UDACITY

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	*Increase sales by 20% over the next 6 months - Over the next 6 months, the Google Merchandise Store will increase their sales by 20%, targeting their ideal target customer, using targeted analytics to optimize promotions and product recommendations.*
2	*Increase social media followers by 15% in the next 6 months- Over the next 6 months, the Google Merchandise Store will increase their social media following by 15%, targeting their ideal audience on social media, using social media and influencer campaigns.*
3	*Launch 3 New Product Lines in the next 12 months - Over the next 12 months, the Google Merchandise Store will introduce 3 new products, by conducting research and analyzing data, planning product launches, and trying different products to meet customer's needs.*

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.
total sales for the next 6 month period - Track revenue through monthly sales reports.
total follower growth within the 6 month period - track with social media analytics
number of new products launched and their sales performance.- monitor through analytics/sales dashboard

Part Two:
A/B Testing Proposal

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

KPI used as basis for the A/B test
sales
Variable that will have an impact on the KPI
I could use "product images" as a variable. We could test brighter/more colorful background on images and images with people in them.
Hypothesis for your A/B Test
My hypothesis is that the brighter, more colorful backgrounds and images with people will increase click-through rate (CTR) and overall sales compared to standard product images.

A/B Testing Proposal: Details and results

Details of the A/B test	
Variations being tested:	*Current images in the Home page slider and other category pictures on the home page...https://shop.merch.google/*
	Test brighter/more colorful imagery with people in it, on the slider and category pictures.
User groups:	*50% will see original/50% will see new images*
Data collection tool:	*Adobe Target*
Length of the test:	*14 day period - there are close to 30k visitors in a two week period so that's a good sample size to test*

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

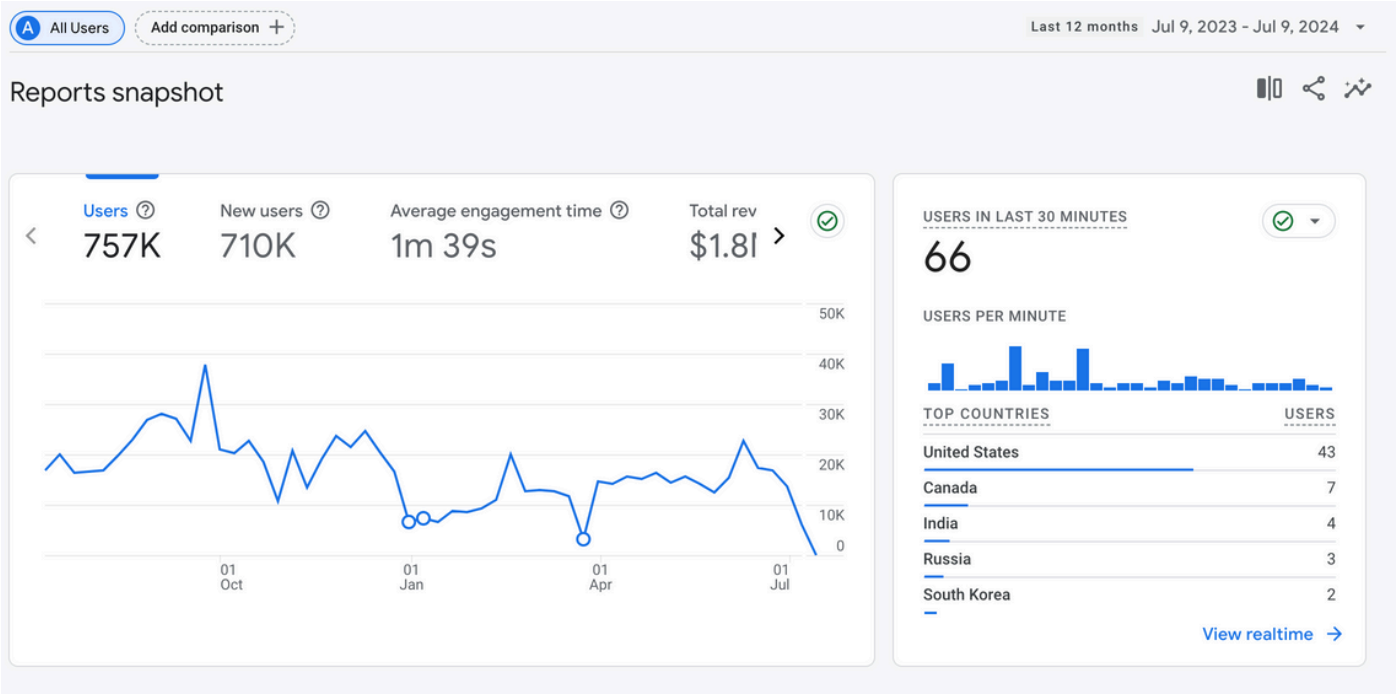
I would review the data collection tool to track CTR, sales and interaction for both sets of images. Whichever images produced the highest CTR and sales, would need to be adapted into the entire website.

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



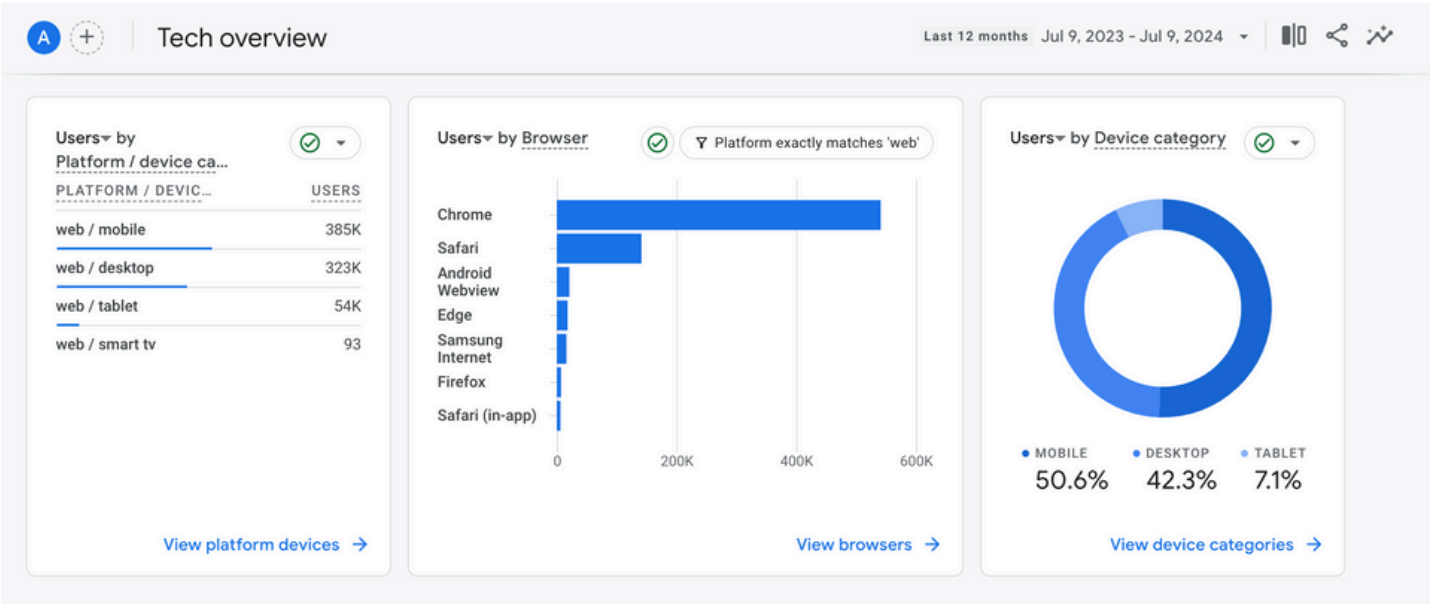
Reports Snapshot

Which month had the most new users?
September 2023
Which month had the fewest new users?
March 2024
Write some ideas why certain trends are associated with these specific months? The uptick in new website users within the month of September, could be due to Google sponsored events/conferences or new product release dates/launches. A drop in new users could be due to businesses reducing spending on corporate merchandise. Also, after the holiday season, consumer spending often decreases as people recover financially from holiday shopping.

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..



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.

Traffic acquisition: Session primary channel group (Default Channel Group)

Last 12 months Jul 9, 2023 - Jul 9, 2024

	Session primary...Channel Group)	Users	Sessions	Engaged sessions	Average engagement time per session	Engaged sessions per user	Events per session	Engagement rate
		756,711 100% of total	1,186,805 100% of total	813,849 100% of total	1m 03s Avg 0%	1.08 Avg 0%	17.67 Avg 0%	68.57% Avg 0%
1	Unassigned	45,656	40,346	263	1m 37s	<0.01	50.17	0.65%
2	Paid Other	106	117	47	21s	0.44	8.11	40.17%
3	Paid Video	109	214	107	13s	0.98	9.73	50%
4	Direct	434,657	672,289	428,636	55s	0.99	15.26	63.76%
5	Paid Search	8,097	21,436	13,850	9s	1.71	5.90	64.61%
6	Display	45	58	43	3s	0.96	5.55	74.14%
7	Organic Video	274	475	353	1m 20s	1.29	20.89	74.32%
8	Organic Search	163,791	246,811	198,903	1m 12s	1.21	19.63	80.59%
9	Referral	25,720	39,221	31,759	1m 19s	1.23	21.34	80.97%
10	Cross-network	110,578	134,379	111,842	56s	1.01	12.65	83.23%
11	Organic Social	9,255	16,078	13,503	1m 49s	1.46	26.43	83.98%
12	Email	9,241	25,562	21,547	2m 05s	2.33	27.64	84.29%
13	Affiliates	457	631	532	24s	1.16	19.03	84.31%
14	Organic Shopping	836	1,078	930	1m 05s	1.11	15.56	86.27%
15	Paid Shopping	2	2	2	2m 40s	1.00	36.00	100%

User Acquisition

Which channel groups had the highest and lowest engagement rates?
Paid shopping had the highest engagement rate per the data. An unassigned category had the lowest engagement rate.

Which channel groups had the highest and lowest total revenue?
Direct had the highest revenue for channel groups. Affiliates, display, paid other, and paid video returned the lowest revenue with $0.00.

What do these metrics mean, based on your experience?
That tells me that when people visit the Google Merch Store that already have intentions to make a purchase. They are not responding to a display ad or paid video either since those channels returned zero revenue. Customers who want Google merch have likely ordered it before (returning customers) and they already know how to access the website.

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

Search... Rows per page: 10 Go to: 1 1-10 of 814

	Item name	Items viewed	Items added to cart	Items purchased	Item revenue
		742,747 100% of total	8,022,918,602,179,725,000 100% of total	102,300 100% of total	$1,400,327.13 100% of total
1	Google Cloud Sticker	1,865	10,316	2,878	$3,535.20
2	(not set)	11	17	2,838	$0.00
3	Google Pen White	2,192	8,027	2,748	$4,506.80
4	Google Sticker	2,272	15,884	2,739	$3,357.90
5	Google Black Wheat Pen	1,371	8,682	2,318	$4,012.80
6	Google Recycled Memo Notebook Set	2,012	5,919	2,090	$12,070.80
7	Google Ombre Yellow Pen	824	4,018	1,422	$2,313.20
8	Google Ombre Lime Pen	961	6,683	1,409	$2,317.20
9	Google Ombre Purple Pen	979	12,130,131,596,565	1,215	$2,000.80
10	Google Bamboo Lid Recycled Bottle	1,548	5,874	1,173	$8,521.20

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1	Super G Timbuk2 Recycled Backpack	29,935	500,000,001,007,690	531	$55,150.00
2	G25gle Birthday Tee	12,018	65,640	1,137	$24,721.20
3	Google 25th Birthday Hoodie	8,494	202,709	403	$24,495.00
4	Google Black Eco Zip Hoodie	6,824	2,099	393	$22,369.80
5	Google Campus Bike	21,332	24,403	464	$21,472.00
6	Super G Brick Puzzle Set	3,184	3,239	594	$20,632.00
7	Google Unisex Eco Tee Black	22	48	863	$20,294.40
8	Super G Eco Polo Shirt	2,856	1,898	381	$17,567.00
9	Google Kai Blue Sweatshirt	3,802	101,825	297	$16,629.00
10	Google Bike Socks	962	4,828	1,068	$15,408.00

Part Four: Segmentation

Audience Segment: Demographics

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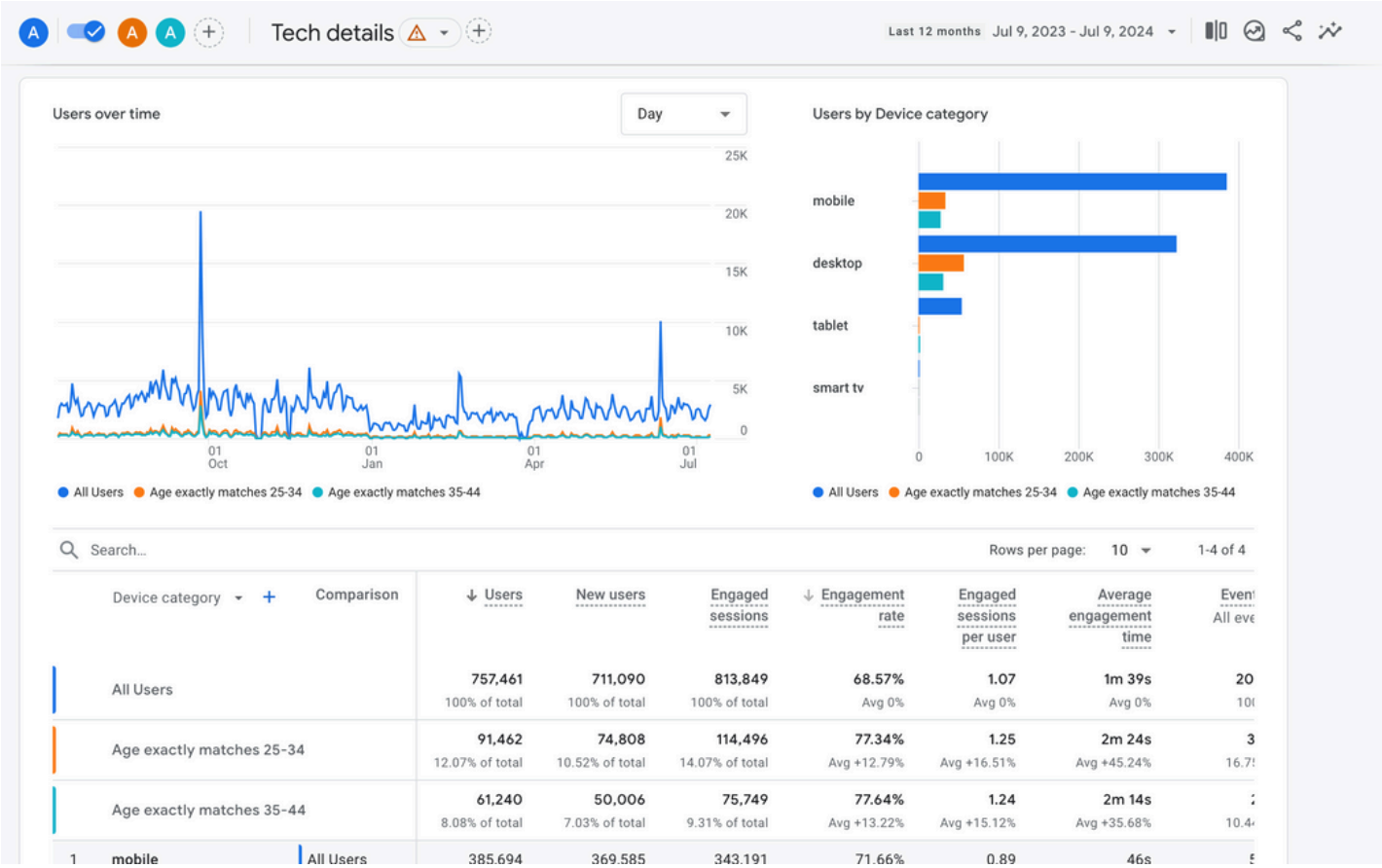
Values used:	*Gender exactly matches female and gender exactly matches male*

Audience Segment: Technology



Values used:	*Age exactly matches 25-34 and age exactly matches 35-44*

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?

I could spend less on this campaign...

Tech Trends: Discover the Latest Google Gear *- This campaign has the lowest ROAS so it's the least effective. I would likely end this campaign or re-allocate the funds to another campaign performing better.*

I need to spend more on these campaigns...
Unlock the Power of Google: Shop the Best in Tech - *This campaign has the highest ROAS and it's the most effective campaign. I could allocate more funds here here to help increase revenue.*
Gear Up with Google: Your One-Stop Tech Shop - *This campaign has the second highest ROAS, so I could allocate more funds into it. This would increase how effective it is and increase revenue.*

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.

eCommerce UX Change: Once change that could be made to the UX is optimizing the footer, by displaying more information in it like popular categories, social media links, and. Also as a store, displaying contact and support information prominently would be good for users.

eCommerce option: One way to improve eCommerce capabilities would be to add in additional options to pay like Paypal or Google Pay. These would load pre-saved credit card information so you don't have to manually enter it to complete the purchase. Also, you should not have to sign into a Google account to checkout. A guest should be able to checkout without being prompted to sign in. Fewer and more streamlined steps will help to increase the checkout rate.

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	***Technology name - CHAT GPT***
	Using AI as a marketing techonology, can help you create a personalized shopping experience for customers. Based on product selections added to cart or viewed, AI could make assumptions on what other products a customer might be interested in. You could also test different messages/variables/CTAs to see which ones work best using AI technology.
2	***Technology name - Augmented Reality***
	• *AR technology would provide customers with an interactive experience and keep them engaged longer. By allowing customers to try on products or see them in their own space, they can truly get a feel for what they are purchasing. Lastly, using this technology would give you a competitive advantage over your competitors.*