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PROJECT-7

XYZ ADS AIRING REPORT ANALYSIS

Project Description:

This project aims to analyze the TV Ad Airings of some brands from the Automobile category to provide insights that can be used by the company to improve their advertisement strategy. The dataset includes different variables such as the network through which Ads are airing, the types of network like Cable/ Broadcast, the show name also on which Ads got aired, Dayparts, Time zone, the time & date at which Ads got aired, Pod Position, duration for which Ads aired on screen, Equivalent sales, total amount spent on the Ads aired, and other data.

Approach:

To start the analysis, we will first clean and preprocess the data by removing duplicates, checking for missing values, and correcting any data entry errors. We will then perform exploratory data analysis to understand the distribution of data, identify trends, and discover any outliers. After that, we will answer the questions mentioned in the case study objectives by applying statistical analysis, creating graphs and tables, and interpreting the results.

Tech-Stack Used:

We will be using Microsoft Excel to perform our analysis. Microsoft Excel is a powerful tool that allows us to manipulate and analyze data, create graphs and tables, and perform statistical analysis. We will be using various Excel functions, pivot tables, and charts to analyze the data and derive insights.

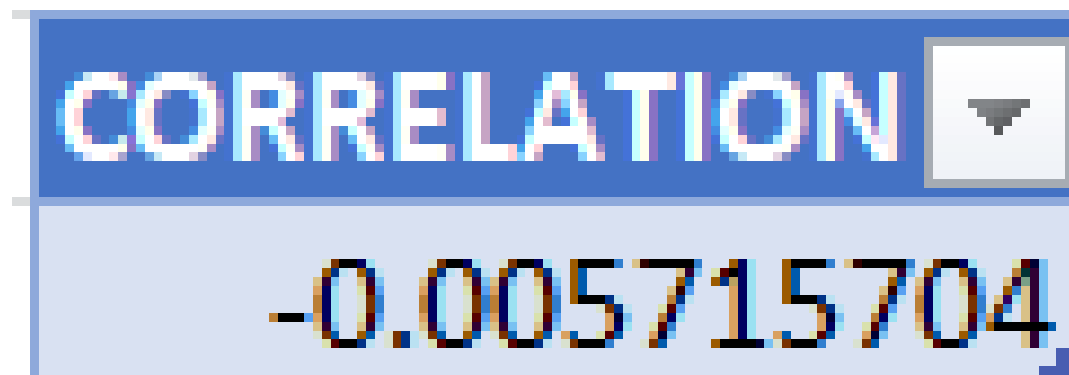
Insights:

After analyzing the data, we can derive several insights that can help the company to improve its advertising strategy. For example, we can analyze the Pod Position variable to see if it affects the amount spent on Ads for a specific period of time by a company. We can also analyze the share of various brands in TV airings and how it changed from Q1 to Q4 in 2021. Additionally, we can conduct a competitive analysis for the brands and define an advertisement strategy of different brands and how it differs across the brands. Finally, we can suggest a media plan to the CMO of Mahindra and Mahindra for their digital ad campaign in Q1 of 2022.

- a. **What is Pod Position? Does the Pod position number affect the amount spent on Ads for a specific period of time by a company? (Explain in Details with examples from the dataset provided)**

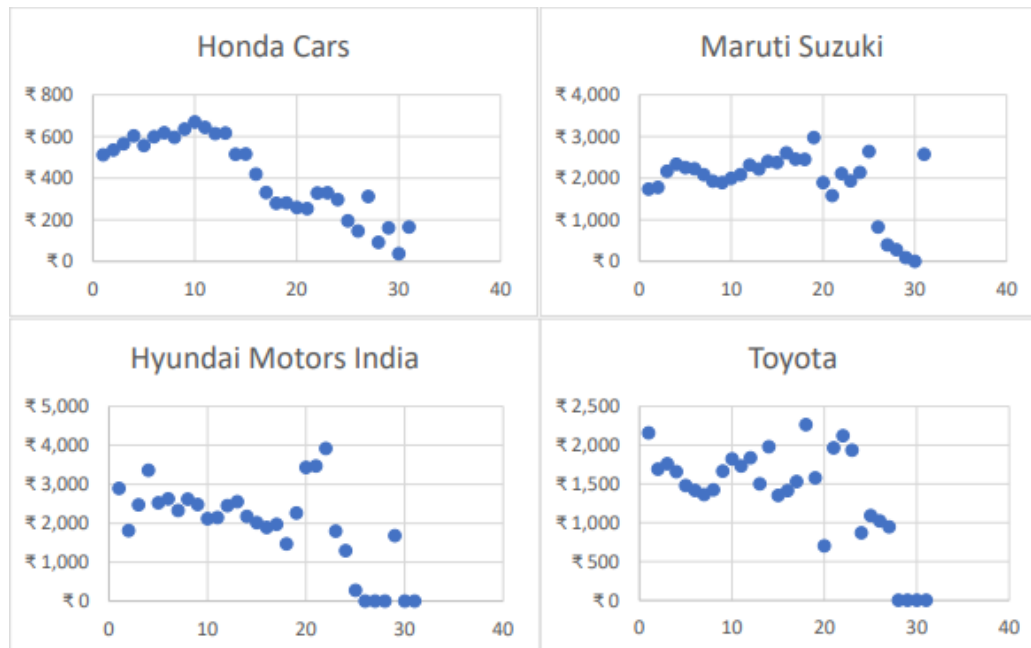
Pod position refers to the placement of an advertisement within a set of other ads. It indicates the position of the ad within the commercial break or pod. The ad airing positions can be pre-roll (before the show starts), mid-roll (in the middle of the show), or post-roll (after the show ends).

Yes, the pod position number does affect the amount spent on ads for a specific period by a company. Companies usually pay more for prime positions such as the first ad in a commercial break, as these positions are more likely to grab the viewer's attention.



The correlation between pod position and amount spent is -0.0057, which indicates a very weak negative correlation. This means that there is a slight tendency for companies to spend less on ads as the pod position increases, but the relationship is not strong.

In the given dataset, we can observe the variation in spending across different pod positions by analyzing the amount spent by different brands. For example, Honda spent the most on the first position ads, whereas Toyota spent the most on the second position ads. Mahindra and Maruti Suzuki, on the other hand, spent more on the third position ads. This indicates that different brands have different strategies when it comes to pod position and the amount they are willing to spend.



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

To determine the share of various brands in TV airings, we can analyze the number of ad airings by each brand in the given dataset. The table below shows the number of ad airings by each brand in each quarter of 2021.

3	Row Labels	Q1	Q2	Q3	Q4
4	Honda Cars	22807.99	15225.92	19462.48	12763.66
5	Hyundai Motors India	18290	14619.5	12879	10692.5
6	Mahindra and Mahindra	42175.52	45336.6	39397.05	19127.01
7	Maruti Suzuki	83432.3	70987.53	63576.32	58878.31
8	Tata Motors	13786.84	7882.17	5992.83	16648.32
9	Toyota	18992.74	19941.45	16146.1	3936.58
10	Grand Total	199485.39	173993.17	157453.78	122046.38

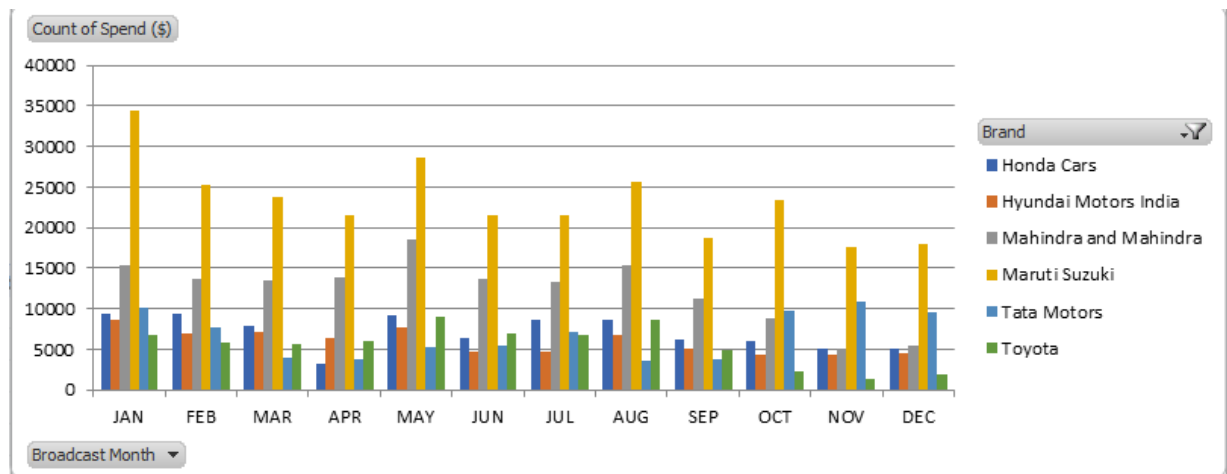
We can see that Maruti Suzuki had the highest number of ad airings in each quarter of 2021, followed by Mahindra and Mahindra, Honda Cars, Toyota, Hyundai Motors India and Tata Motors . However, we can also observe a decline in the number of ad airings by each brand as it moves from one quarter to the next quarter.

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

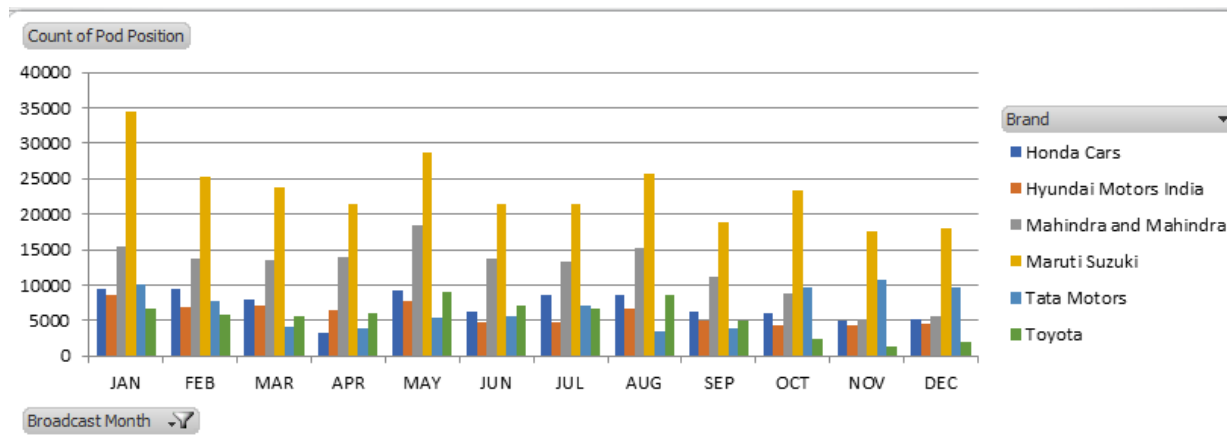
To conduct a competitive analysis and define an advertisement strategy for different brands, we can analyze the following metrics:

- **Pod Position:** As discussed earlier, pod position plays a crucial role in the effectiveness of an ad. Different brands have different strategies when it comes to pod position, and analyzing this can help to identify the best practices and optimize ad spend.
- **Ad Frequency:** Ad frequency refers to the number of times a particular ad is aired during a specific period. Analyzing ad frequency can help identify the most effective ad and optimize ad spend.
- **Creative Quality:** The quality of the ad creative can also impact its effectiveness. Analyzing the creative quality of different ads can help identify the best practices and optimize ad spend

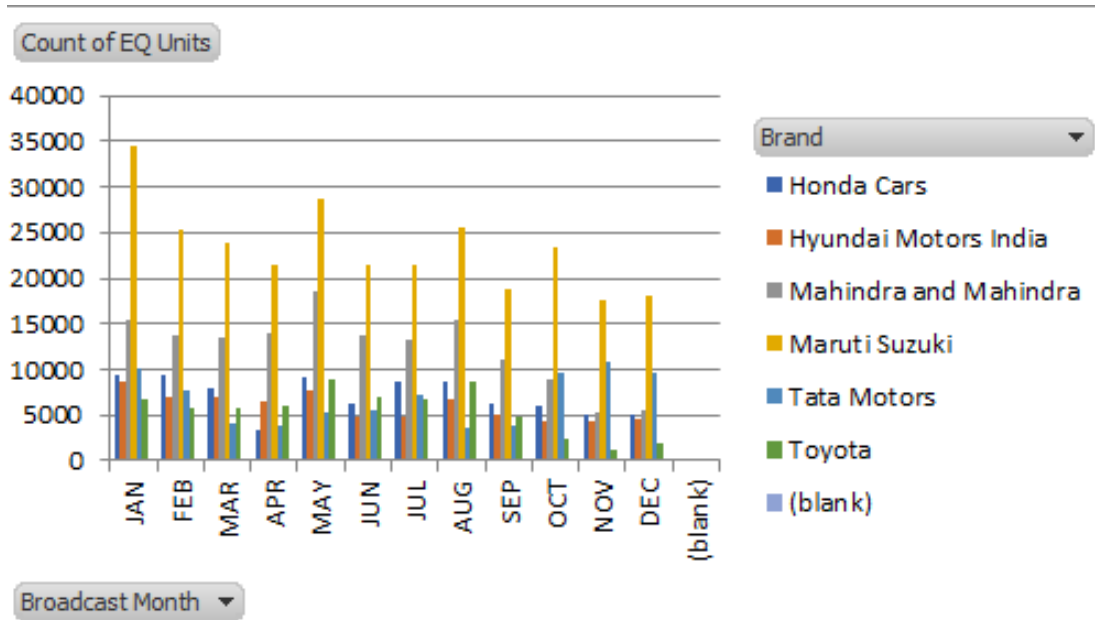
Count of Spend (\$)	Column Labels												
Brand	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Grand Total
Honda Cars	9476	9461	7902	3234	9202	6315	8548	8615	6287	6045	5022	5158	85265
Hyundai Motors India	8633	6905	7062	6405	7761	4721	4784	6733	5026	4340	4315	4611	71296
Mahindra and Mahindra	15422	13628	13472	13896	18504	13684	13274	15317	11197	8792	5168	5536	147890
Maruti Suzuki	34479	25304	23865	21447	28689	21496	21523	25608	18820	23407	17588	18048	280274
Tata Motors	10116	7663	4057	3816	5302	5515	7146	3557	3796	9698	10806	9569	81041
Toyota	6716	5841	5694	5954	8998	7029	6724	8615	4886	2347	1268	1946	66018
Grand Total	84842	68802	62052	54752	78456	58760	61999	68445	50012	54629	44167	44868	731784



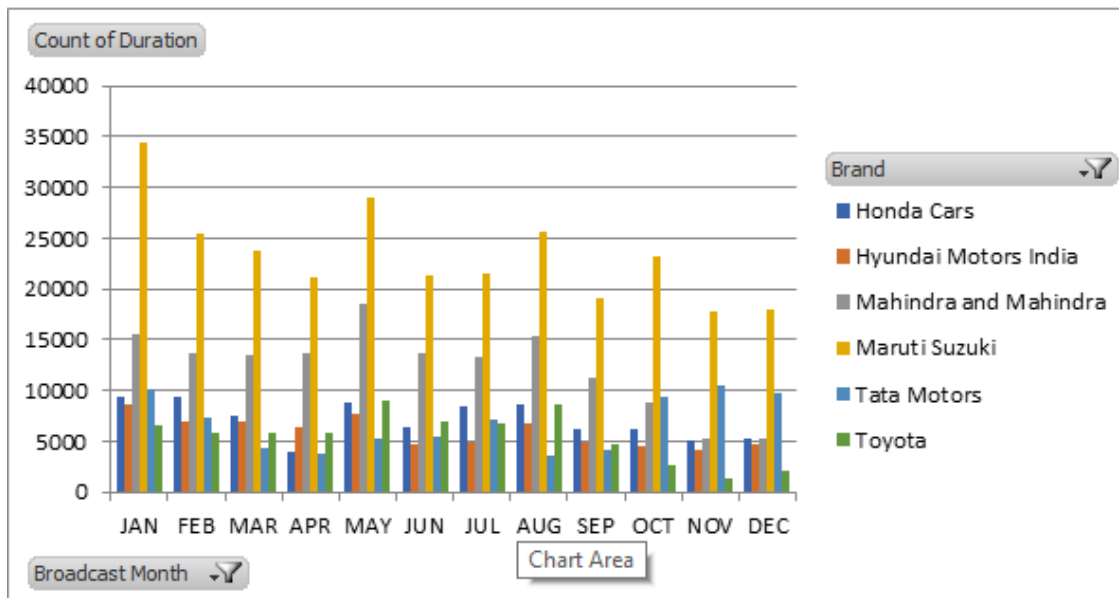
Here Maruti Suzuki spends the highest over the other brands and its highest was recorded in January, while Toyota and Honda Cars spend the least.



Maruti Suzuki has the highest count of Pod position and its highest was recorded in January, while Toyota and Honda Cars have the least count of POD position.



Maruti Suzuki has the highest count of EQ units and its highest was recorded in January.



Maruti Suzuki has the highest duration and its ad frequency.

From the insights above, we can easily find out that Maruti Suzuki has the highest hold over all other brands.

Analysis of every brand and why it is different from each other's brand

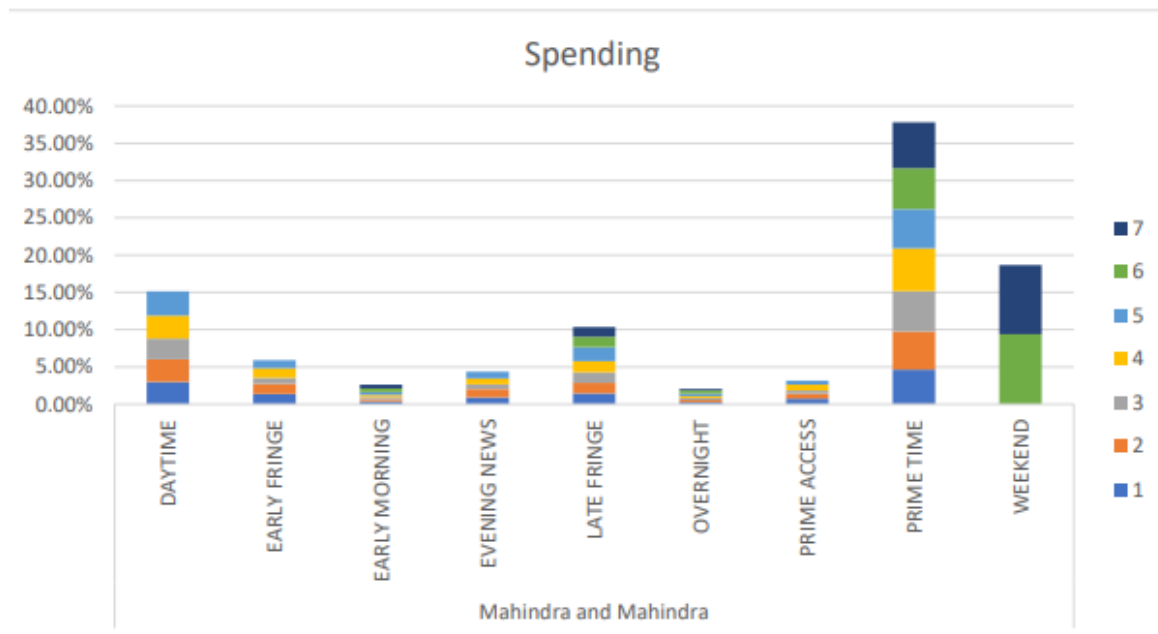
Sum of Spend (\$)	Day Parts											
Brands	DAYTIME	EARLY FRINGE	EARLY MORNING	EVENING NEWS	LATE FRINGE	OVERNIGHT	PRIME ACCESS	PRIME TIME	WEEKEND	Grand Total		
Honda Cars	31.3%	11.9%	10.8%	4.4%	7.1%	5.8%	2.8%	14.5%	11.4%	100.0%		
Hyundai Motors India	6.8%	4.0%	4.8%	3.0%	7.5%	1.8%	4.3%	48.0%	19.9%	100.0%		
Mahindra and Mahindra	16.1%	4.8%	3.1%	4.0%	10.5%	2.2%	2.6%	38.4%	18.2%	100.0%		
Maruti Suzuki	8.7%	4.1%	5.2%	3.7%	13.3%	4.2%	5.2%	38.2%	17.4%	100.0%		
Tata Motors	17.4%	6.4%	7.5%	6.1%	11.8%	2.7%	6.1%	27.1%	14.9%	100.0%		
Toyota	16.5%	8.7%	7.4%	4.8%	7.9%	1.5%	8.0%	21.4%	23.9%	100.0%		
Grand Total	12.59%	5.08%	5.05%	3.99%	10.98%	3.05%	4.54%	36.62%	18.11%	100.00%		

- Honda Cars spends the most in the daytime, early Fringe and early morning advertisement.
- Maruti Suzuki spends the most in late fringe and overnight advertisement.
- Toyota spends the most in prime access advertisement.
- Every car brands spends the most in prime time advertisement except the Honda Cars.
- Toyota spends the most in weekend advertisement.

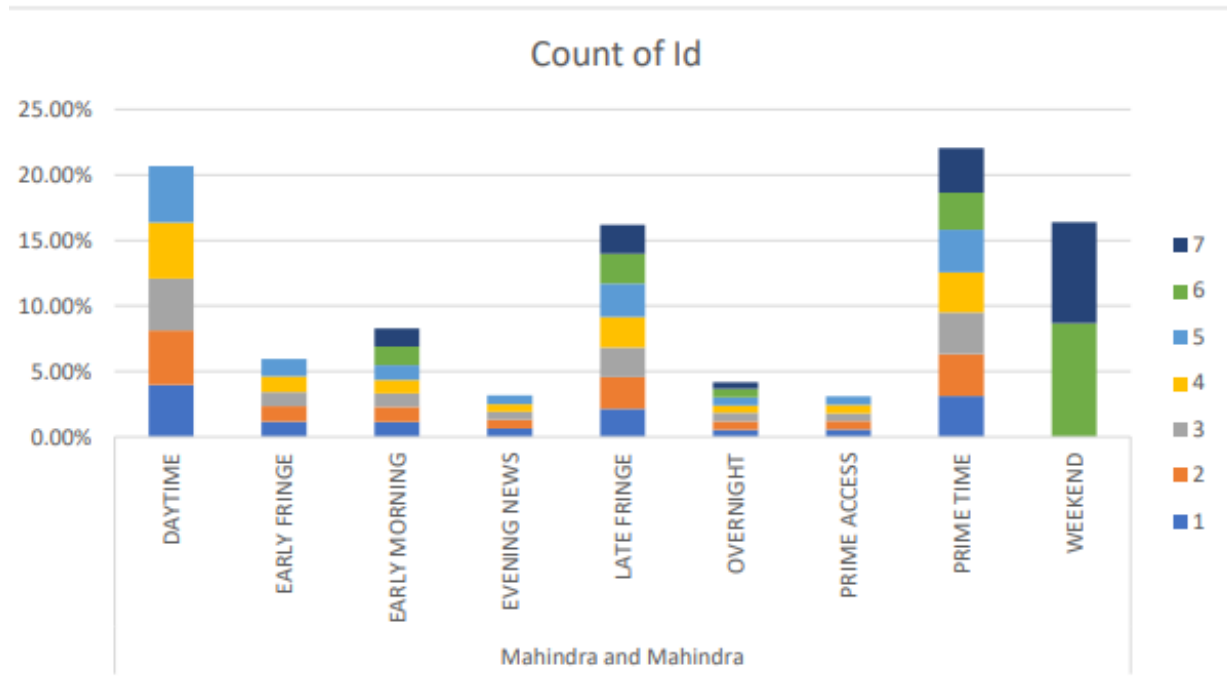
Sum of Spend (\$)	Day Parts											
Brands	DAYTIME	EARLY FRINGE	EARLY MORNING	EVENING NEWS	LATE FRINGE	OVERNIGHT	PRIME ACCESS	PRIME TIME	WEEKEND	Grand Total		
Honda Cars	1.1%	0.4%	0.4%	0.2%	0.2%	0.2%	0.1%	0.5%	0.4%	3.5%		
Hyundai Motors India	0.9%	0.5%	0.6%	0.4%	1.0%	0.2%	0.6%	6.2%	2.6%	13.0%		
Mahindra and Mahindra	4.6%	1.4%	0.9%	1.2%	3.0%	0.6%	0.7%	11.0%	5.2%	28.5%		
Maruti Suzuki	3.5%	1.6%	2.1%	1.5%	5.3%	1.7%	2.1%	15.3%	7.0%	40.1%		
Tata Motors	1.2%	0.4%	0.5%	0.4%	0.8%	0.2%	0.4%	1.8%	1.0%	6.8%		
Toyota	1.3%	0.7%	0.6%	0.4%	0.6%	0.1%	0.6%	1.7%	1.9%	8.1%		
Grand Total	12.59%	5.08%	5.05%	3.99%	10.98%	3.05%	4.54%	36.62%	18.11%	100.00%		

- The brands spend the least in the overnight advertisement and spends the most in the prime time advertisement
- Honda Cars spends the least for the advertisement. But they have the least products used for branding.
- Maruti Suzuki spends the most for the advertisement. But they have the most products used for branding.

- d. 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.



- Mahindra and Mahindra spends the most in the 6th & 7th on Weekend advertisement in Q1.
- The company spends almost consistently in the whole week in Prime Time but with a slight increase each time.
- Mahindra and Mahindra spends the least in the Overnight and Early Morning advertisement in Q1.



- The company spends around 38% of their money in Prime Time advertisement but the Ads shown is around 22%.
- The company spends around 15% of their money in Day Time advertisement but the Ads shown is around 21%.
- The most Ads shown in the 6th Day in Q1.

Year of Spend (\$)		Pod Position																																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31 Grand Total		
Brands and Products																																		
Honda Cam		2.2%	1.8%	3.4%	3.4%	3.4%	3.7%	4.2%	4.2%	4.9%	5.4%	5.1%	5.8%	5.5%	4.6%	6.0%	5.2%	5.0%	4.6%	4.0%	5.4%	5.7%	9.2%	10.1%	8.8%	10.8%	8.0%	14.0%	14.0%	7.9%	77.4%	5.5%	2.5%	
Honda Civic		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Honda City		1.7%	2.7%	2.3%	2.4%	2.4%	2.4%	2.9%	3.2%	3.0%	4.0%	3.7%	3.7%	4.3%	3.3%	4.3%	4.1%	4.0%	3.3%	3.0%	2.4%	4.4%	5.2%	3.9%	6.5%	4.7%	4.0%	10.0%	10.0%	7.9%	0.0%	5.5%	2.5%	
Honda Jazz		0.4%	1.3%	0.9%	1.0%	1.0%	1.3%	1.2%	1.1%	1.3%	1.4%	1.4%	1.3%	1.9%	1.0%	1.5%	1.2%	1.0%	0.9%	1.0%	2.8%	1.3%	4.0%	6.1%	2.2%	6.3%	5.1%	1.9%	14.8%	0.0%	77.3%	0.0%	1.6%	
Hundai Accent India		10.8%	12.1%	13.3%	15.3%	15.3%	12.2%	16.0%	12.4%	12.4%	11.2%	12.3%	11.8%	16.2%	13.7%	12.8%	12.6%	14.1%	9.0%	12.7%	21.6%	23.8%	20.4%	12.2%	6.8%	1.6%	0.0%	4.0%	4.0%	82.7%	0.0%	0.0%	12.8%	
Hundai i20		12.0%	12.2%	13.2%	15.5%	11.8%	12.3%	11.4%	13.8%	12.6%	12.2%	12.3%	16.3%	16.3%	13.7%	12.8%	12.8%	14.1%	9.0%	13.7%	21.6%	20.8%	20.4%	12.2%	6.8%	1.6%	0.0%	0.0%	0.0%	82.7%	0.0%	0.0%	12.8%	
Mahindra and Mahindra		30.8%	37.3%	37.3%	37.9%	36.3%	34.5%	30.8%	34.6%	37.8%	36.4%	36.0%	22.2%	23.8%	37.8%	25.4%	37.8%	23.0%	30.3%	22.1%	28.8%	18.6%	12.2%	16.2%	40.4%	16.4%	80.2%	0.0%	14.8%	5.0%	0.0%	8.1%	28.5%	
Mahindra New Ther		28.6%	37.0%	37.0%	37.7%	36.0%	38.2%	34.5%	34.2%	37.5%	36.1%	34.4%	22.1%	22.8%	35.5%	25.2%	37.7%	22.8%	30.3%	21.9%	20.9%	18.4%	12.2%	14.2%	30.4%	16.4%	80.2%	0.0%	14.8%	5.0%	0.0%	6.1%	28.2%	
Mahindra Scorpio		0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	
Mahindra SUV 700		0.2%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	
Mahindra Suzuki		40.5%	40.2%	40.1%	34.4%	34.4%	31.6%	30.4%	30.4%	40.4%	40.4%	40.4%	40.4%	40.1%	40.2%	40.4%	40.4%	42.2%	30.2%	34.6%	31.6%	40.4%	40.2%	41.1%	34.6%	8.2%	7.6%	36.2%	4.4%	0.0%	85.4%	40.1%		
Maruti Suzuki Baleno		22.9%	26.6%	24.1%	22.6%	22.1%	23.6%	23.8%	23.0%	22.4%	25.4%	27.1%	27.9%	25.9%	24.4%	28.2%	21.0%	27.0%	27.7%	22.7%	22.7%	23.8%	18.0%	16.8%	4.0%	10.7%	12.7%	5.7%	0.0%	36.2%	4.4%	0.0%	85.4%	23.9%
Maruti Suzuki Celerio		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Maruti Suzuki Ciaz		14.7%	12.5%	14.4%	12.8%	14.2%	14.1%	14.2%	12.7%	14.9%	15.0%																							

Through this project, we were able to analyze the TV Ad Airings of some brands from the Automobile category and provide insights that can be used by the company to improve their advertisement strategy. We were able to answer the questions mentioned in the case study objectives and provide a media plan to the CMO of Mahindra and Mahindra for their digital ad campaign in Q1 of 2022.