Marketing Data and Technology

Draw Insights from Marketing Data

Part One:
Setting Goals

Identify Key Business Objectives

Key Business Objective: A defined goal or outcome used to plan the desired direction of your company. Write at least 3 but no more than 5 business objectives that support your business model. Each objective should be SMART.	
1	Over the following six months, raise the website conversion rate by 15%. Why: Revenue will rise without incurring more traffic expenses if more visitors convert to purchasers.
2	In four months, increase the number of email subscribers by 30%. For this reason, it creates a direct marketing channel that increases repeat business and customer retention.
3	Boost online sales by 20% year over year (YOY). Why: Complies with your strategic growth objectives and can be bolstered by improved UX and more effective advertising allocation.
4	By the third quarter, use AI-based product recommendations to raise average order value by 10%. Because it improves user experience and increases upsells.
5	Within the following 90 days, cut the cart abandonment rate by 25%. Why: Resolves checkout concerns, such as unforeseen expenses or a lack of payment choices, to recover lost revenue.

Identify Key Performance Indicators

	Key Performance Indicator (KPI): A quantifiable metric used to determine how effectively your key business objectives are being met. Ensure that the specific metric is clearly identified.
1	Objective 1 KPI: Over the following six months, raise the website conversion rate by 15%. KPI: The percentage of visitors that finish a purchase on a website
2	KPI for Goal 2: Within four months, increase the number of email subscribers by 30% KPI: The total monthly number of new email subscribers
3	KPI: Total monthly/annual online revenue (compared year-over-year) KPI for Objective 3: Increase online sales by 20% year over year
4	Average order value (AOV) before and after the launch of the AI recommendation tool KPI for Objective 4: Implement AI-based product recommendations by Q3
5	Objective 5's KPI is to lower the cart abandonment rate by 25% over the following ninety days. KPI: Cart abandonment rate (%) monitored via the checkout funnel or analytics

Part Two:
A/B Testing Proposal

A/B Testing Proposal: KPI, Variable, and Hypothesis

KPI used as basis for the A/B test

The A/B test's foundational KPI is the website conversion rate, or the proportion of website visitors who finish a purchase.

Variable that will have an impact on the KPI

A variable that will affect the KPI is:
Product pages' call-to-action (CTA) buttons: comparing the colors of blue and green "Buy Now" buttons, for instance

Hypothesis for your A/B Test

The conversion rate will rise if the CTA button is colored green instead of blue, according to the A/B test hypothesis. This is because the green button will be more noticeable on the product page and might encourage more people to click and finish the purchase.

A/B Testing Proposal: Details and results

Details of the A/B test	
Variations being tested:	*Version currently in use: blue "Buy Now" button.*
	Change: The "Buy Now" button now green.
User groups:	The blue button (control group) is visible to Group A. The green button (test group) is visible to Group B.
Data collection tool:	Google Analytics (or Optimize if Google Analytics is unavailable).
Length of the test:	Two weeks, or until each group reaches at least 1,000 users, to guarantee statistically meaningful outcomes.

Describe how you would determine the results of the A/B test

The conversion rate—the proportion of users who clicked the "Buy Now" button and finished a purchase—will be measured by me. The version that converts more often will be deemed more successful. The green button will be implemented site-wide if it displays a noticeably higher conversion rate.
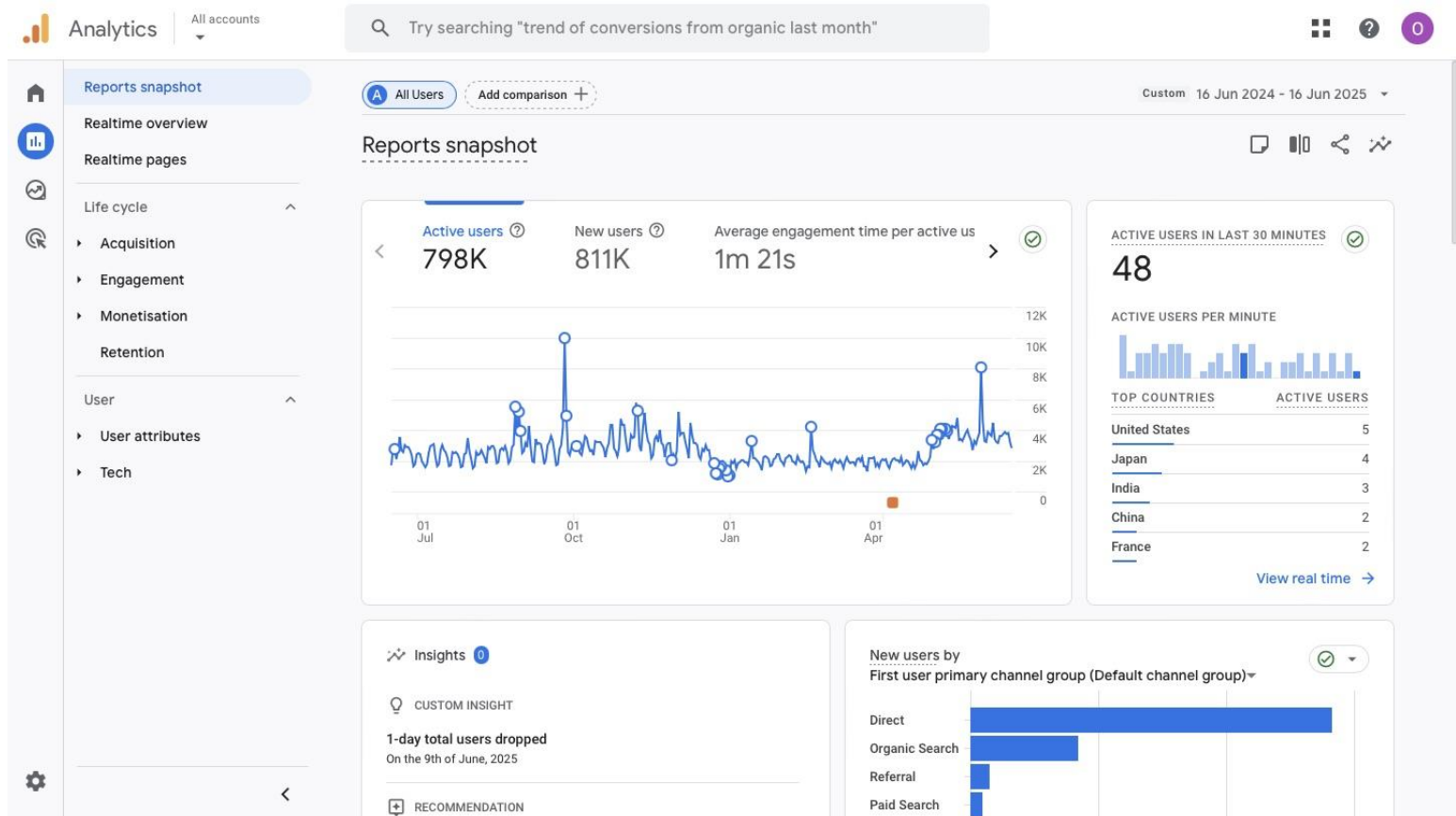
Part Three:
Data Exploration

Reports Snapshot

From the Reports Snapshot, select a twelve month time period you would like to explore.

Ensure that the following are visible in the screenshot:

- Timeframe
- New users
- Axis values

Reports Snapshot

Which month had the most new users?

The graph's peak suggests that the month of June 2021 saw the greatest number of new users.

Which month had the fewest new users?

According to the graph, February 2021 appears to be the month with the least amount of activity.

Write some ideas why certain trends are associated with these specific months?

June 2021: Seasonal interest peaks, product debuts, or effective marketing campaigns may be the cause of the surge in new users.
February 2021: Possible causes of the low activity include decreased marketing efforts, engagement declines following the holidays, or outside events or holidays that decreased user activity.
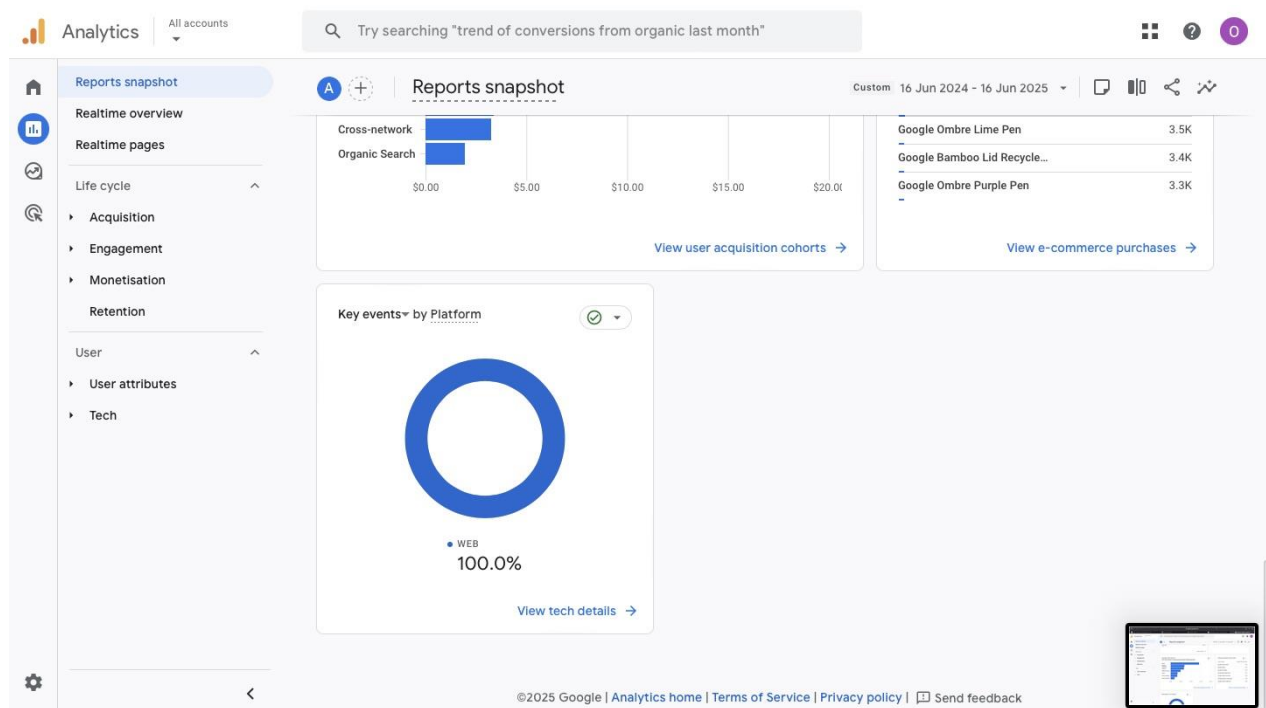
User Tech

Please go into the User → Tech → Tech overview report for the following:

For the twelve month period you've chosen, provide a screenshot showing percentage chart (donut charts) of All Users that came from mobile, desktop, and tablet devices.

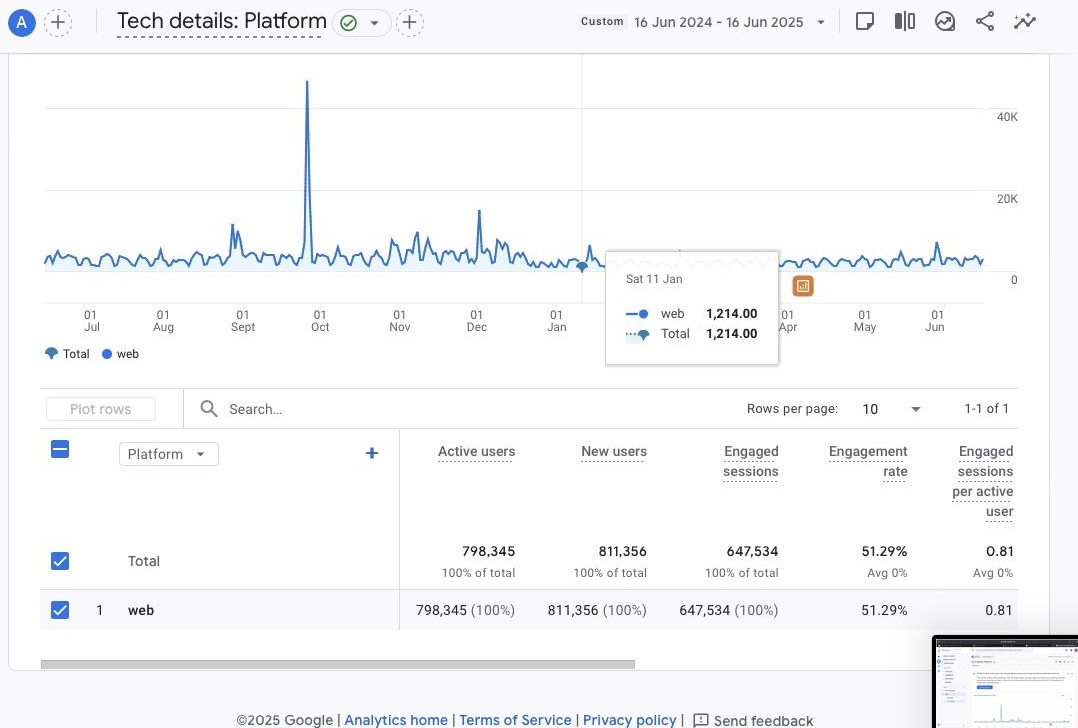Ensure that the following are visible in the screenshot:

- Device Category
- Donut chart showing % breakdown by device

Note that the time frame selected does not need to be visible in the screenshot..
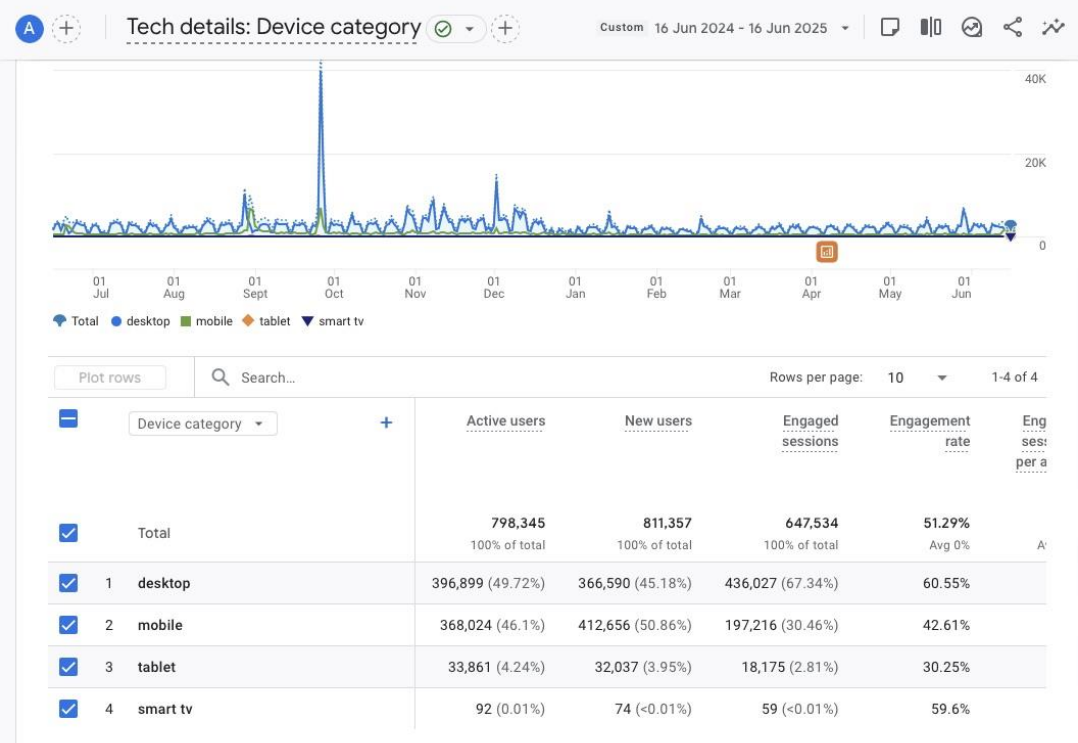
Screenshot 1 — Analytics

Analytics | All accounts

Try searching "trend of conversions from organic last month"

Reports snapshot
Realtime overview
Realtime pages

Life cycle
▸ Acquisition
▸ Engagement
▸ Monetisation
  Retention

User
▸ User attributes
▾ Tech
  Overview
  Tech details

A + Tech details: Platform ⊘ ▾ +   Custom 16 Jun 2024 - 16 Jun 2025 ▾

40K

20K

0

01 Jul   01 Aug   01 Sept   01 Oct   01 Nov   01 Dec   01 Jan   01 Apr   01 May   01 Jun

Sat 11 Jan
● web   1,214.00
● Total 1,214.00

🔺 Total ● web

Plot rows   🔍 Search...   Rows per page: 10 ▾   1-1 of 1

	Platform ▾	+	Active users	New users	Engaged sessions	Engagement rate	Engaged sessions per active user
☑	Total		798,345 100% of total	811,356 100% of total	647,534 100% of total	51.29% Avg 0%	0.81 Avg 0%
☑ 1	web		798,345 (100%)	811,356 (100%)	647,534 (100%)	51.29%	0.81

©2025 Google | Analytics home | Terms of Service | Privacy policy | ⊡ Send feedback

Screenshot 2 — Analytics

Analytics | All accounts

Try searching "Explorations"

Reports snapshot
Realtime overview
Realtime pages

Life cycle
▸ Acquisition
▸ Engagement
▸ Monetisation
  Retention

User
▸ User attributes
▾ Tech
  Overview
  Tech details

A + Tech details: Device category ⊘ ▾ +   Custom 16 Jun 2024 - 16 Jun 2025 ▾

40K

20K

0

01 Jul   01 Aug   01 Sept   01 Oct   01 Nov   01 Dec   01 Jan   01 Feb   01 Mar   01 Apr   01 May   01 Jun

🔺 Total ● desktop ◼ mobile ◆ tablet ▾ smart tv

Plot rows   🔍 Search...   Rows per page: 10 ▾   1-4 of 4

|	Device category ▾	+	Active users	New users	Engaged sessions	Engagement rate	Eng sess per a
☑	Total		798,345 100% of total	811,357 100% of total	647,534 100% of total	51.29% Avg 0%	A:
☑ 1	desktop		396,899 (49.72%)	366,590 (45.18%)	436,027 (67.34%)	60.55%	
☑ 2	mobile		368,024 (46.1%)	412,656 (50.86%)	197,216 (30.46%)	42.61%	
☑ 3	tablet		33,861 (4.24%)	32,037 (3.95%)	18,175 (2.81%)	30.25%	
☑ 4	smart tv		92 (0.01%)	74 (<0.01%)	59 (<0.01%)	59.6%	

User Acquisition

For this section, if you are using your own business's Google Analytics data but do not have eCommerce capabilities established, please use the Google Analytics demo data provided from the Google Merchandise store.

Take a screenshot that shows the Engagement rate of the different acquisition channels over a 12 month period.

Ensure that the following are visible in the screenshot:

- Channel group
- Users
- Engagement Rate

Note that the time frame selected does not need to be visible in the screenshot, but will be reflected by the number of users.
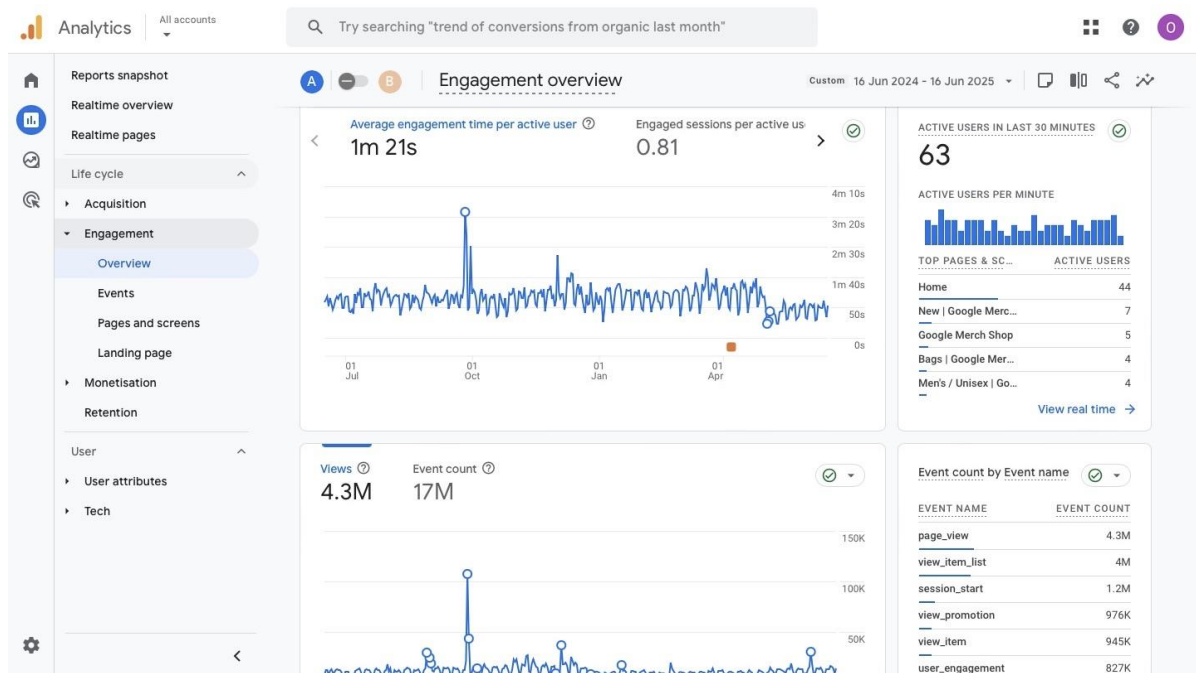
User Acquisition

Which channel groups had the highest and lowest engagement rates?

Write your answer here

Which channel groups had the highest and lowest total revenue?

Write your answer here

What do these metrics mean, based on your experience?

Write your answer here in 1-3 sentences

Monetization

For this section, if you are using your own business's Google Analytics data but do not have eCommerce capabilities established, please use the Google Analytics demo data provided from the Google Merchandise store.

During the twelve month period you've selected, provide a screenshot that shows the Item name that contributed the highest number of unique purchases and the item name that was responsible for the largest percentage of revenue? (Screenshot(s) only; no annotation required.)

Ensure that the following are visible in the screenshot:

- Item names
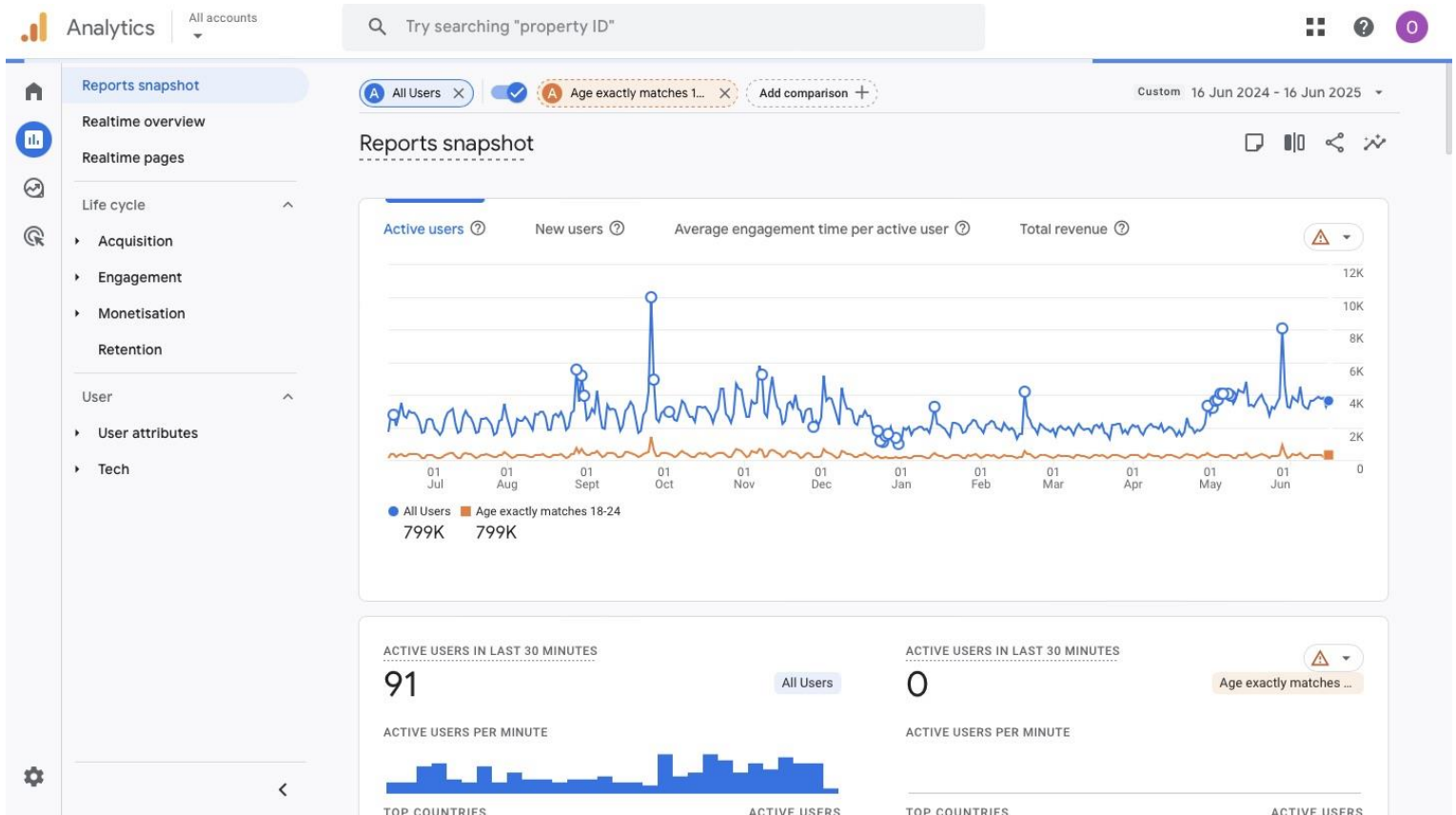- Number of items purchased
- Item revenue
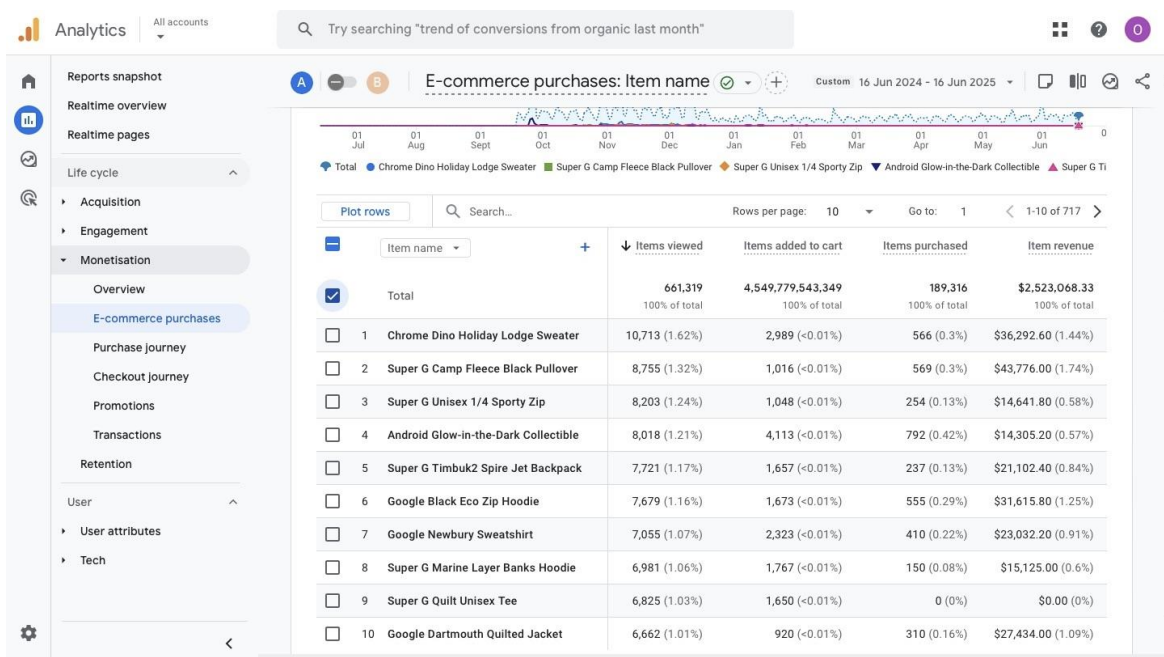
Part Four: Segmentation
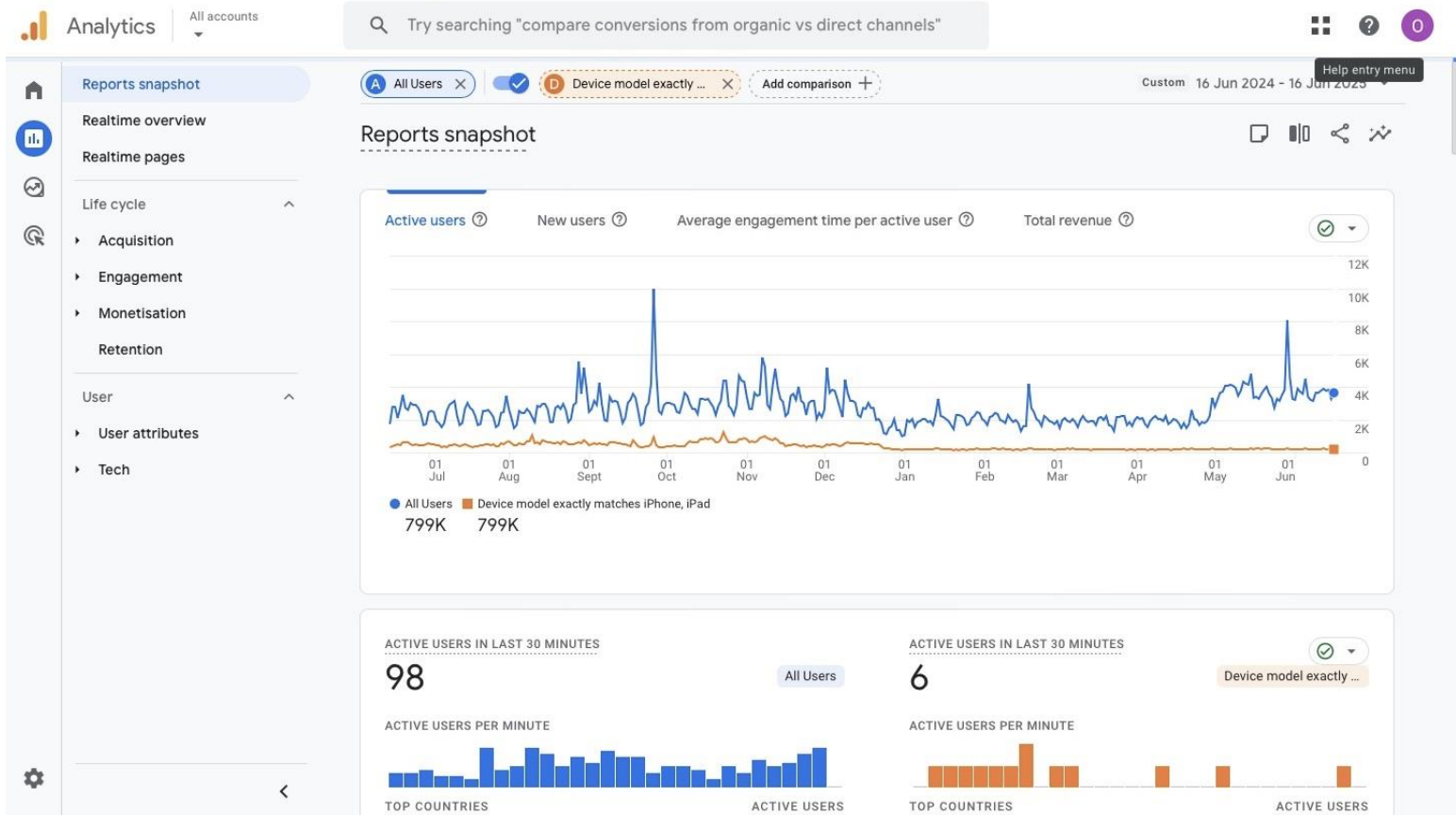
Audience Segment: Demographics

Values used:	Age exactly matches 18. 91 people have been active in the past 30 minutes. No users have been active in the last ten minutes.

Audience Segment: Technology

Values used:	98 active users in the last 30 minutes.

Part Five:
Analysis and Suggestions

Google Merchandise Store data

You can find the results of the Google Merchandise Store campaigns below.

Campaign Name	Cost	Revenue	ROAS
Tech Trends: Discover the Latest Google Gear	$5,000	$3,000	0.6
Shop with Google: Unleash Your Digital Lifestyle	$5,000	$8,000	1.6
Google Gadgets Galore: Elevate Your Tech Game	$5,000	$8,000	1.6
Gear Up with Google: Your One-Stop Tech Shop	$8,000	$13,000	1.625
Google Merch Madness: Score Big on Tech Essentials	$5,000	$2,000	0.4
Unlock the Power of Google: Shop the Best in Tech	$2,000	$3,500	1.75
Totals	$30,000	$37,500	

Business Sales Growth

Based on the data provided, how might the campaigns be realigned and improved to potentially achieve a 20% YOY sales growth **without additional cost**? You can assume that the data will remain consistent over the projected time frame. Please reference specific data to support your answer, such as metrics and campaigns.

You could get the answer by asking yourself: Which campaign would I spend less, and which would I spend more?

Spend less on campaigns that aren't doing well:
0.4 is the Google Merch Madness ROAS (loss-making).
Spending $5,000 now → Cutting to $0 since it only makes $2,000 out of the $5,000 spent, losing value.
Tech Trends: Learn About the Most Recent 0.6 is the Google Gear ROAS.
Spending $5,000 now → Cut to $2,000.
Poor ROI; a partial cut enables the testing of new ideas and messaging.
Boost Investment in Successful Campaigns:
Unlock Google's Power by Purchasing the Best Technology
Current Spend: $2,000 → Increase to $5,000 ROAS: 1.75
Anticipated Income: $5,000 × 1.75 = $8,750
Use Google to shop at Google Gadgets Galore.
1.6 ROAS
Spend $5,000 on each → Raise each to $7,000.
Anticipated Revenue: $11,200 ($7,000 × 1.6). Everybody
Become Prepared with Google: Your One-Stop Technology Store
Current Spend: $8,000 → Maintain or marginally raise to $9,000 ROAS: 1.625
Anticipated Revenue: $14,625 ($9,000 × 1.625).
CON...

- New Budget Allocation ($30,000):

CAMPIGN	NEW SPEND	ROAS	PROGECTED REVENUE
Google Merch Madness	$0	0.4	$0
Tech Trends: Discover the Latest Google Gear	$2,000	0.6	$1,200
Unlock the Power of Google	$5,000	1.75	$8,750
Shop with Google	$7,000	1.6	$11,200
Google Gadgets Galore	$7,000	1.6	$11.200
Gear Up with Google	$9,000	1.625	$14,625
Total	$30,000		$46,975

- The outcome:
  Estimated Income: $46,975 year The growth achieved was 25.27%, calculated as (46,975 − $37,500) ÷ $37,500 x 100.
  No Further Funding Is Needed

eCommerce improvements

Looking at your website pages or the [Google Merchandise Store](#) website and current eCommerce experience, identify one change to the eCommerce UX and one additional eCommerce option you would recommend implementing.

Example: One way to improve eCommerce capabilities would be to add the option of a digital wallet with the option to securely store and manage cards that have been used for payment, along with the option of using PayPal or Apple Pay.

UX change:

Establish a dynamic, persistent shopping cart preview (mini cart) with buttons for "Checkout" and "View Cart," a dropdown that displays the contents of the cart, the subtotal, and CTAs (call-to-action) that update in real time as users add items. Why: This streamlines the checkout process, improves visibility of chosen items, and lowers user friction and cart abandonment rates.

Other eCommerce change or addition:

Incorporate secure saved card capabilities with a variety of digital wallet choices, including PayPal, Google Pay, and Apple Pay. Why? Because wallets allow for quick and secure checkout. By allowing these choices, payment friction is eliminated, drop-off is decreased, and conversions on mobile devices are especially increased. Moreover, it conforms to eCommerce standards and best practices.

Technology

It is time for some exploration! You need to find 2 emerging marketing technologies that you could use in a technology stack. For each one, you need to describe why you would use that tool.

1	Customer Data Platforms (CDPs)
	First-party customer data from many sources (web, mobile apps, email, and CRM) is gathered, combined, and arranged into a single customer perspective via a CDP. This enables: marketing efforts that are tailored to each individual's tastes and behavior in real time. cross-channel audience targeting (web, email, and advertisements). improved tracking and attribution of ROI.
2	AI-Powered Content Generation
	Artificial intelligence (AI) content solutions generate high-converting material at scale through natural language generation (NLG). These are the perfect instruments for: writing emails, ad copy, product descriptions, and blog entries that are optimized for search engines. Quickly A/B test several different content versions. cutting down on the time and money spent creating material by hand.