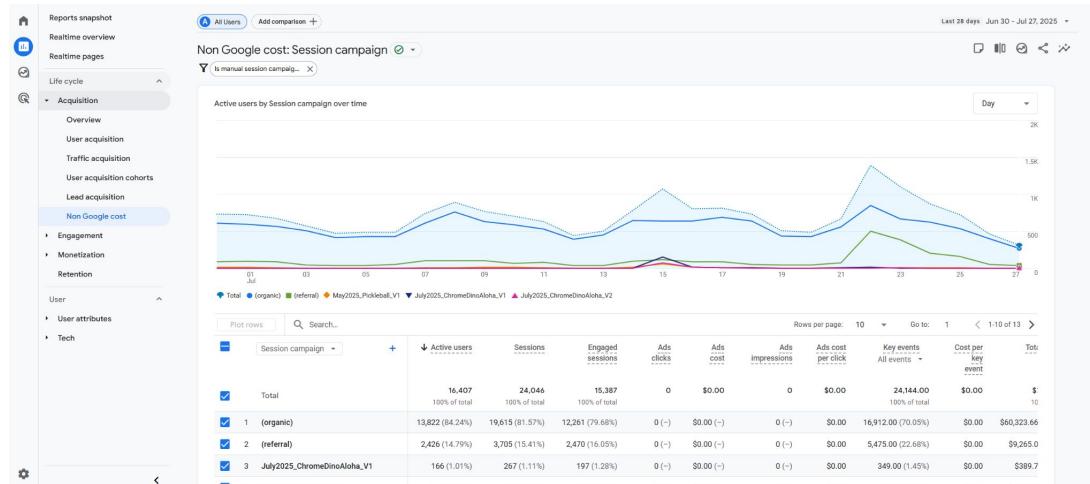
Acquisition > Lead Acquisition

- Tracks how leads are acquired, based on events like form_submit, sign_up, generate_lead, or other custom conversion events
- Breaks down lead sources by source/medium, campaign (UTM parameters), and default channel group
- **KPIs** - Shows lead performance metrics:
 - Number of leads generated, engagement time before conversion, conversion rate by channel



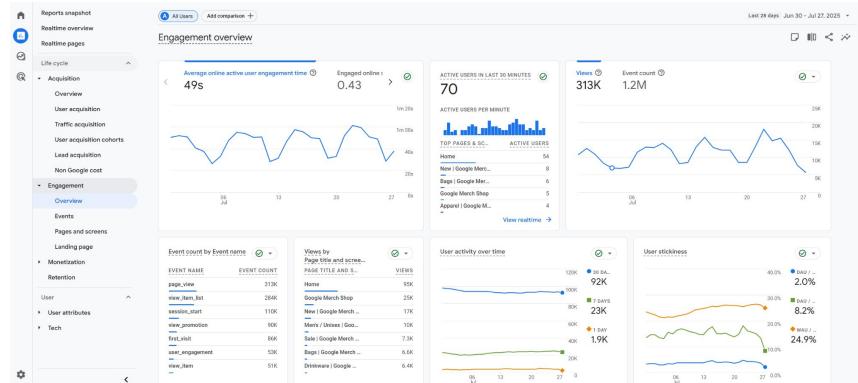
Acquisition > Non Google Cost

- Tracks paid traffic from non-Google channels (e.g. Facebook Ads, LinkedIn Ads, etc.)
- Required manual cost data upload or integration using Data import or the GA4 Measurement Protocol
- **KPIs** - Compares cost vs. performance:
 - Ad cost, impressions and clicks, sessions and users, conversions and revenue, return on ad spend, cost per click



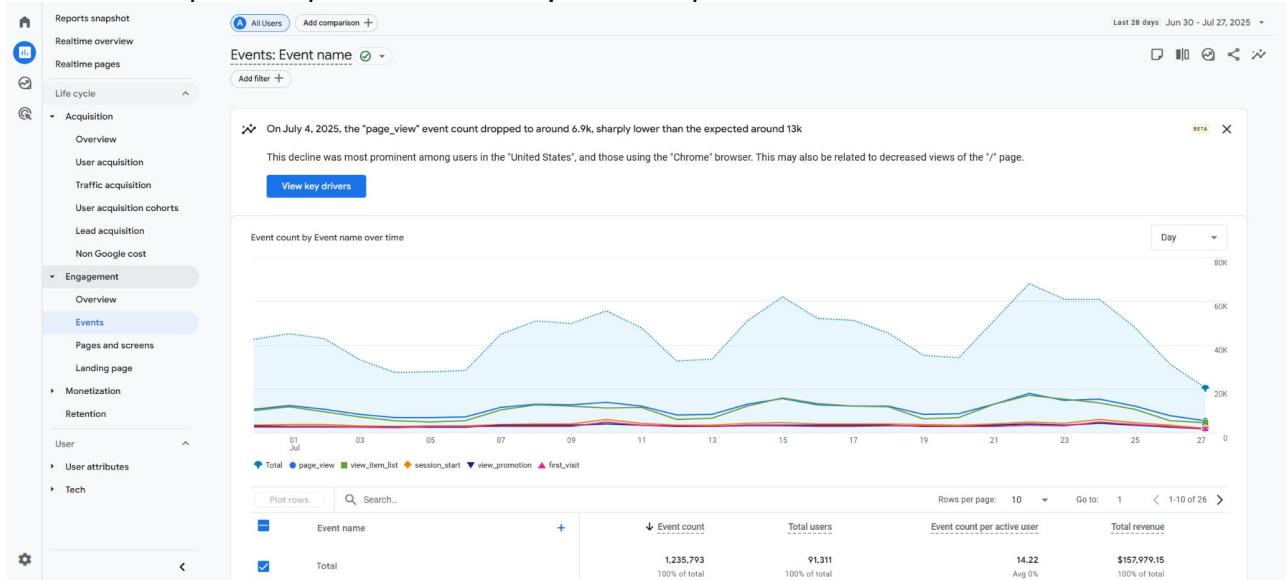
Engagement > Overview

- Tracks overall user interaction with your site or app, focusing on what users do after landing, not just how they arrived
- Includes key engagement metrics:
 - Views, engaged sessions, average engagement time, engagement rate (sessions lasting 10+ seconds, with 2+ views or conversions)
- **KPIs** - Highlights top-performing elements:
 - Top pages and screens by engagement, top events triggered by users (e.g. clicks, scrolls), top conversions and their counts



Engagement > Events

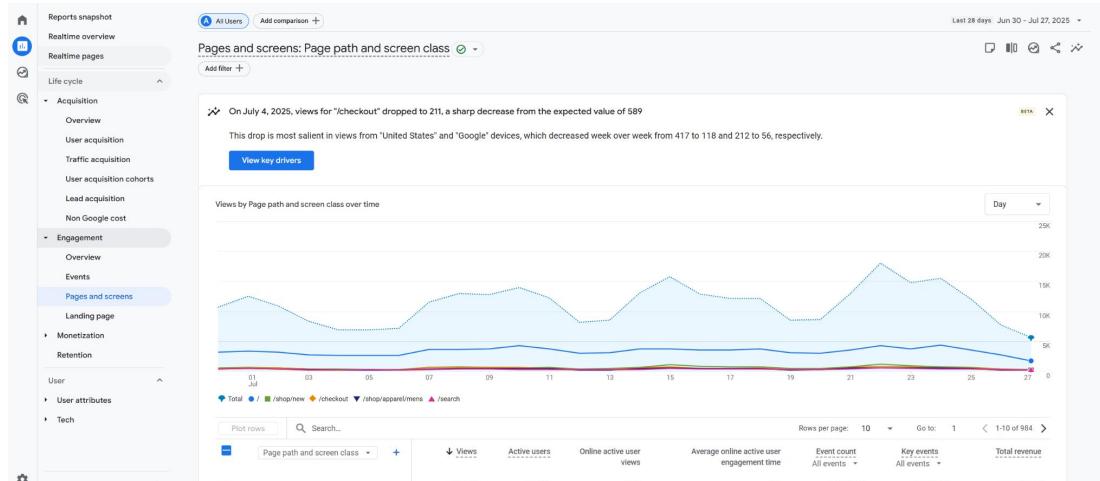
- Lists all events users trigger on your site or app, including both automatically collected and custom-defined events (e.g. page_view, scroll, click, form_submit, purchase)
- **KPIs** - Displays key event metrics:
 - Event count, users, event count per user, event value



Use this report to help analyze user behavior and intent to see which actions users are taking most often, identify drop-off points or underused features, and validate event tracking.

Engagement > Pages and Screens

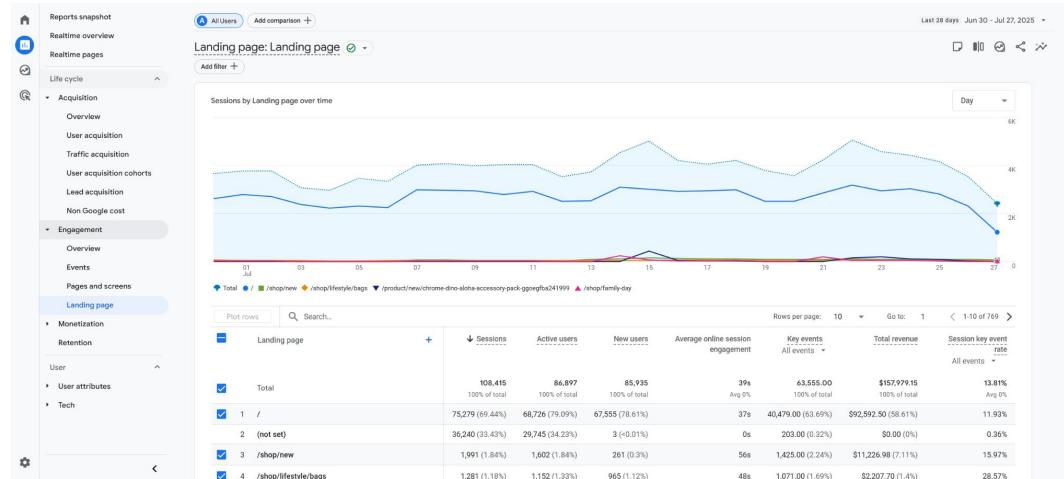
- Shows performance of individual pages (web) or screens (app) based on page title, screen name, or page path
- **KPIs** - Provides key metrics for each page/screen:
 - Views and users, average engagement time, engaged sessions, engagement rate, conversions from that page, event count per page (e.g. clicks, video plays)



Use this report to help evaluate content effectiveness by identifying your most engaging or highest-converting pages, spotting pages with low engagement or high drop-off, and supporting content and UX optimization.

Engagement > Landing Page

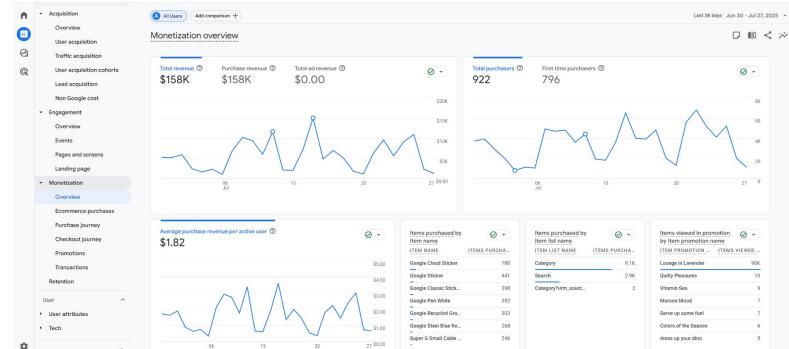
- Identifies the first page users see when they start a session, focusing on entry points, not all visited pages
- **KPIs** - Shows performance metrics for each landing page:
 - Sessions and new users, average engagement time, engagement rate, conversions, bounce indicators (via low engagement rate)



Use this report to help evaluate landing page effectiveness (which pages attract and retain users, which ones lead to conversions or drop-offs) and improve CTAs, layouts, or content on underperforming entry pages.

Monetization > Overview

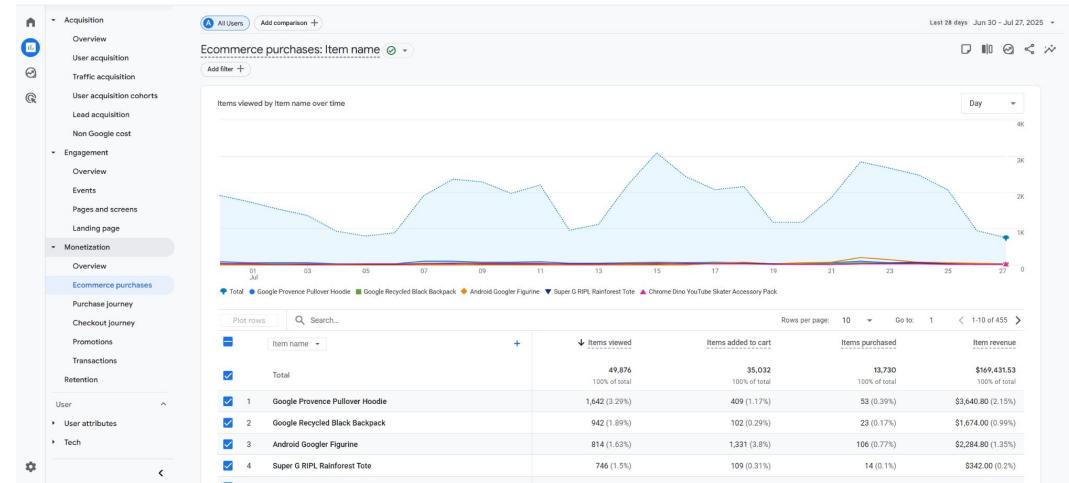
- Summarizes revenue-related activity on your site or app, including ecommerce, in-app purchases, and ad revenue
- Breaks down revenue by key dimensions: items, product categories, source/medium or campaign (if integrated with Ads), date/time trends
- **KPIs** - Key monetization metrics includes:
 - Total revenue (purchase + ads + subscriptions), ecommerce purchases and item views, average purchase revenue per user, items purchases and quantity, first-time vs. returning buyers)



Use this report to help measure performance of your sales and monetization efforts by seeing what products generate the most revenue and identifying trends in purchasing behaviors and optimizing funnels.

Monetization > Ecommerce Purchases

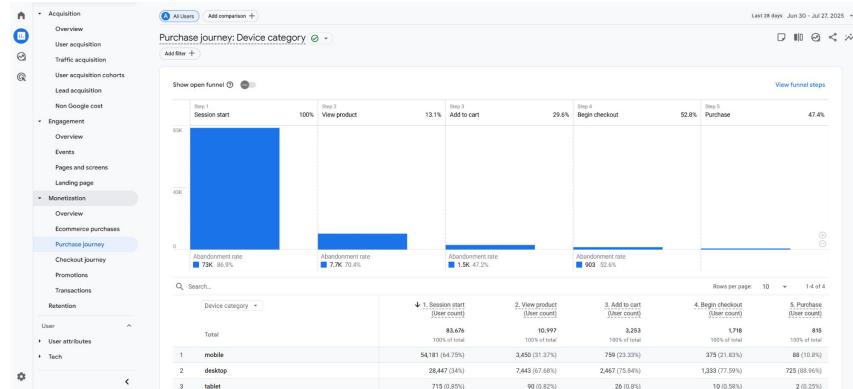
- Tracks product-level purchase activity on your site or app, focusing on what items were bought, how often, and for how much
- Breaks down product performance by item name or ID, item category, item brand, item variant
- **KPIs** - Key ecommerce metrics include:
 - Item views, add-to-cart events, purchases, item purchase quantity, item revenue



Use this report to help optimize product listings and sales funnels by identifying top-selling products and underperformers, and spotting drop-off between viewing, carting, and buying.

Monetization > Purchase Journey

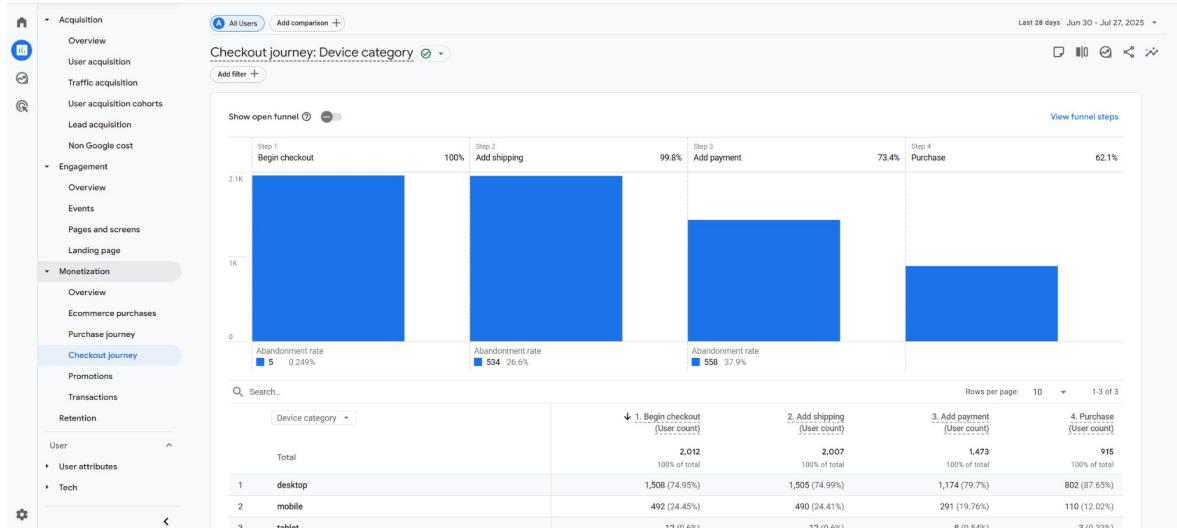
- Visualizes the steps users take leading up to a purchase, helping analyze where users enter, progress, or drop off in the buying process
- Tracks key ecommerce interactions, such as:
 - Item view → Add to cart → Begin checkout → Purchase
 - Conversion rates and drop-off between steps
- **KPIs** - Includes metrics by step and product:
 - Users and sessions at each stage, event count (e.g. how many users reached add_to_cart), revenue generated from completed purchases



Use this report to identify friction points and optimization opportunities by pinpointing stages where users abandon the journey, and improving product pages, cart UX, or checkout flow.

Monetization > Checkout Journey

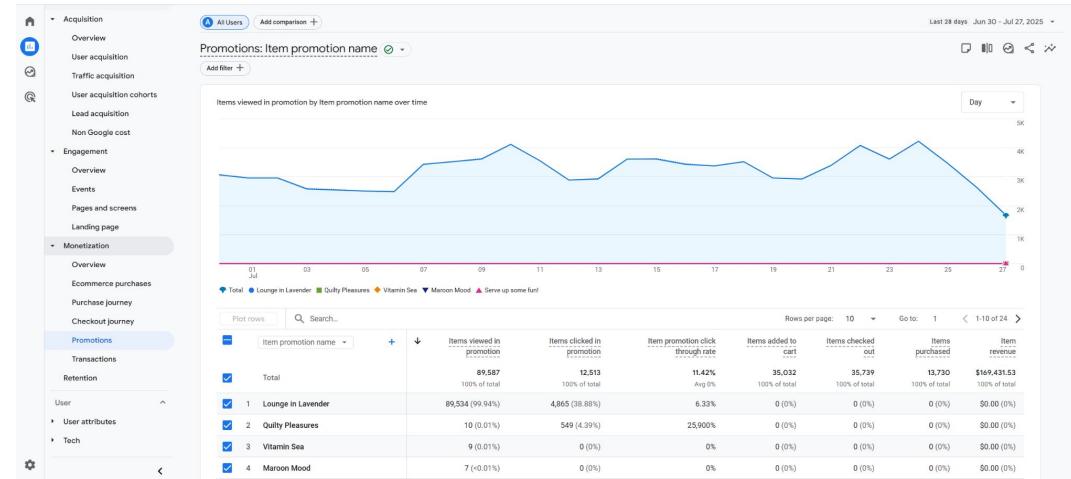
- Tracks user progression through the checkout process, from cart initiation to completed purchase
- Breaks down each checkout step (e.g. billing info, shipping, payment) by number of users/sessions at each step, drop-off rates between steps



Use this report to identify friction points in checkout flow where users abandon their purchase to optimize checkout experience to reduce cart abandonment, and pinpoint stages needing UX fixes or clearer CTAs.

Monetization > Promotions

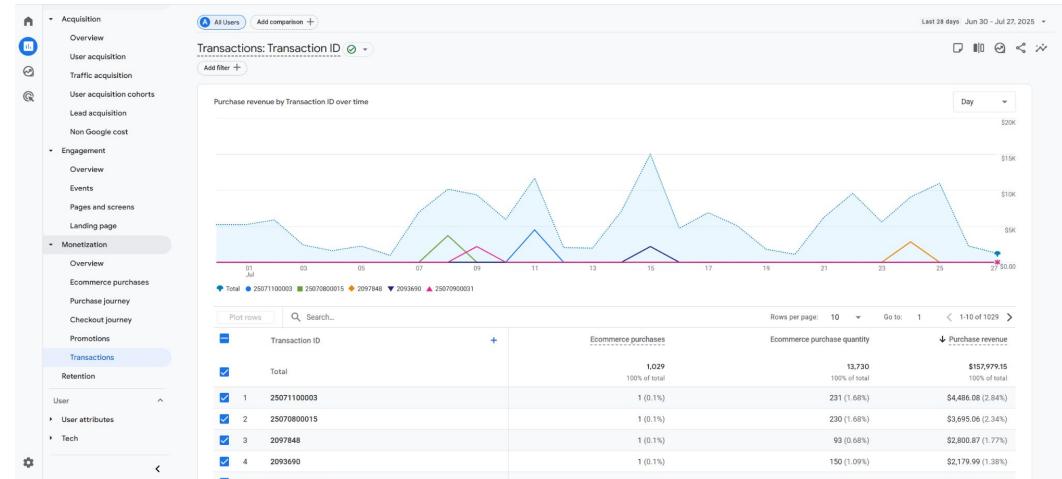
- Tracks performance of internal and external promotions based on promotion impressions and clicks tied to ecommerce events
- Breaks down data by promotion metadata: promotion ID, promotion name, creative name and position (if configured)
- **KPIs** - Key promotion metrics include:
 - Promotion views, promotion clicks, click through rate, revenue



Use this report to help evaluate effectiveness of marketing banners, pop-ups, and campaigns and optimize placement and messaging to boost conversions.

Monetization > Transactions

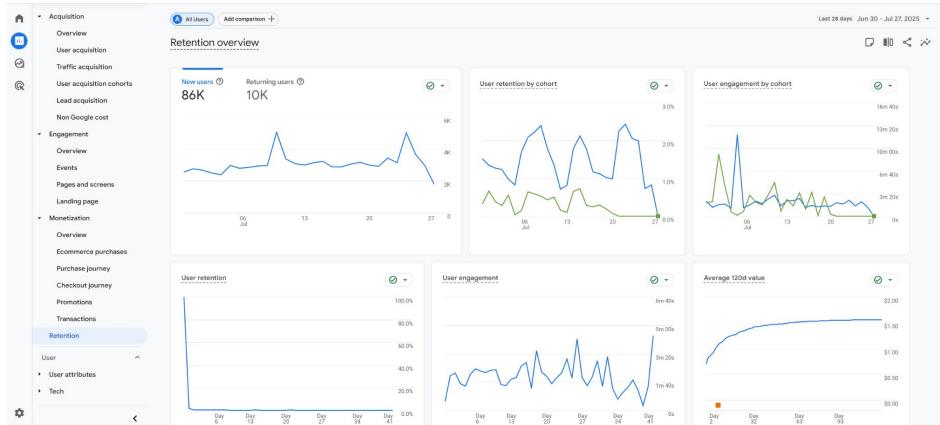
- Lists individual purchase transactions, with each row representing a single completed transaction
- Breaks down revenue contributions by item quantity and value per transaction
- **KPIs** - Includes key transaction-level details:
 - Transaction ID, total revenue (including tax, shipping, discounts), number of items purchased, purchase date and time



Use this report to validate ecommerce tracking accuracy, ensuring all purchases are properly recorded and attributed, and spot patterns across transactions (e.g. large orders, repeat buyers).

Retention Reports

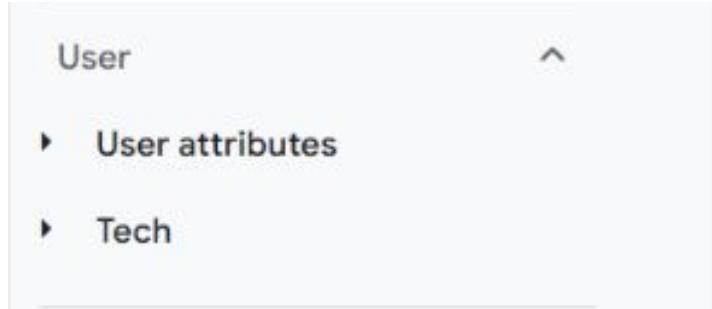
- Tracks how well your site/app retains users over time, measuring if and when users return after their first visit
- Compare retention trends across:
- Time intervals (daily, weekly, monthly), user types (new vs. returning), traffic sources or campaigns (if segmented)
- **KPIs** - Key retention metrics include:
 - User retention, engaged sessions per user, retention per cohort



User Reports

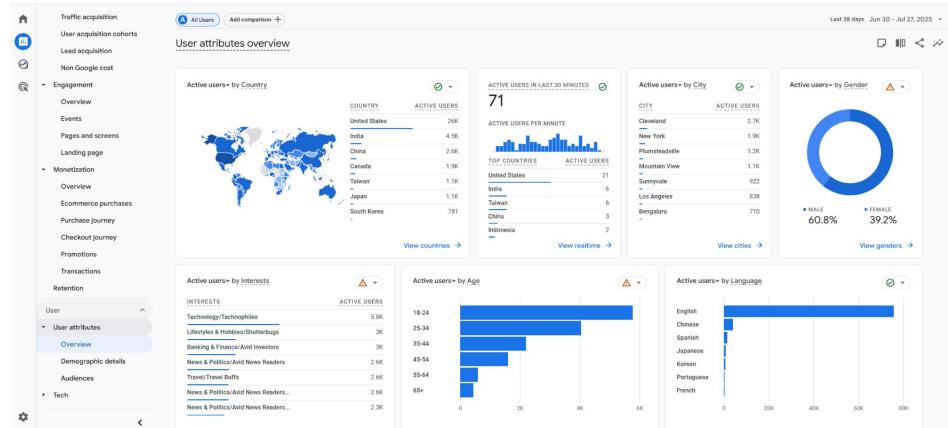
Demographic and technical data like:

- Age, gender, location
- Devices and operating systems



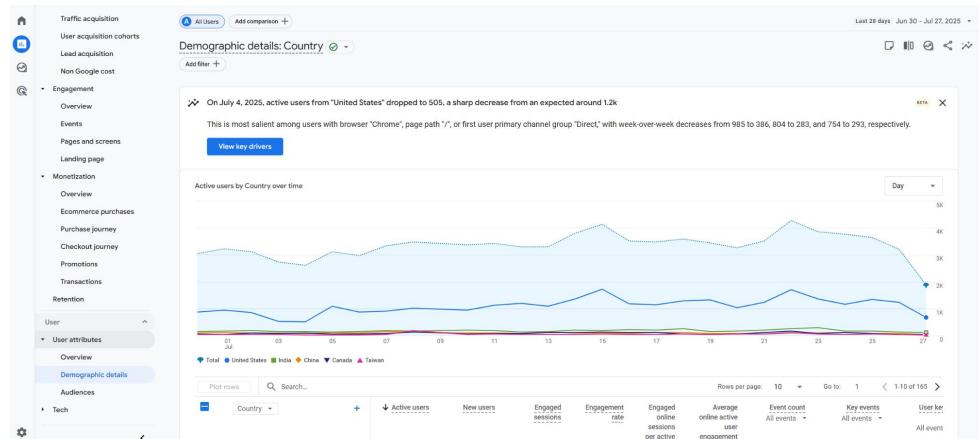
User Attributes > Overview

- Provides a demographic and technical profile of your users, understanding who your users are and how they access your site or app
- View user composition over time:
 - Trend lines showing changes in user base by attribute
 - Segmentable by acquisition source, event, or funnel
- Key user attribute breakdowns include:
 - Demographics, tech, user type, engagement metrics



User Attributes > Demographic Details

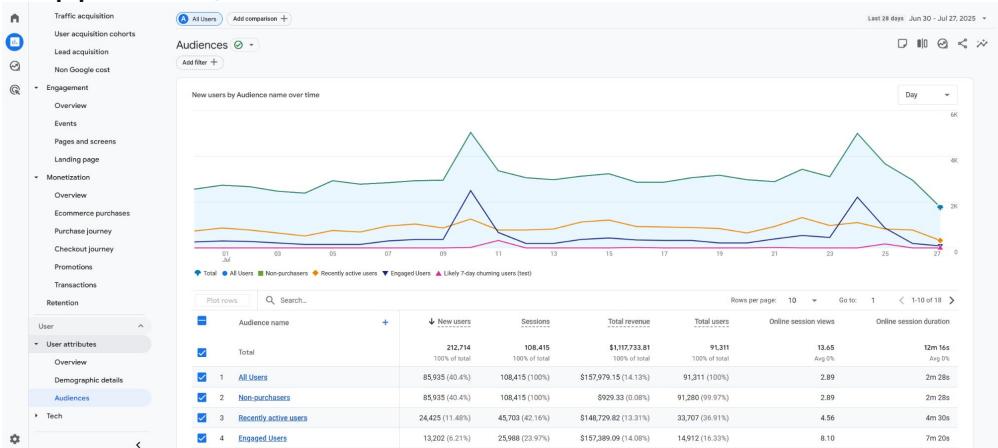
- Breaks down user data by demographic attributes to understand who your users are demographically
- Displays user engagement across demographics: sessions, engagement time, conversion events, revenue (if applicable)
- Key demographic dimensions include:
 - Country and region, city, language, gender and age (if available)



Use this report to help identify high-performing user groups by discovering where your most engaged or valuable users come from, and informing ad targeting, localization, and audience segmentation strategies.

User Attributes > Audiences

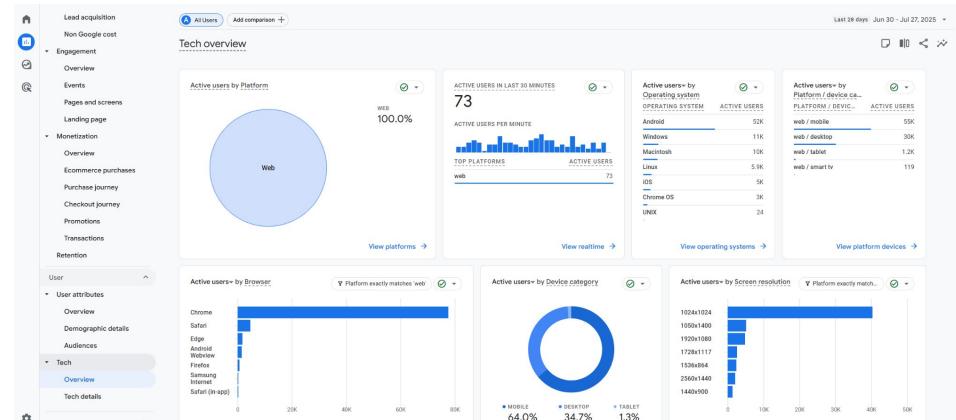
- Tracks performance of custom-defined user segments ("Audiences")
 - Audiences: groups you define based on user behavior, attributes, or conditions (e.g. Engaged Users, Cart Abandoners")
- **KPIs** - Key audience metrics include:
 - Number of users, sessions per audience, average engagement time, conversions and revenue (if applicable)



Use this report to understand different audiences behave by comparing performance across audiences, evaluating which audience segments are most valuable or active, and use insights to refine campaigns, tailor messaging, or trigger remarketing efforts.

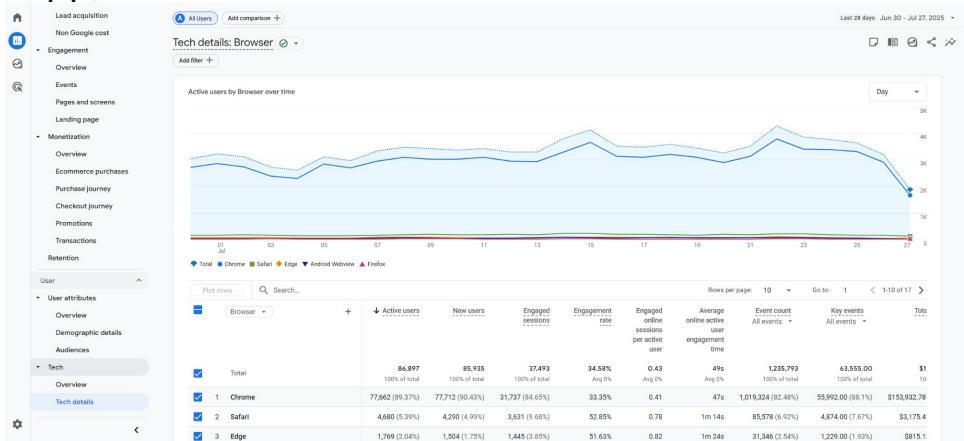
Tech > Overview

- Summarizes users' technical environments, understanding how users access your site or app
- Engagement and performance by tech setup: sessions, average engagement time, conversion events
- Key technical dimensions include:
 - Device category, operating system, browser, screen resolution, app version (if applicable)



Tech > Tech Details

- Provides a granular view of users' technology setup, breaking down traffic by specific technical combinations
- Engagement and performance per tech configuration:
 - Users, sessions, engagement time, conversions and revenue (if applicable)
- Key dimensions include:
 - Browser + device category, operating system, screen resolution, platform/app version (if using an app)



Key Events to Track (Automatically and Custom)

Automatically Collected Events

GA4 auto-tracks:

- Page_view, scroll, click, session_start, file_download, video_start / video_progress

Enhanced Measurement

Toggle this in the Data Stream settings to enable event tracking without extra code.

Recommended Events

You can manually implement Google-recommended events such as:

- Purchase, sign_up, login

Custom Events

Create your own custom events (e.g. button_click, form_submit) and define parameters.

Conversion Tracking

How to Set Up a Conversion:

1. Go to Admin > Events
2. Mark an existing event (like sign_up) as a conversion
3. Or create a new custom event and then mark it as a conversion

Why It Matters:

Conversions help you measure success metrics like leads, purchases, or engagement goals.

Explore: Custom Reports (Explorations)

GA4's Explore tab lets you create custom reports to dive deeper.

Popular techniques include:

- **Free-form:** Drag-and-drop custom dimensions and metrics
- **Funnel:** Analyze user journey steps
- **Path Exploration:** Visualize user flow through your site
- **Segment Overlap:** Compare audience behavior

The screenshot shows the 'Explore' tab in the Google Analytics 4 interface. At the top, there are four template cards: 'Blank', 'Free form', 'Funnel exploration', and 'Path exploration'. Below these is a table listing nine saved explorations, each with a preview icon, name, owner, last modified date, and property information.

Type	Name	Owner	Last modified	Property
人群	Ecommerce purchases: Item name		May 8, 2024	GA4 - Google Merch Shop
人群	Predict top spenders - GA4 Training	Claudia Bertuccini	Aug 31, 2023	GA4 - Google Merch Shop
人群	Transaction IDs	Nikki Antoinette Vinuya	Jan 28, 2023	GA4 - Google Merch Shop
人群	User Lifetime Marc		Nov 17, 2022	GA4 - Google Merch Shop
人群	Untitled exploration		Nov 8, 2022	GA4 - Google Merch Shop
人群	marc test		Nov 8, 2022	GA4 - Google Merch Shop
人群	Free form	Brett Sneed	Apr 15, 2022	GA4 - Google Merch Shop
人群	My path exploration	Brett Sneed	Jan 11, 2022	GA4 - Google Merch Shop
人群	Shopping Behavior Funnel	Demo	Jan 29, 2021	GA4 - Google Merch Shop
人群	Mobile / Paid / Direct Segment Overlap Demo		Jan 29, 2021	GA4 - Google Merch Shop

Connect GA4 to Google Tools

- **Google Ads:** Sync audiences, conversions, and performance
- **BigQuery:** Export raw GA4 data for SQL analysis
- **Google Tag Manager:** Deploy events and tags without coding
- **Looker Studio (formerly Data Studio):** Build custom dashboards



Google Ads



Google
Big Query



Google Tag Manager



Looker Studio

**Aaand that's
Google Analytics 4!**