INDIVIDUAL FINAL RESEARCH PROJECT - By-Thanmai Reddy Kadire (119351901)

GOOGLE ANALYTICS

Google Analytics was available for free to use, as powerful as it is to store a large amount of data i.e higher dimensional data to get insights about their online customers. It is not only free but is also very easy to use. Today Google Analytics owns 75% of the market share worldwide. There are different techniques that we can use to analyze the data. Here, in this report, there are two different techniques used to analyze the data.

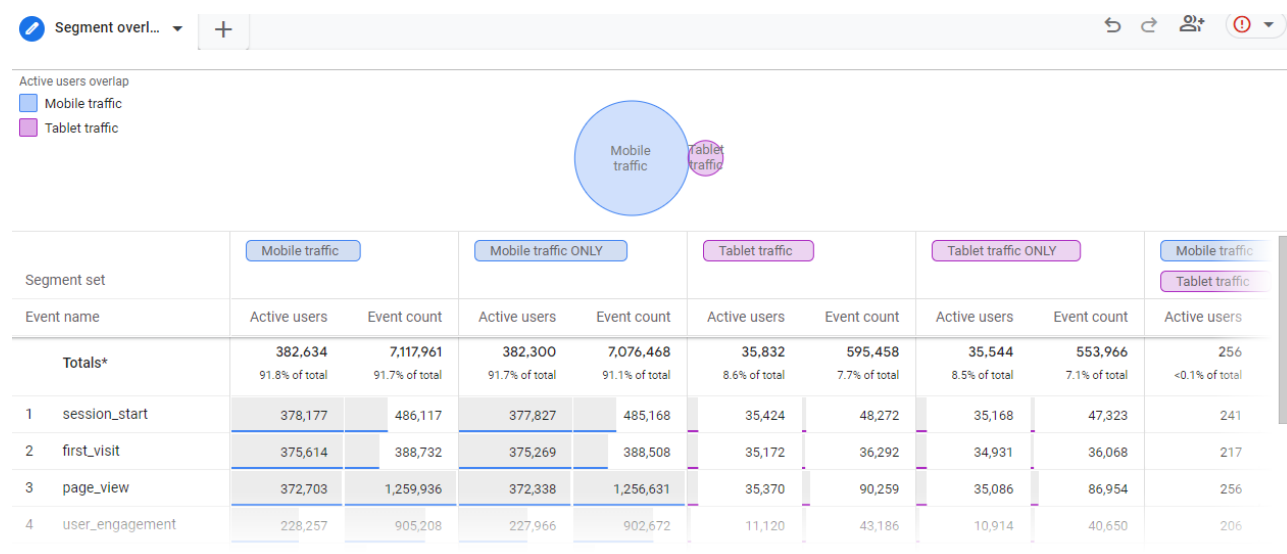### Technique 1: Segment Overlap

FIGURE 1

Segment Overlap helps us to compare two or three different segments to check if they overlap and according to that we analyze the data. Segment overlap helps to isolate the specific number of users.

- Here in the above data screenshot I am using data from 15th September 2021 - 15Th October 2022. I have chosen two different segments, they are mobile traffic and tablet traffic. And in the Breakdown, I have chosen the Event name from Dimensions. In the Values, I have selected active users and Event Count to see how many active users are using the website along with the number of event counts.
- Firstly, when coming to mobile data, most of the active users have been using mobile compared to tablets. So, there large amount of traffic that drives the website is mobile traffic. Here, mobile traffic data also includes the active users that may be using tablets as well. So, as per the data chosen, there are 383K active users. 'Mobile traffic only' data specifies the users that are using mobile apps or opening the website on mobile only are 382K.

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- Tablet traffic is the traffic that drives to the website which states the number of users using tablets only to browse the website or use an application which may also include the users that are using a tablet as well as mobile. So, as per the data chosen, there are 36K active users 'Tablet traffic only' specifies the active users using the tablet alone to browse the website.

- Event is something that helps us measure user interaction on the website or an app. Here, in our data, we have mapped the Event count against the active users. An event can be loading a page, clicking a link, etc.

FIGURE 2

- Here, as per figure 2, we can see that some of the traffic is overlapping where we can say that active users are using both mobile phones and tablets simultaneously, which are about 256 users with an Event count of 41K. So, mobile traffic and tablet traffic are driven to the website at the same time.

- As per the data we can see in Figure 1, most of the active users using mobile phones are just starting the session which is in the **session_start** itself, followed by the **first_visit** which means that most of the active users are visiting the page for the first time.

- As per Figure 1, there is a large number of Event counts in the **page_view followed by user_engagement** with a count of 1,259,936 and 905,208 who is using a mobile phone and maybe a tablet and 1,256,631 and 902,672 users using only mobile phones.

Segment set	Mobile traffic		Mobile traffic ONLY		Tablet traffic		Tablet traffic ONLY		Mobile traffic Tablet traffic
Event name	Active users	Event count	Active users	Event count	Active users	Event count	Active users	Event count	Active users
5 new_recent_active_user	227,543	242,949	227,244	242,729	11,065	11,716	10,867	11,496	198
6 scroll	220,220	555,405	220,092	554,041	11,232	29,883	11,034	28,519	198
7 view_item_list	157,692	1,019,964	157,595	1,017,142	8,666	62,749	8,534	59,927	132
8 view_promotion	136,474	1,277,502	136,141	1,250,621	23,625	213,016	23,435	186,135	221
9 view_item	97,987	324,255	97,855	323,317	4,282	16,756	4,209	15,818	74
10 experiment_impression	58,626	235,096	58,517	234,317	4,150	18,522	4,042	17,743	109

FIGURE 3

- As per figure 3, we can see that there is also a large number of Event counts on the **view_promotions** page with 1,277,502 users using mobile traffic and 1,250,621 users using mobile traffic only, even though there are less number of active users present on that page compared to first_visit and session_start the events occurred here in view_promotion are more.   FIGURE 4

Segment set	c ONLY	Tablet traffic		Tablet traffic ONLY		Mobile traffic / Tablet traffic		Totals*	
Event name	Event count	Active users	Event count	Active users	Event count	Active users	Event count	↓Active users	Event count
Totals*	7,076,468 (91.1% of total)	35,832 (8.6% of total)	595,458 (7.7% of total)	35,544 (8.5% of total)	553,966 (7.1% of total)	256 (<0.1% of total)	41,492 (0.5% of total)	416,917 (100.0% of total)	7,765,815 (100.0% of total)
1 session_start	485,168	35,424	48,272	35,168	47,323	241	949	412,017	533,440
2 first_visit	388,508	35,172	36,292	34,931	36,068	217	224	409,307	424,800
3 page_view	1,256,631	35,370	90,259	35,086	86,954	256	3,305	406,205	1,346,890
4 user_engagement	902,672	11,120	43,186	10,914	40,650	206	2,536	238,857	945,858

- Coming to the tablet traffic, using figure 4 we can say that there are more Event counts when compared with the active users since each user might be clicking the same link or loading pages one or more times.

Segment set	c ONLY	Tablet traffic		Tablet traffic ONLY		Mobile traffic / Tablet traffic		Totals*	
Event name	Event count	Active users	Event count	Active users	Event count	Active users	Event count	↓Active users	Event count
5 new_recent_active_user	242,729	11,065	11,716	10,867	11,496	198	220	238,103	254,445
6 scroll	554,041	11,232	29,883	11,034	28,519	198	1,364	230,727	583,924
7 view_item_list	1,017,142	8,666	62,749	8,534	59,927	132	2,822	165,892	1,079,891
8 view_promotion	1,250,621	23,625	213,016	23,435	186,135	221	26,881	160,744	1,463,637
9 view_item	323,317	4,282	16,756	4,209	15,818	74	938	102,052	340,073
10 experiment_impression	234,317	4,150	18,522	4,042	17,743	109	779	62,446	252,839

FIGURE 5

- Here, as well there are more number of Event counts on the **view_promotion** page 213,016 being the highest event counts in the entire tablet traffic, and 186,135 Event counts on tablet traffic only where there are less number of active users on that page.
FIGURE 5

So, using figures 4 & 5 we can conclude that there are more active users in the **session_start** followed by **first_visit** and **page_view** whereas the more number of Event counts occurred are in **Page_view** followed by **view_promotion** and **view_item_list**.

Technique 2: Free Form

		Segment	Mobile traffic	Direct traffic	Mobile traffic			Totals
		Country	United States	United Stat…	Canada	China	Japan	
Month		Date	Active users	Active users	Active users	Active users	Active users	↓ Active users
	Totals		63.33% of total	21.44% of total	7.72% of total	4.44% of total	2.21% of total	100% of total
1	09	20220927	1,046	450	117	45	24	1,512
2	09	20220926	1,120	327	121	32	14	1,521
3	10	20221001	763	395	123	27	17	1,156
4	09	20220921	834	199	106	42	16	1,189
5	09	20220928	630	247	80	32	17	1,014
6	10	20221002	625	265	106	34	19	990
7	10	20221014	660	213	48	31	26	953
8	10	20221013	550	214	44	47	32	907
9	10	20221012	621	207	46	31	25	930
10	09	20220922	593	172	83	57	14	925

Figure 1

Free Form: Free form technique is used to visualize the data using a graph or a table.

- As per figure 1, we have chosen data that is customized for 30 days, i.e from 16th Sept 2022 to 15th Oct 2022. And the segments used here are direct traffic of the website compared with the mobile traffic that the active users are using. The dimensions that are chosen are Month and date attributes in the rows and country attribute in the columns. We have used 10 rows and 5 columns with Values as Active users of our website.
- The above figure 1 is sorted according to the largest number of users using direct traffic or mobile traffic on a particular date and month in different countries.
- On Sept 27th, 2022, there was a huge amount of mobile traffic that was driven through our website from the United States of America, this was the day when the mobile traffic was at its peak in the United States with 1,046 active users, who were using our website using mobile phones or tablets.

- Similarly, on 26th Sept 2022, the mobile traffic was driven but a little lesser than the 27th Sept 2022, with 1,120 active users.
- So, there was a large amount of traffic driven to the website on 27th and 26th Sept 2022 being at its peak in the United States in the last 30 days.
- Also, there were 450 active users who were using direct traffic which means using the website URL directly to browse our website being the highest number of active users on the same day when mobile traffic was huge i.e 27th Sept 2022 in the United States.
- The mobile traffic and direct traffic driven to the website in the United States gradually decreased in Oct 2022 when compared to Sept 2022 last week.
- Coming to Canada, there was only mobile traffic driven to the website from the past 30 days with 117 active users on 27th September being the highest number of active users in Canada, and 13th of Oct 2022 having the lowest number of active users.
- Similarly in China and Japan there was only mobile traffic that was driven to the website with 57 active users in China on 22nd Sept 2022 and 32 being the highest number of users in Japan on 13th Oct 2022 using our website from the past 30 days.
- The lowest number of active users that China had was on 1st Oct 2022 with only 27 users, and the least active users that Japan had was on the 22nd and 26th of Sept 2022.
- Compared to other countries the United States is driving more traffic to the website especially driving mobile traffic as most users are browsing through mobile phones.