



Project Description:

For your Final Project, we are providing you with a dataset having different TV Airing Brands, their product, their category. Dataset includes the network through which Ads are airing, types of network like Cable/ Broadcast and the show name also on which Ads got aired. You can also see the data of Dayparts, Time zone and the time & date at which Ads got aired. IT also includes other data like Pod Position (the lesser the valuable), duration for which Ads aired on screen, Equivalent sales &, total amount spent on the Ads aired.

Business Understanding:

Advertising is a way of marketing your business in order to increase sales or make your audience aware of your products or services. Until a customer deals with you directly and buys your products or services, your advertising may help to form their first impressions of your business. Target audience for businesses could be local, regional, national or international or a mixture. So, they use different ways for advertisement. Some of the types of advertisement are Internet/online directories, Trade and technical press, Radio, Cinema, Outdoor advertising, National papers, magazines and TV. Advertising business is very competitive as a lot of players bid a lot of money in a single segment of business to target the same audience. Here comes the analytical skills of the company to target those audiences from those types of media platforms where they convert them to their customers at a low cost.

Tech Stack Used

Microsoft Excel 365: It enables users to format, organize and calculate data in a spreadsheet. It organize data in an easy-to-navigate way. We need not to perform any complex mathematical functions. And it turn piles of data into helpful graphics and charts.

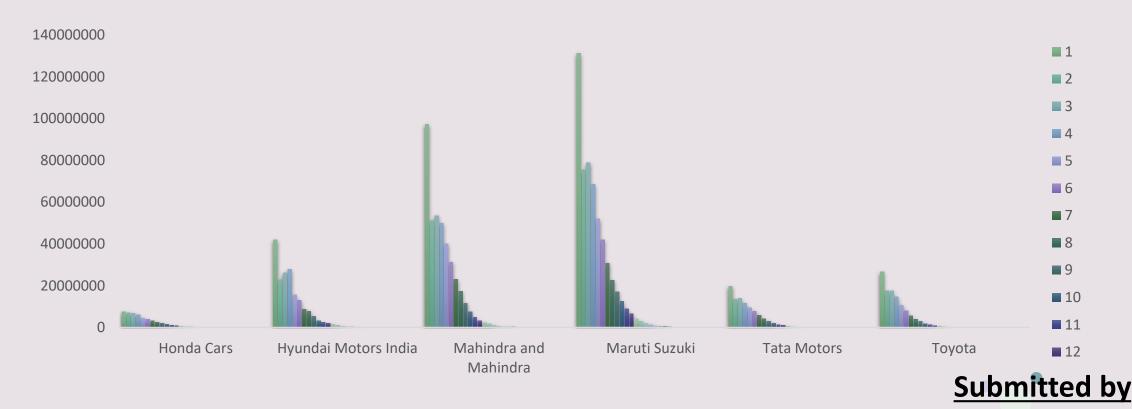
Microsoft Word 2021: It is used to make a report (PDF) to be presented to the leadership team.

Approach

The dataset is already cleaned and hence no need of cleaning it.



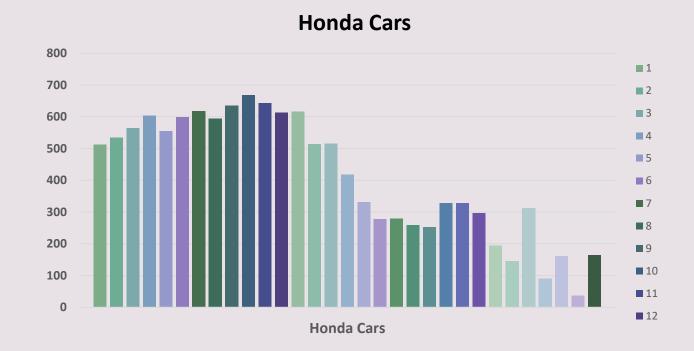
- 1. What is Pod Position? Does the Pod position number affect the amount spent on Ads for a specific period by a company? (Explain in Details with examples from the dataset provided).
 - A group of ads are sequenced together to be played back-to-back within a single ad break. The position of an individual advertisement within a certain commercial pod is called Pod Position. Yes, the Pod position number affects the amount spent on Ads for a specific period by the company.



Rahul Inchal

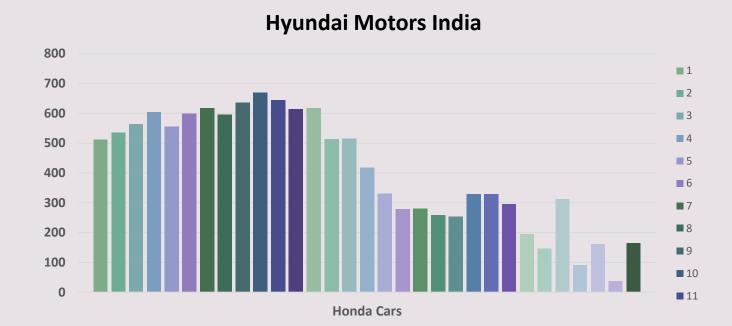
Row Labels	Honda Cars
1	511.707441
2	535.1725376
3	563.9687896
4	603.1101108
5	555.9165626
6	598.5055819
7	617.810728
8	595.2302973
9	635.4668915
10	669.0303688
11	643.4724712
12	613.7883275
13	616.5152253
14	514.3061947
15	515.9065817
16	418.4334365
17	330.9027237
18	278.7604167
19	280.0740741
20	258.3394495
21	252.9452055
22	328.4142857
23	328.7222222
24	296.5652174
25	194.2380952
26	145.7142857
27	312.1428571
28	91
29	161
30	37
31	165
Grand Total	565.9806486

Honda Cars



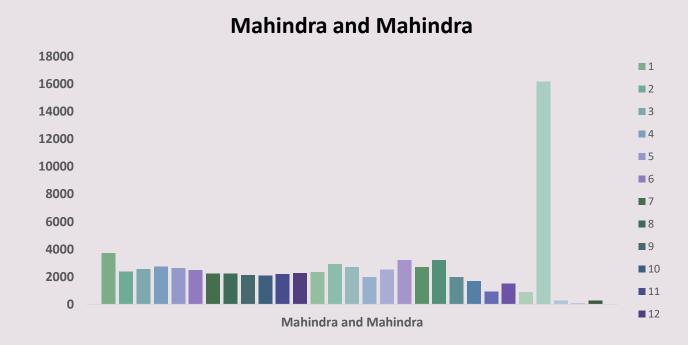
Row Labels	Hyundai Motors India
1	2888.118671
2	1810.573167
3	2467.429825
4	3358.793466
5	2517.864325
6	2620.939272
7	2324.108701
8	2611.46313
9	2476.639737
10	2110.40484
11	2139.41218
12	2445.787611
13	2550.500849
14	2169.752381
15	2014.573643
16	1890.511765
17	1970.801653
18	1468.92
19	2258.122807
20	3429.333333
21	3467.269231
22	3917.384615
23	1792.875
24	1290.5
25	275.8
29	1679
Grand Total	2536.029455

Hyundai Motors India



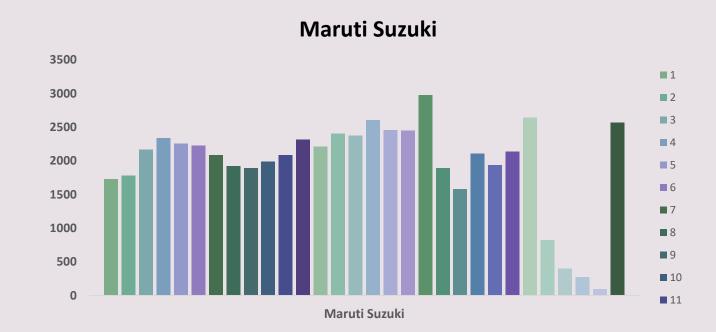
5	Mahindra and				
Row Labels	Mahindra				
1	3722.685225				
2	2394.050568				
3	2543.396467				
4	2734.234466				
5	2632.441617				
6	2490.032407				
7	2228.28577				
8	2229.052414				
9	2140.285977				
10	2093.684966				
11	2192.165315				
12	2277.284571				
13	2329.209482				
14	2928.996743				
15	2719.952632				
16	1965.130435				
17	2527.961039				
18	3203.982906				
19	2693.545455				
20	3222.764706				
21	1972.03125				
22	1686.833333				
23	934.7777778				
24	1496.52381				
25	897.2857143				
26	16174.66667				
28	294				
29	101				
31	274				
Grand Total	2686.494388				

Mahindra and Mahindra



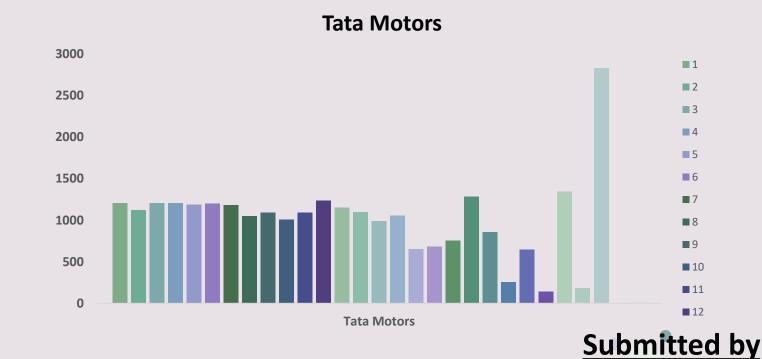
Row Labels	Maruti Suzuki				
1	1729.61703				
2	1775.659437				
3	2162.889118				
4	2333.953994				
5	2251.613803				
6	2225.940178				
7	2082.05607				
8	1923.734549				
9	1892.229459				
10	1988.345079				
11	2083.07839				
12	2311.22773				
13	2213.278689				
14	2400.258173				
15	2371.576779				
16	2603.25188				
17	2452.80597				
18	2449.49763				
19	2973.295597				
20	1889.579439				
21	1575.446154				
22	2104.5				
23	1931.555556				
24	2136.133333				
25	2639.4				
26	818.8181818				
27	393.6666667				
28	274				
29	90				
31	2569				
Grand Total	1993.215468				

Maruti Suzuki



Row Labels	Tata Motors
1	1209.39811
2	1124.436647
3	1202.358165
4	1209.757003
5	1190.088243
6	1202.111386
7	1183.476632
8	1048.887159
9	1090.598556
10	1005.254009
11	1089.545092
12	1234.030048
13	1148.935354
14	1099.957447
15	990.6907216
16	1056.514925
17	652.8421053
18	681.055556
19	754.4347826
20	1282.933333
21	854.3846154
22	258.5454545
23	649.75
24	141.2727273
25	1343.75
26	181.6666667
27	2830
28	7
30	11
Grand Total	1169.657667

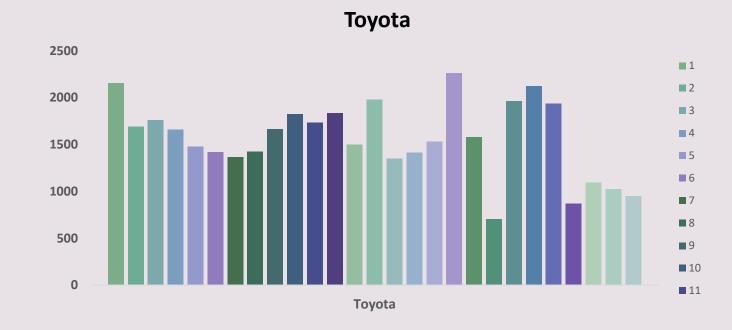
Tata Motors



Rahul Inchal

Row Labels	Toyota					
1	2154.855334					
2	1691.091915					
3	1757.716188					
4	1655.621585					
5	1477.943892					
6	1415.064146					
7	1362.315479					
8	1423.675826					
9	1665.462781					
10	1821.735209					
11	1730.140278					
12	1834.734234					
13	1499.466667					
14	1975.71066					
15	1349.827338					
16	1411.684211					
17	1527.578947					
18	2260.86					
19	1575.432432					
20	699.5263158					
21	1962					
22	2121.083333					
23	1932.22222					
24	868					
25	1093					
26	1021					
27	947					
Grand Total	1706.399952					

Toyota



Insights

- 1. Honda cars and Maruti Suzuki follows the same trend. As the number of pod position increases, amount spent on running the Ads also starts increasing and afterwards, it starts declining.
- 2. Hyundai Motors India and Toyota follows almost the same trend. As the number of pod position increases, amount spent on running the Ads starts declining in beginning. But then after, it starts increasing and again declining at last positions.
- 3. Tata Motors and Mahindra and Mahindra follows the same trend. As the number of pod position increases, amount spent on running the Ads very slightly starts declining in beginning, and then starts very slightly increasing and again decreasing at the end.
- 4. For the car manufactures, as the pod position increases, price increases earlier and then after it starts decreasing.



2. What is the share of various brands in TV airings and how has it changed from Q1 to Q4 in 2021?

Sum of Spending

Row Labels	Q1	Q2	Q3	Q4	Grand Total	
Honda Cars	3.71%	2.94%	3.83%	3.28%	3.47%	
Hyundai Motors India	13.65%	12.56%	12.29%	13.17%	12.98%	
Mahindra and Mahindra	28.22%	30.61%	30.21%	24.92%	28.53%	
Maruti Suzuki	39.98%	39.76%	39.62%	41.27%	40.12%	
Tata Motors	5.63%	5.05%	5.02%	12.48%	6.81%	
Toyota	8.81%	9.08%	9.02%	4.88%	8.09%	
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	

Sum of Spending





Sum of Spending

Insights

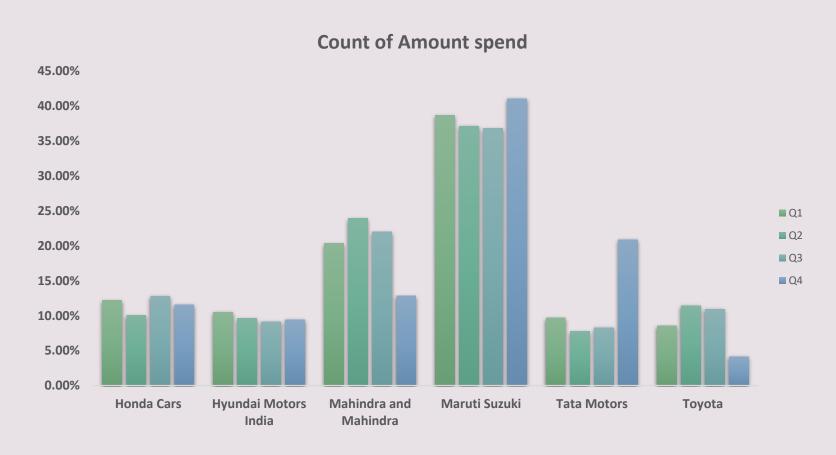
- 1. Maruti Suzuki has the highest share in TV Airings followed by Mahindra and Mahindra.
- 2. Honda Cars has the lowest share in TV Airings.
- 3. For Honda Motors and Hyundai Motors India, the share of amount spending slightly decreases from Q1 to Q4 in 2021.
- 4. The share of amount spending of Mahindra and Mahindra has slightly decreased more.
- 5. For Toyota, it has decreases almost 5% from Q1 to Q4.
- 6. The share of amount spending of Maruti Suzuki has slightly increases from Q1 to Q4.
- 7. The share of Tata Motors has almost increased 3 times of Q1 in Q4.



Count of Spending

Row Labels	Q1	Q2	Q3	Q4	Grand Total
Honda Cars	12.18%	10.05%	12.80%	11.60%	11.65%
Hyundai Motors India	10.52%	9.65%	9.17%	9.45%	9.74%
Mahindra and Mahindra	20.37%	23.96%	21.99%	12.84%	20.21%
Maruti Suzuki	38.68%	37.15%	36.81%	41.10%	38.30%
Tata Motors	9.71%	7.75%	8.29%	20.88%	11.07%
Toyota	8.55%	11.44%	10.94%	4.14%	9.02%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%

Count of Spending





Count of Spending

Insight

- 1. The counting id of Maruti Suzuki is the highest and so the share.
- 2. The share of Id count decreases from Q1 to Q4 for Mahindra and Mahindra, Toyota, Honda Cars and Hyundai Motors India.
- 3. The share of Id count increases from Q1 to Q4 for Tata Motors the most, followed by the Maruti Suzuki.

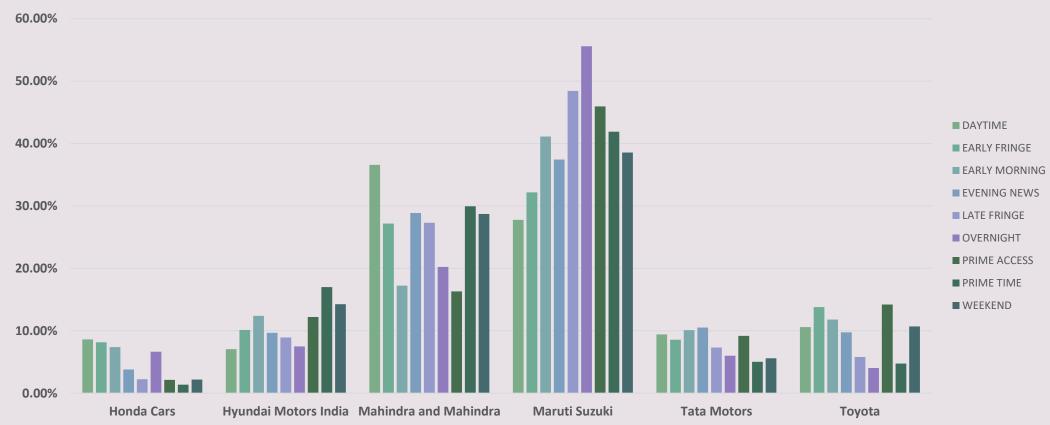
3. Conduct a competitive analysis for the brands and define advertisement strategy of different brands and how it differs across the brands.

Percentage of sum

Row Labels	DAYTIME	EARLY FRINGE	EARLY MORNING	EVENING NEWS	LATE FRINGE	OVERNIGH T	PRIME ACCESS	PRIME TIME	WEEKEN D	Grand Total
Honda Cars	8.61%	8.16%	7.38%	3.79%	2.24%	6.64%	2.14%	1.37%	2.18%	3.47%
Hyundai Motors India	7.05%	10.13%	12.38%	9.66%	8.92%	7.49%	12.21%	17.01%	14.26%	12.98%
Mahindra and Mahindra	36.58%	27.17%	17.23%	28.86%	27.32%	20.24%	16.31%	29.95%	28.72%	28.53%
Maruti Suzuki	27.76%	32.18%	41.11%	37.43%	48.43%	55.59%	45.95%	41.90%	38.56%	40.12%
Tata Motors	9.42%	8.57%	10.11%	10.50%	7.30%	6.01%	9.18%	5.03%	5.60%	6.81%
Toyota	10.58%	13.79%	11.79%	9.75%	5.80%	4.04%	14.22%	4.74%	10.68%	8.09%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Percentage of sum

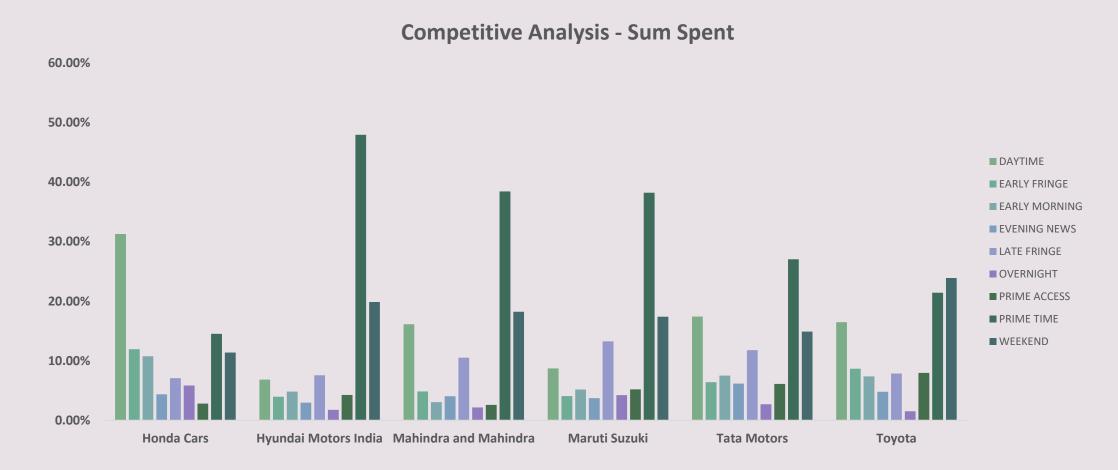




Percentage of sum

Row Labels	DAYTIME	EARLY FRINGE	EARLY MORNING	EVENING NEWS	LATE FRINGE	OVERNIG HT	PRIME ACCESS	PRIME TIME	WEEKEN D	Grand Total
11011 2010010	2711111112						7133233			10001
Honda Cars	31.30%	11.94%	10.76%	4.36%	7.09%	5.84%	2.80%	14.51%	11.39%	100.00%
Hyundai Motors										
India	6.84%	3.96%	4.82%	2.97%	7.55%	1.76%	4.27%	47.97%	19.88%	100.00%
Mahindra and										
Mahindra	16.15%	4.83%	3.05%	4.03%	10.52%	2.16%	2.59%	38.44%	18.23%	100.00%
Maruti Suzuki	8.71%	4.07%	5.18%	3.72%	13.26%	4.23%	5.19%	38.24%	17.40%	100.00%
	47 404		/	a 4 - 24	44 ===4	2 222/	0.400/	0= 000/	4.4.000/	100 000/
Tata Motors	17.42%	6.39%	7.50%	6.15%	11.77%	2.69%	6.12%	27.06%	14.89%	100.00%
Toyota	16.48%	8.65%	7.36%	4.80%	7.87%	1.52%	7.97%	21.43%	22 01%	100.00%
loyota	10.40/0	0.03/6	7.50/0	4.00/0	7.07/0	1.52/0	7.57/0	21.43/0	23.31/0	100.00/0
Grand Total	12.59%	5.08%	5.05%	3.99%	10.98%	3.05%	4.54%	36.62%	18.11%	100.00%

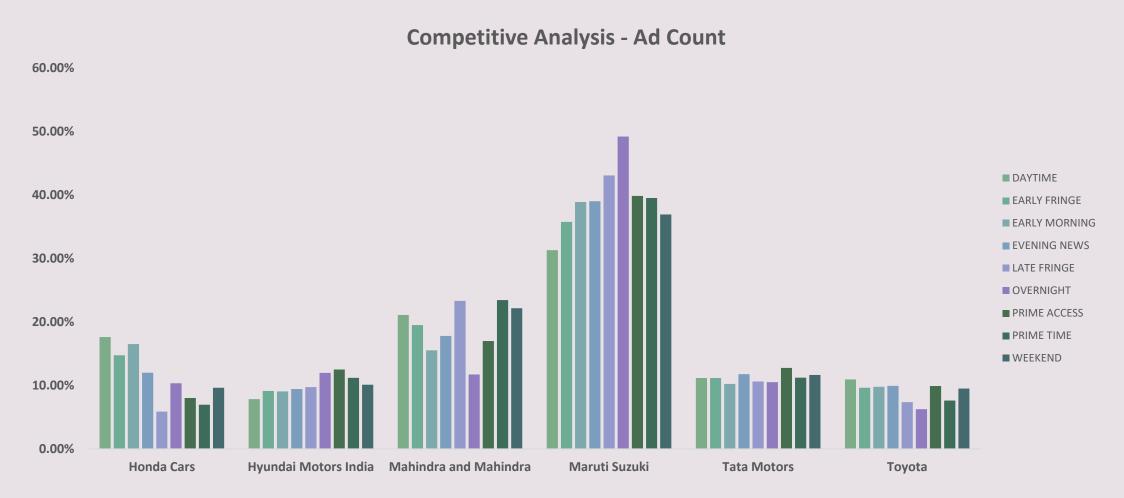
Percentage of sum



Percentage of Count

		EARLY	EARLY	EVENING	LATE	OVERNIG	PRIME	PRIME	WEEKE	Grand
Row Labels	DAYTIME	FRINGE	MORNING	NEWS	FRINGE	HT	ACCESS	TIME	ND	Total
Honda Cars	17.63%	14.75%	16.50%	12.01%	5.88%	10.33%	8.01%	6.95%	9.62%	11.65%
Hyundai Motors										
India	7.85%	9.13%	9.04%	9.44%	9.73%	11.97%	12.50%	11.19%	10.11%	9.74%
Mahindra and										
Mahindra	21.10%	19.51%	15.53%	17.81%	23.32%	11.71%	16.99%	23.45%	22.16%	20.21%
Maruti Suzuki	31.32%	35.80%	38.92%	39.03%	43.10%	49.22%	39.86%	39.55%	36.95%	38.30%
Tata Motors	11.16%	11.17%	10.24%	11.78%	10.61%	10.52%	12.75%	11.23%	11.65%	11.07%
Toyota	10.94%	9.64%	9.77%	9.93%	7.35%	6.25%	9.90%	7.63%	9.51%	9.02%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Percentage of Count

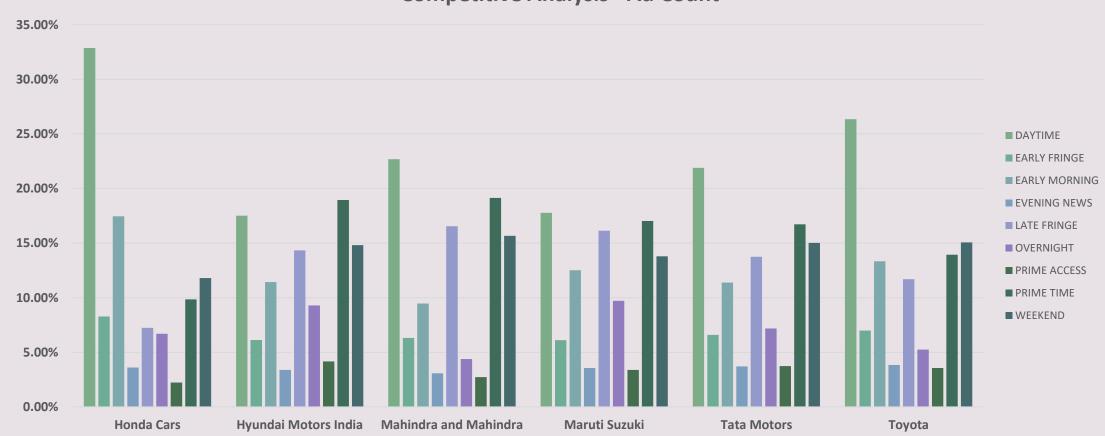


Percentage of Count

		EARLY	EARLY	EVENING	LATE	OVERNIG	PRIME	PRIME	WEEKE	Grand
Row Labels	DAYTIME	FRINGE	MORNING	NEWS	FRINGE	HT	ACCESS	TIME	ND	Total
Honda Cars	32.88%	8.28%	17.45%	3.60%	7.23%	6.70%	2.23%	9.84%	11.80%	100.00%
Hyundai Motors India	17.51%	6.13%	11.44%	3.38%	14.33%	9.29%	4.17%	18.95%	14.82%	100.00%
Mahindra and Mahindra	22.69%	6.31%	9.47%	3.08%	16.54%	4.38%	2.73%	19.14%	15.67%	100.00%
Maruti Suzuki	17.77%	6.11%	12.52%	3.56%	16.14%	9.71%	3.38%	17.03%	13.78%	100.00%
Tata Motors	21.90%	6.60%	11.38%	3.71%	13.74%	7.18%	3.74%	16.72%	15.03%	100.00%
Toyota	26.35%	6.98%	13.34%	3.84%	11.69%	5.24%	3.56%	13.94%	15.06%	100.00%
Grand Total	21.73%	6.54%	12.32%	3.49%	14.34%	7.56%	3.25%	16.49%	14.29%	100.00%

Percentage of Count





Insights

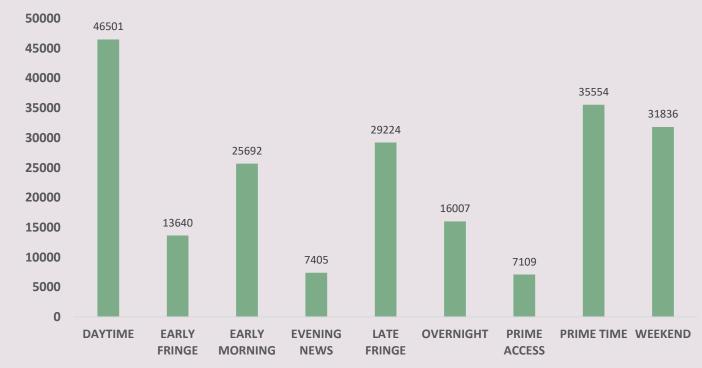
- 1. Honda Spends the maximum(32.88%) share of money for ads during the DAYTIME Dayparts and minimum share during PRIME ACCESS(2.23%) Dayparts while of all the spends done during DAYTIME, Honda accounts for only 8.61% of the Total.
- 2. Maruti Suzuki bears 55.59% of total spends done during OVERNIGHT Dayparts and it also has the maximum share for Number of Ads in the OVERNIGHT Dayparts(49.22%). This shows Maruti's strategy for showing their ads.
- 3. Mahindra has 36.5% share of the total amount spend during DAYTIME but gets only 21.1% share of Ads count from DAYTIME. Suzuki on the other hand has 31.32% share in ad count during DAYTIME with only 27.76% Spends share during DAYTIME, clearly stating that the cost of ads for Mahinda is more than that of Suzuki. This also means Mahinda is more preferred by People than Maruti Suzuki.
- 4. Toyota doesn't have a specific preference when it comes to selecting a specific time to show its ads. The ad percentage for Toyota is almost Evenly distribute across the Dayparts for ad count share but the money spent is different during the same period.
- 5. Suzuki has the maximum percentage of spend across all Dayparts.



4. Mahindra and Mahindra wants to run a digital ad campaign to complement its existing TV ads in Q1 of 2022. Based on the data from 2021, suggest a media plan to the CMO of Mahindra and Mahindra. Which audience should they target? *Assume XYZ Ads has the ad viewership data and TV viewership for the people in India.

Row Labels	Count of Spend (\$)
DAYTIME	46501
EARLY FRINGE	13640
EARLY MORNING	25692
EVENING NEWS	7405
LATE FRINGE	29224
OVERNIGHT	16007
PRIME ACCESS	7109
PRIME TIME	35554
WEEKEND	31836
Grand Total	212968

Spent by Mahindra by dayparts in Q1



Suggestions

Mahindra & Mahindra should Target the Audience of DAYTIME and PRIMETIME viewers in the First Quarter of 2022. As observed from the Comparative Analysis Table Mahinda followed the same trend in 2021.

Count of Spent between Maruti Suzuki and mahindra

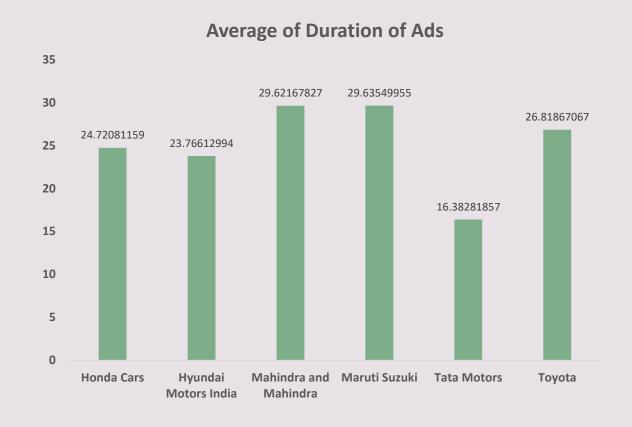
			_
	Mahindra and	Maruti	Grand
Row Labels	Mahindra	Suzuki	Total
JAN	15422	34479	49901
FEB	13628	25304	38932
MAR	13472	23865	37337
APR	13896	21447	35343
MAY	18504	28689	47193
JUN	13684	21496	35180
JUL	13274	21523	34797
AUG	15317	25608	40925
SEP	11197	18820	30017
ОСТ	8792	23407	32199
NOV	5168	17588	22756
DEC	5536	18048	23584
Grand Total	147890	280274	428164



Suggestions

Maximum number of Ads are played in the Month of January and Suzuki tops the list with 34479 ads. Mahindra's got less than half of it. In the 1st Quarter of 2022 Mahindra needs to increase the number of Ads it plays to get better results.

Row Labels	Average of Duration
Honda Cars	24.72081159
Hyundai Motors India	23.76612994
Mahindra and Mahindra	29.62167827
Maruti Suzuki	29.63549955
Tata Motors	16.38281857
Toyota	26.81867067
Grand Total	26.76644338

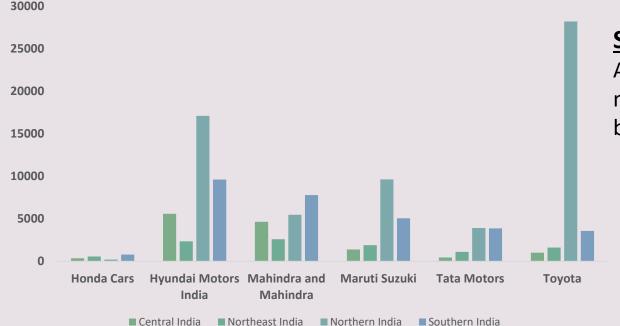


Suggestions

The average duration of Mahindra and Mahindra is almost same of their competitor. So, this is a good approach.

Row Labels	Central India	Northeast India	Northern India	Southern India	Grand Total
Honda Cars	361.9102564	561.4082368	209	787.7200214	565.9806486
Hyundai Motors India	5585.716981	2341.558241	17115.23077	9618.737832	2536.029455
Mahindra and Mahindra	4641.268293	2587.832472	5477.857143	7796.646057	2686.494388
Maruti Suzuki	1395.665653	1890.12906	9638.902439	5052.030401	1993.215468
Tata Motors	446.0453074	1109.419205	3911.588235	3881.218372	1169.657667
Toyota	1016.399399	1619.519079	28209.57143	3563.920986	1706.399952
Grand Total	1554.056616	1810.307779	9105.313559	5094.121833	1902.832751

Average spent in Different part of country

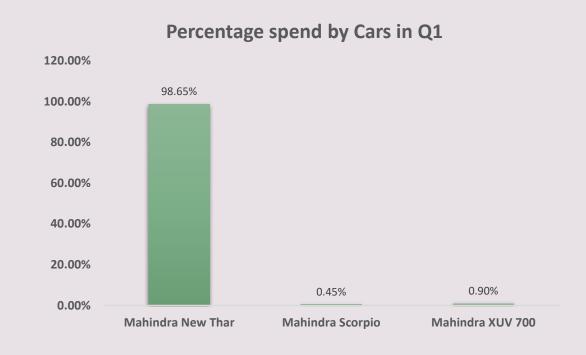


Suggestions

As the competitor of Mahindra and Mahindra are focusing more on Northern part of India, hence the suggestion would to be more aggressive towards that region.



Row Labels	Sum of Spend (\$)
Mahindra New Thar	98.65%
Mahindra Scorpio	0.45%
Mahindra XUV 700	0.90%
Grand Total	100.00%



Suggestions

As Mahindra is focusing way too much on Mahindra Thar and spending almost everything on Mahindra thar. Suggestion would be focusing more on other two SUV as well i.e., Scorpio and XUV 700.

Results

- 1. The company spends a lot of money for the advertising. I learned how a data analyst can help the company to learn where to spend the money to get the maximum profit.
- 2. I learned about the pod position. I got to know how the ordering of ads are related to the money spent by the company.
- 3. I implemented the understanding of competitive analysis and how it can be done to get the valuable insights.
- 4. I learned the analytical skills of how a company can convert the audience to their customers at a low cost.

