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 15% in within 12 months*
2	*Reduce the number of customers leaving by 20% in the next 6 months*
3	*Increase brand awareness by 30% and increase traffic by 20% in 6 months*
4	*Increase market share by 10% in the next 2 years*
5	*Reduce production cost by 10% in one year*

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	*Sales Revenue Growth*
2	*Customer Retention Rate*
3	*Website Traffic*
4	*Customer Acquisition*
5	*Cost Of Goods Sold*

Part Two:
A/B Testing Proposal

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

KPI used as the basis for an A/B Test:

Customer Acquisition.

Identify a variable that will have an impact on the KPI and metric

Call-To-Action-Button-Color.

Determine a hypothesis for your A/B Test. Your hypothesis should include the variable you are testing and your predicted outcome.

By testing different Call-To-Action-Button-Colors, We expect to see an increase in Customer Acquisition. We hypothesize that using a red button will grab user's attention, increase their engagement and ultimately lead to a higher conversion rate and customer acquisition.

A/B Testing Proposal: Testing Process

Describe the steps you would take to perform the A/B test.

- *Define my target audience and divide them into two groups, Group A will be the control group who will test your already in place call-to-action-color-button, while Group B will test the Red call-action-color-button*

- *Randomly select a large enough sample size from both groups so that statistics can show accurate results.*

- *Update only the call-to-action-button color to Red for Group B, leaving everything else the same for Group A & B.*

- *Setup tracking by adding UTM codes to the landing page to record the user interaction such as clicks on the call-to-action-button, conversions and customer acquisitions for both Groups A&B.*

- *Run the test long enough, about a month to capture a sufficient number of user interactions and conversions.*

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

Using Google Analytics study the results and analyze the statistics between the two groups such as clicks and conversions and determine if the Red color of the call-to-action-button impacted the customer acquisition.
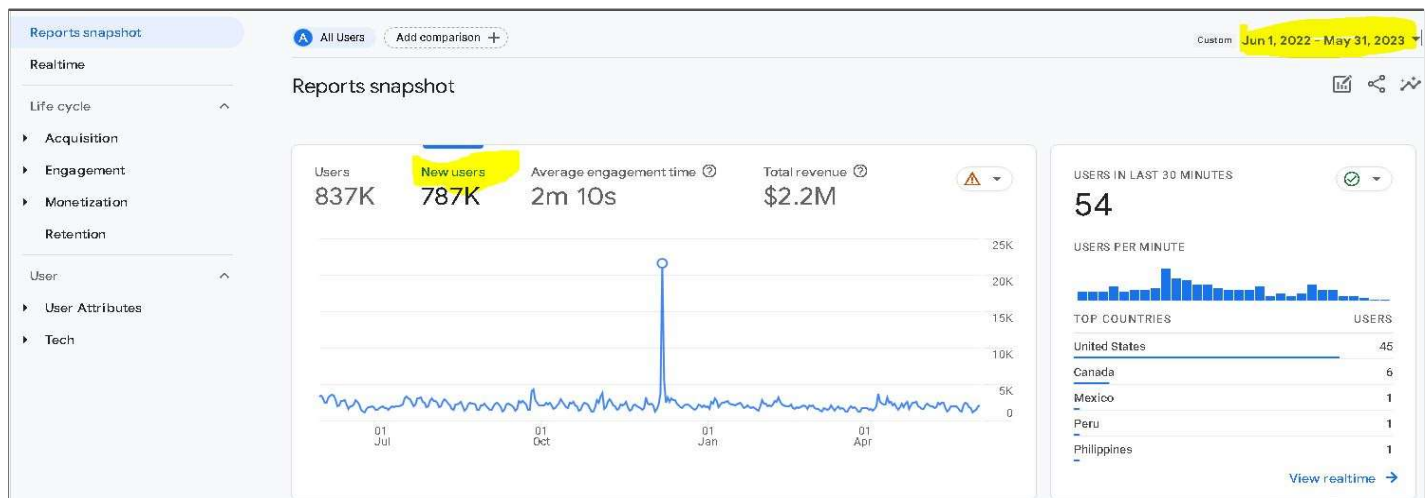
Part Three:
Data Exploration

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, and which month had the fewest new users?
December had the most new users.
March had the least new users.

Do you have any ideas why certain trends are associated with these specific months?

Considering the huge spike in December, I am assuming it was associated with Holiday shopping, Black Friday, Cyber Monday and Christmas.

As for March, I would say Post-holiday lull due to less consumer spending and maybe March historically has lower sales.

Insert your notes about the screenshot on the previous page here.

The previous screenshot displays the time period of 1 year (Jun 1, 2022-May 31,2023 the total number of new users.

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..
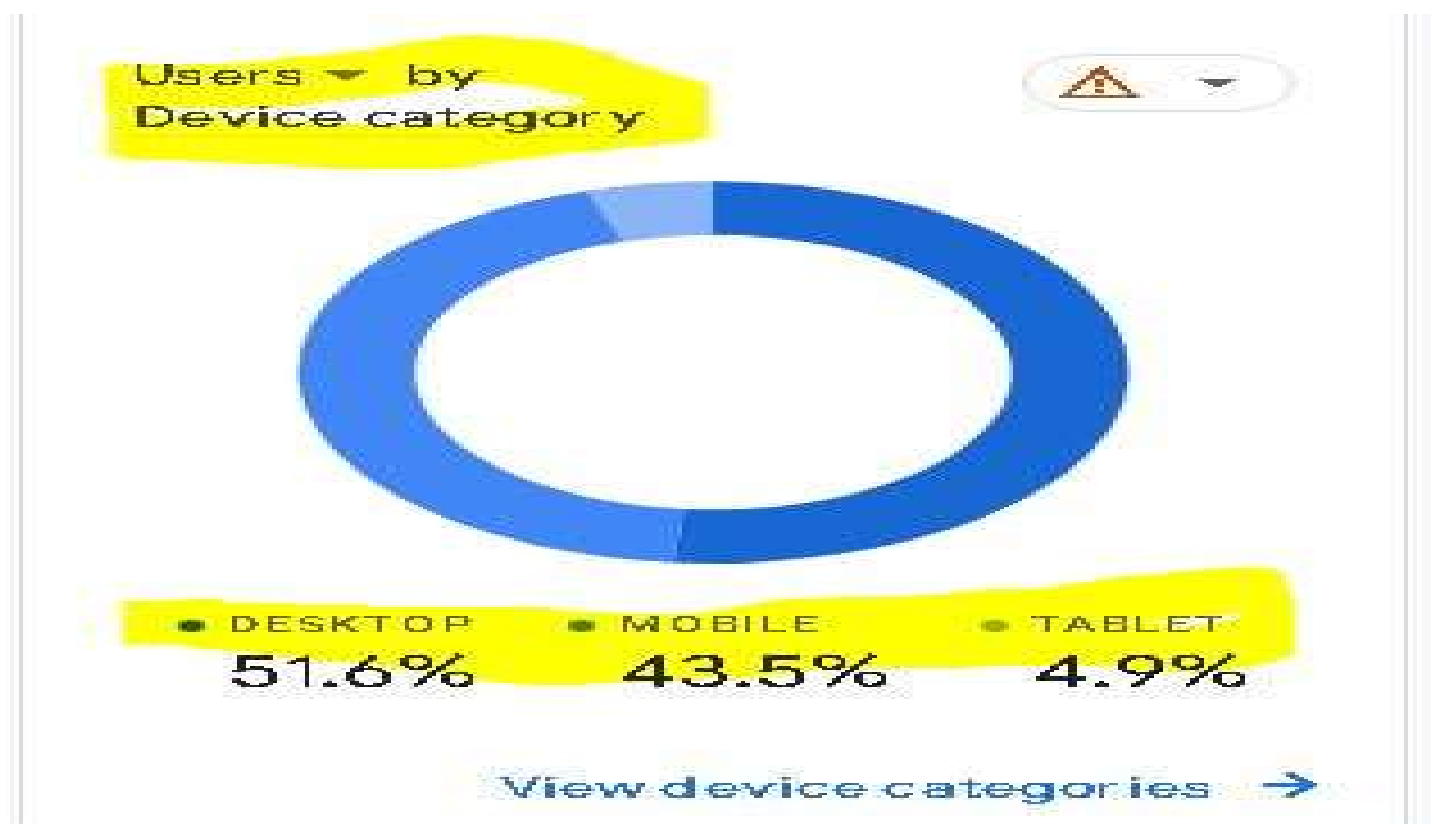
User Acquisition

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.

	First user defa... channel group	↓ Total users	New users	Engaged sessions	Engagement rate	Engaged sessions per user	Average engagement time
		842,161 100% of total	786,956 100% of total	959,696 100% of total	71.2% Avg 0%	1.15 Avg 0%	2m 10s Avg 0%
1	Direct	364,663	313,521	427,213	66.34%	1.18	2m 42s
2	Unassigned	310,619	4,362	3,013	48.43%	0.69	0m 09s
3	Organic Search	248,135	245,939	295,135	77.66%	1.19	2m 07s
4	Paid Search	62,360	62,154	66,453	79.95%	1.07	0m 56s
5	Cross-network	50,149	50,286	62,372	96.67%	1.24	1m 19s
6	Display	34,471	34,400	26,285	54.3%	0.76	0m 31s
7	Referral	33,348	32,837	40,343	75.78%	1.21	2m 24s
8	Paid Shopping	13,873	13,648	9,531	58.9%	0.69	0m 53s
9	Paid Video	8,502	8,389	5,528	57.44%	0.65	0m 31s
10	Organic Social	7,552	7,439	9,623	73.93%	1.27	3m 16s

Rows per page: 10   Go to: 1   1-10 of 14

User Acquisition

During the twelve month period you've selected, which channel groups had the highest and lowest engagement rates and the highest and lowest total revenue?

Cross network had the highest engagement

Unassigned had the lowest engagement rate

Direct had the highest total revenue

Unassigned, display and paid video the lowest total revenue

What do these metrics mean, based on your experience?

It's measurement of how engaged users are interacting on your website or app. If the rate is high, then they are spending more time on your site with different pages or features.

Insert your notes about the screenshot on the previous page here.

The previous screenshot displays a view of the channel groups, total users and their engagement rate between the period of June 1, 2022- May 31, 2023.
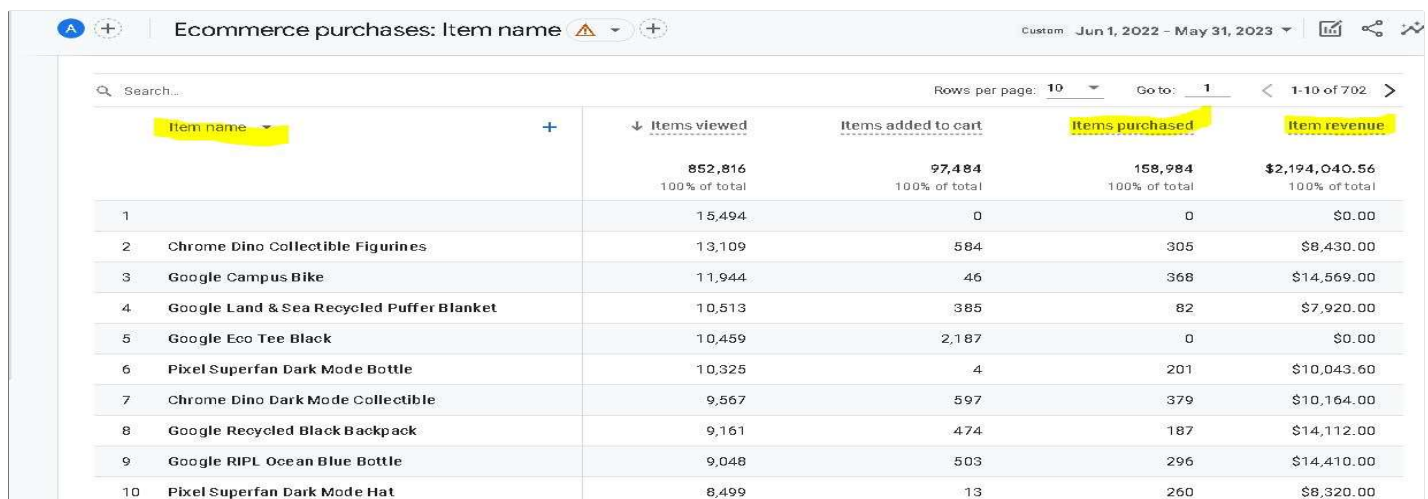
Monetization

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

Insert the screenshot of a view (such as the Audience Overview) that includes both your Audience Demographic segment as well as "All Users." Write down or include a screenshot of the values used to create the segment.

Segment	All users	Female	Totals
Country	Views per user	Views per user	↓ Views per user
Totals	6.33 Avg -2.21%	22.9 Avg +253.69%	6.47 Avg 0%
1 United States	8.03	28.99	8.26
2 Brazil	5.27	18.63	5.46
3 Australia	4.72	17.33	4.82
4 Taiwan	6.51	15.09	6.66
5 Singapore	5.78	11.83	5.88
6 Congo - Kinshasa	17.29	0	17.29
7 Canada	4.91	9.75	4.97
8 Russia	13.23	0	13.23
9 Japan	4.89	7.73	4.98
10 Philippines	5.33	7.03	5.44

Audience Segment: Technology

Insert the screenshot of a view (such as the Audience Overview) that includes both your Technology segment as well as "All Users." Write down or include a screenshot of the values used to create the segment.

Free form 1				
Segment	All users	Mobile users	Totals	
Browser	New users	New users	↓ New users	
Totals	784,562 74.9% of total	262,951 25.1% of total	1,047,513 100% of total	
1 Chrome	548,763	164,611	713,374	
2 Safari	168,976	73,439	242,415	
3 Android Webview	13,114	9,434	22,548	
4 Samsung Internet	12,659	8,062	20,721	
5 Edge	18,874	284	19,158	
6 Firefox	9,689	920	10,609	
7 Safari (in-app)	4,191	2,983	7,174	
8 Android Browser	1,779	1,701	3,480	
9 Opera	2,705	452	3,157	
10 UC Browser	1,188	914	2,102	

Part Five:
Analysis and Suggestions

Analysis and Suggestions: Business Sales Growth

Analyze your existing marketing campaigns to grow your business. In order to complete this section using your own data, you must have the required data (Campaign, Cost, Revenue, ROAS) for a minimum of two campaigns. If you do not have at least two campaigns or are missing some of the necessary data, you can use the [2021 GSMM Solar YouTube Ad Sales Funnel Campaigns Pitch Deck](#) to answer this question. You are also welcome to add additional data beyond what is specified.

If using your own data, complete the following table adding rows as necessary. If using the provided GSMM Pitch Deck, delete the table.

Analysis and Suggestions: Business Sales Growth

Based on the data and other information provided, how might the campaigns be realigned and improved to potentially achieve a 20% YOY sales growth? You can assume that the c\data will remain consistent over the projected time frame. Please reference specific data to support your answer like metrics and campaigns.

| Solar Leads - In-Stream RT - Conversions | Max Conv. | $1,760.23 | 41,677 | 9,964 | 20 | $10,957.48 | 6.2 |
| Solar Subscribers - Discovery Keywords - CPV | Manual CPV | $4,344.11 | 185,217 | 0 | 7 | $20,977.68 | 4.8 |

Based on the ROAS for the campaigns listed. My suggestion would be to increase Ad spend since they are high performing, produced revenue and a ROAS. Increasing Ad spend also allows you to reach a wider audience.

March 19, 2021 - December 31, 2021							
2021 Solar YouTube Ads Sales Funnel Campaigns	**Bid strategy**	**Cost**	**Views**	**Clicks**	**Conv.**	**Revenue**	**ROAS**
Solar Leads - In-Stream Solar Cheat Code Website	Max Conv.	$270.11	2,002	318	0	0	0
Maximize Conv - Solar Sales Calls - Custom Intent	Max Conv.	$920.59	3,527	655	6	0	0
Solar Leads - In-Stream RT - Conversions	Max Conv.	$1,760.23	41,677	9,964	20	$10,957.48	6.2
Solar Subscribers - Discovery Keywords - CPV	Manual CPV	$4,344.11	185,217	0	7	$20,977.68	4.8
Solar Leads - In-Stream Solar Exclusive Website	Max Conv.	$323.81	2,852	302	0	0	0
Totals		$7,618.85	235,275	11239	33	$31,935.16	4.2

And based on these campaigns here, my suggestion would be to optimize targeting based on audience demographics to reach more people looking to buy from you. Enhance the ads creatives and messaging. The goal is to reach more people, show them ads they like and convince them to buy from you. These campaigns did not provide a Revenue or ROAS .

Analysis and Suggestions: eCommerce

Now you will evaluate the current state of eCommerce for your business and how it might be improved.

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.

UX change:

Implement a guest check out option

Making this change simplifies the UX purchase by eliminating the friction of creating an account and speeding up the checkout process for those who might not make frequent purchases.

Other eCommerce change or addition:

Introduce product reviews and ratings

This change allows previous users who have purchased a product to share their opinion about a product so others can see. Also, it can boost trust, accountability from positive feed back and drive more sales.

Analysis and Suggestions: Technology

Now you will look at your existing technology stack and make recommendations for the future. This should include at least two additional technologies that are not currently utilized, one of which is a new emerging technology.

If using your own business, provide both the existing technology stack and the recommended update which.

If you are not using your own business or do not currently have a technology stack, you can use the [GSMM 2021 Marketing Technology and Channels Spreadsheet](#) to answer this question or as a template to create your own.

Artificial Intelligence and Machine Learning

Voice Search Optimization