**Marketing Data Analysis**

Problem & background

Marketing campaign data of **2,240** customers of Maven Marketing, including customer profiles, product preferences, campaign successes/failures, and channel performance. In this study, we examined the variables that have a major impact on online purchases, the best performing product, the channel, and the most effective marketing strategy. We suggest specific solutions to improve the efficiency of web purchases and boost income based on our findings.

Solution & Outcomes

* This data contains **24 Null/Blanks** which is found in **"Income"** Column we can handle this null value by some different methods.
* **First Method: -** First, we can drop values. If the proportion of missing values is minimal and has no bearing on the sample's representativeness.
* **Second Method: -** It involves inserting approximated values based on the available data for missing values. There are numerous ways to fill in the gaps left by missing numbers, including mean (average), median, mode, and regression. We have used **"Mean/Average"** for the blank values in this dataset.
* Factors that are significantly related to the number of web purchases are: -
  + Education
  + Marital Status
  + Country Origin
  + Birth Year
  + Income
* Marketing **Campaign-4** was the most successful campaign as compared to others.
* The average customer is a **married Spanish** citizen born between **1963 and 1982** with a **graduation** degree and an income between **26,730 to 76,729**
* The best-performing **product** right now are **Wines.**
* Store purchase channels is the best performing channels as compared to others.

Methodology & Project scope

* This project's main goal is to make the calculation and understanding of the results simpler. Data from different tables must be combined into one Excel spreadsheet and formatted appropriately.
* The dataset will next be analysed for flow patterns, correlations between variables, and further insights. In order to simplify additional data analysis, we will create new Excel worksheets within the same file utilising pivot tables and a variety of Excel functions.
* We will use pivot charts to produce an easily understood visual representation of the advised analysis. These graphs will provide information about the customer behavior.
* In the end, we'll produce a dashboard that provides all the suggested analysis in a simple to understand manner. The dashboard will give users a thorough overview of the data and allow them to base their judgements on the analysis's key findings.

Goals & KPIs

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

Concepts Used & Formula’s

* A pivot table is used to quickly summaries and interact with data.
* A bar graph is used to display findings
* Count, Average, Pivot table, VLOOKUP, Max, Min, filter etc.

Conclusion

The dataset provides a thorough overview of the customer purchases and which may be utilised to develop insights and make sensible decisions.

The project aims to create a clear and accurate dataset by using Pivot tables are utilized to extract insights for informed Store business approaches. The goal is to provide valuable information for decision-making in the industry.

In order to obtain insight and make wise business decisions, it is crucial to address null values and outliers, comprehend the influence of age, education, and income on web purchases, identify the most effective campaign, analyse client demography, and assess product performance. Companies can improve their marketing strategy and increase their general market success by addressing ineffective channels and capitalising on successful campaigns and product performance.

Project owner

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**Do you have any questions?**

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