



# MARKETING CAMPAIGN



## REPORT

By

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14<sup>th</sup> July, 2023

“Don’t find customers for products,  
find products for your customers.”

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## Problem Summary & Background:

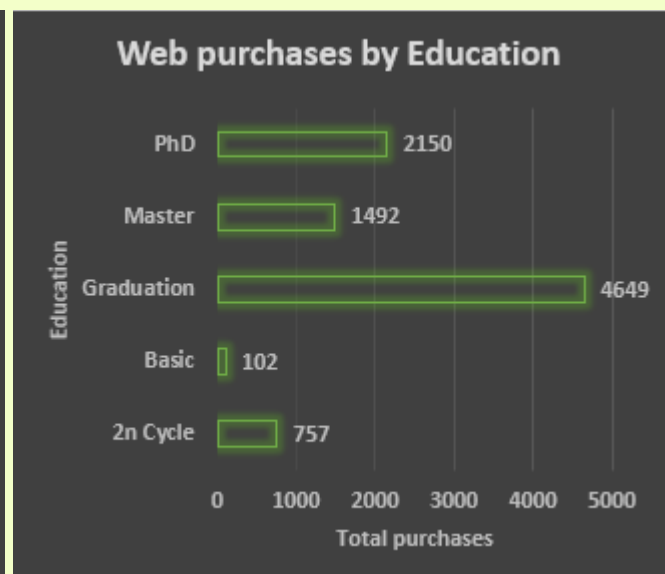
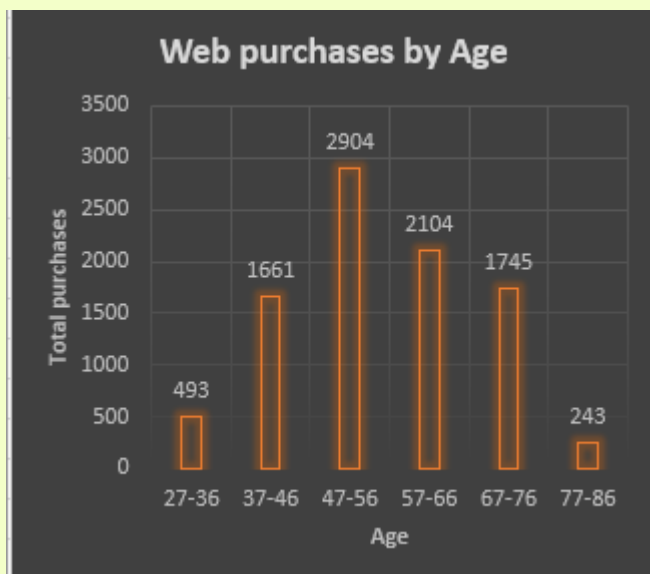
- In this report, we analyzed the factors that significantly impact web purchases, the most successful marketing campaign, the average customer profile, the best performing product, and the underperforming channel. Based on our analysis, we recommend certain actions to improve the performance of web purchases and increase revenue.

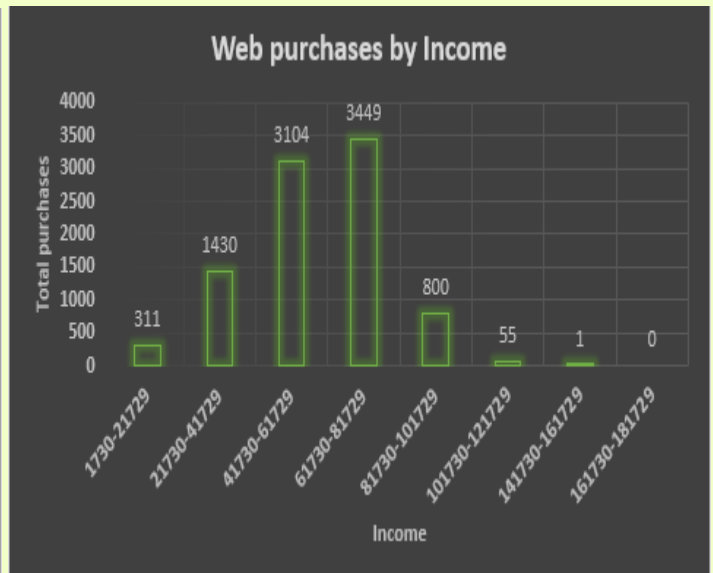
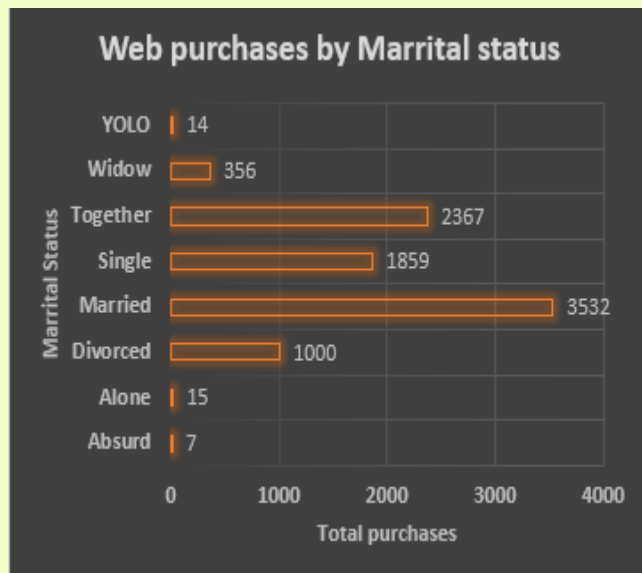
## Analysis & Solution:

### (1) Are there any null values or outliers? How will you handle them?

- There is total 24 NULL values in field 'Income' and 1 Outlier.
- So, replace these 25 values with Mean=51973.
- There is total 3 Outliers in 'Year\_Birth' field.
- So, replace these 3 values with Mode.

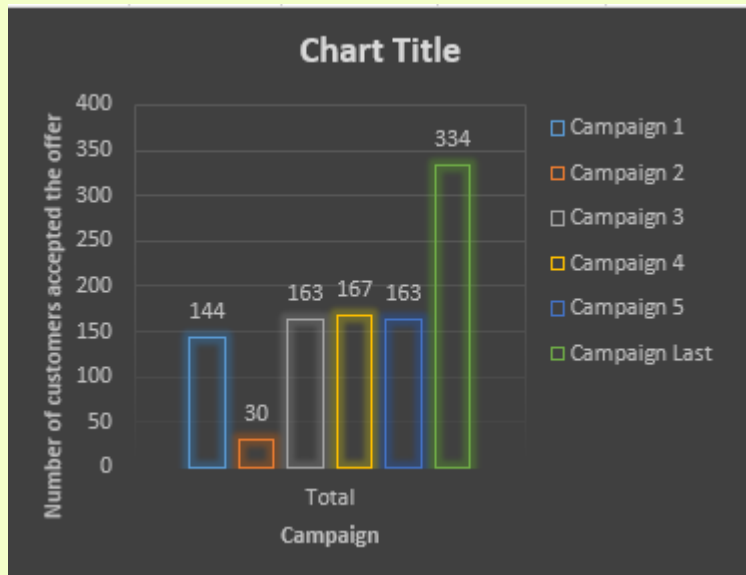
### (2) What factors are significantly related to the number of web purchases?





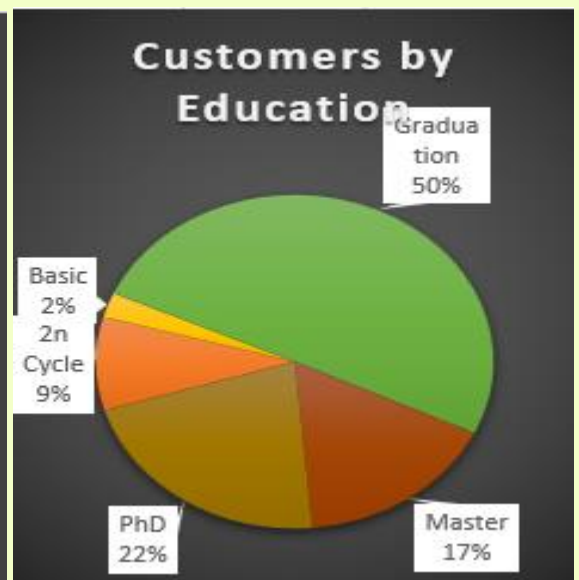
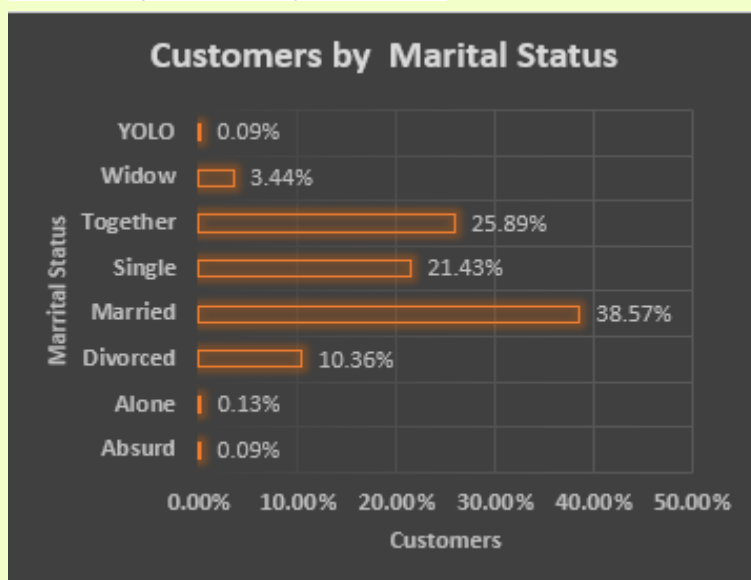
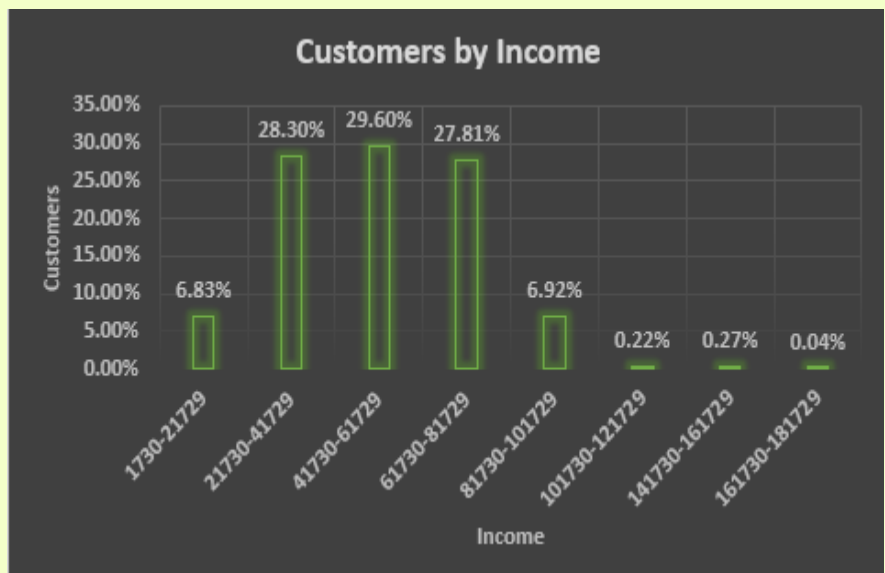
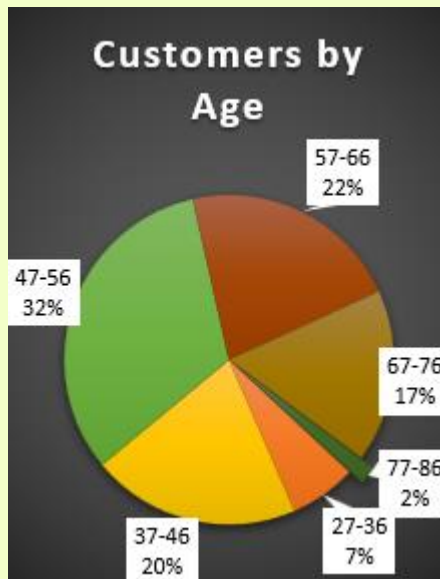
- Birth Years, Education, Marital and Income factors are significantly related to the number of purchases.

### (3) Which marketing campaign was the most successful?



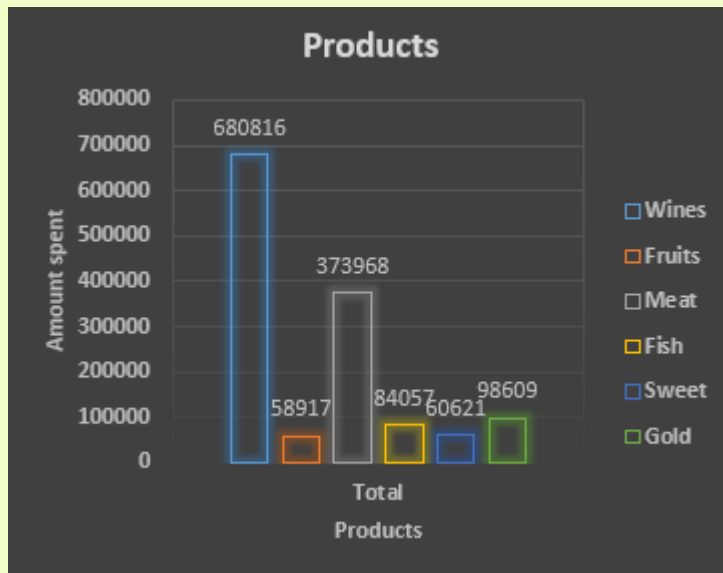
- Last campaign was the most successful.

#### (4) What does the average customer look like?



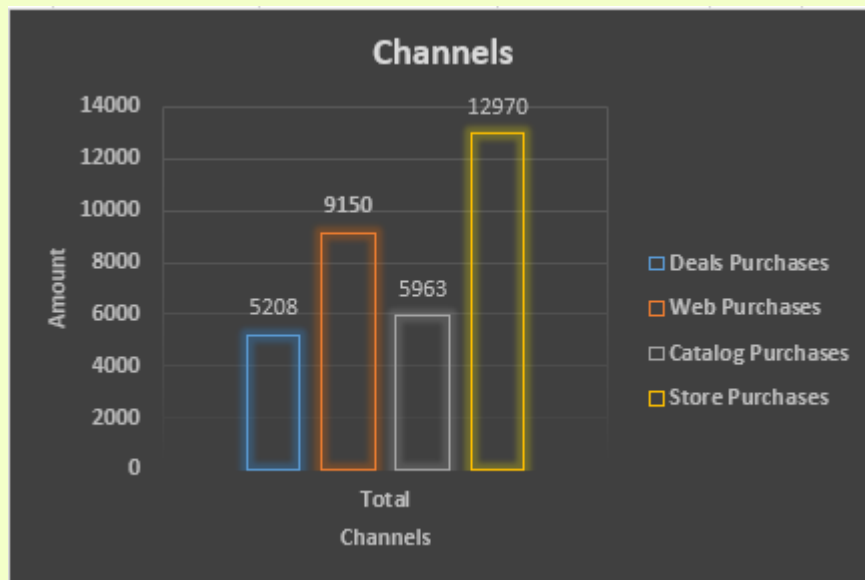
- An average customer is look like age between 47-56, Graduated, Married and having income between 21730 to 81729.

**(5) Which products are performing best?**



➤ "Wine" is the best performing product.

**(6) Which channels are underperforming?**



➤ "Deal" channel is underperforming while "Store" channel is best performing.

## Methodology:

The following methods are followed in our data analysis-

1. **Data Collection:** We downloaded the csv dataset from Kaggle:
2. <https://www.kaggle.com/datasets/deepaksw/marketing-dataset>
3. **Data Cleaning & organization:** The collected data is cleaned and organized in a comprehensive manner. The date and time are converted into suitable formats and organized, and thorough understanding of the data dictionary is done to do necessary analysis.
4. **Data Analysis:** Using Excel formulas we performed necessary calculations. The obtained data is visualized using Excel tools like Pivot table graphs and charts.
5. **Conclusions:** On the basis of our analysis, we identified the business trends, sales patterns, peak hours and more opportunities for business growth.

## Project scope:

Our analysis aims to answer the following questions-

- (1) Are there any null values or outliers? How will you handle them?
- (2) What factors are significantly related to the number of web purchases?
- (3) Which marketing campaign was the most successful?
- (4) What does the average customer look like?
- (5) Which products are performing best?
- (6) Which channels are underperforming?

## Goals:

- Identify customer background.
- Generate leads and increase sales.
- Enhance brand reputation.
- Support specific business objectives.
- Understand customer's requirements.
- Analyze business strategy.

## KPIs:

- Customer's age
- Education
- Marital status
- Income
- Amount spent on different products
- Different campaign channels
- Date of customers' enrollment to the company.

## Concepts used:

The key approach used in the marketing Campaign data analysis is mainly Excel based concepts.

1. Data Import: Excel allows us to import data from various sources, such as CSV files, databases, or other spreadsheet formats.
2. Data Cleaning: Excel provides tools to clean and prepare data for analysis. Here, we checked for blanks and used "Find and Replace" to correct errors or inconsistencies in the data also we changed NULL and Outliers with Mean and Mode.
3. Sorting and Filtering: Excel allows us to sort and filter data based on specific criteria. We sorted data on the basis of ID and other fields for analysis. Filtering enables us to display specific subsets of data based on certain conditions or values.
4. Formulas and Functions: Excel's formula and function capabilities are essential for performing calculations and deriving insights from data. Functions such as SUM, AVERAGE, MODE, COUNT, ROUND, sorting, filter and conditional formatting are used in this analysis to calculate totals and perform conditional analysis.
5. Pivot Tables: Pivot Tables are a powerful feature in Excel for summarizing and analyzing large datasets. Pivot Tables allow for easy exploration and visualization of data.
6. Charts and Graphs: Excel provides a range of chart types (bar charts, line charts, pie charts, etc.) to visually represent data. By creating charts and graphs, we visually analyzed patterns, trends, and disparities in the data.



## Conclusion:

- In conclusion, by understanding the factors that influence web purchases, focusing on the best-performing products, and improving the customer experience, companies can increase revenue and improve the performance of different purchases. With the right strategies and tactics, Store purchases can become a significant source of revenue and growth for the company.

## Project Owner:

- Neel Balar
- 14<sup>th</sup> July, 2023