**REPORT**

**Identifying Ideal Customer Segments for Marketing Campaigns**

1. **Describe the Business problem.**

The company under focus is looking for the ideal set of customers, which are to be focused upon while investing in product development, improving the sales channel and the marketing strategies. The market they are in currently and product that they sell is huge and most of it is the dominating in one or two category which is taking all the focus, so need to work on other product and capture and view for bigger aspect, to expand the business and grow.

1. **Briefly describe the data source**

We have taken our primary data set from Kaggle **"marketing\_campaign.csv,"** [**https://www.kaggle.com/datasets/whenamancodes/ideal-customer-analysis-personality-test**](https://www.kaggle.com/datasets/whenamancodes/ideal-customer-analysis-personality-test)

Customer Personality Analysis is a detailed analysis of a company’s ideal customers. A company may more easily adapt products to meet the unique wants, behaviors, and concerns of various consumer types because of this improved understanding of its customers. Customer personality analysis helps a business to modify its product based on its target customers from distinct types of customer segments. For instance, a business can determine which client segment is most likely to purchase the product and then focus its marketing efforts only on that group of customers, as opposed to spending money to advertise a new product to every customer in its database.

These are the attributes that have been utilized by us and are broadly classified into four categories-

* + **People**
  + **Products**
  + **Promotion**
  + **Place**

|  |  |  |  |
| --- | --- | --- | --- |
| People | Products | Promotion | Place |
| ID: Customer’s unique identifier | Wines: Amount spent on wine in last 2 years | Deals Purchases: Number of purchases made with a discount | **Web Purchases:** Number of purchases made through the company’s website |
| Birth Year: Customer’s birth Year | **Fruits:** Amount spent on fruits in last 2 years | **Campaign 1:** 1 if customer accepted the offer in the 1st  campaign, 0 otherwise | **Catalog Purchases:** Number of purchases made using a catalogue |
| Education: Customer’s education level | **Meat Products:** Amount spent on meat in last 2 years | **Campaign 2:** 1 if customer accepted the offer in the 2nd campaign, 0 otherwise | **Store Purchases:** Number of purchases made directly in stores |
| Marital Status: Customer ‘s marital status | **Fish Products:** Amount spent on fish in last 2 years | **Campaign 3:** 1 if customer accepted the offer in the 3rd campaign, 0 otherwise | **Web Visits Month:** Number of visits to company’s website in the last month |
| Income: Customer’s yearly household income | **Sweet Products:** Amount spent on sweets in last 2 years | **Campaign 4:** 1 if customer accepted the offer in the 4th campaign, 0 otherwise |  |
| Kid home: Number of children in customer’s household | **Gold Products:** Amount spent on gold in last 2 years | **Campaign 5:** 1 if customer accepted the offer in the 5th campaign, 0 otherwise |  |
| Teen home: Number of teenagers in customer’s household |  | **Response:** 1 if customer accepted the offer in the last campaign, 0 otherwise |  |

1. **Briefly describe the BI tool used**

We have chosen Tableau tool for solving the business problem and preparing dashboards for understanding and visualizing various aspects in the provided dataset. Following are the reasons for choosing Tableau:

* Tableau can handle large volumes of data quickly. It is faster and provides extensive features for visualizing the data. Tableau does not limit the number of data points in visualization or enforce row or size limitations, giving you a 360-degree view of your data.
* Tableau has excellent customer support. It has a large community forum for discussions.
* Power Pivot has no distinction between view and dashboards.
* Tableau helps to sort the data and produce the best
* visualization, that gives us a clear view of where the things are going.
* Can perform a lot of tasks and easy to work with.
* We get everything at one place no need to further change the data and put them from one tool to another.

1. **Describe the BI solution (including how data is processed).**

For deeper insight into the data, we prepared three dashboards namely:

1. Consumer Behavior: In this dashboard we have tried to visualize the variation of sales of various products with age, education, and the income group a customer belongs to. In our further analysis we also include whether a customer selected has a child or a teenager at home and how the sales of assorted products differ then. Here is the snapshot of the dashboard.

https://public.tableau.com/app/profile/hiral.lunkad/viz/IdentifyingIdealCustomerSegmentsforMarketingCampaigns/Dashboard1?publish=yes

A screenshot of a graph

Description automatically generated

(b) Sales Channel Dashboard: In this dashboard we have tried to understand how people with different education, age and marital status like to buy the product (online, in-store, catalog, or through deals).

https://public.tableau.com/app/profile/hiral.lunkad/viz/SalesChannelDashboard-IdentifyingIdealCustomerSegmentsforMarketingCampaigns/Dashboard2?publish=yes

A screen shot of a chart

Description automatically generated

(c) Marketing Dashboard: effectiveness of 5 campaigns held by the company have been analyzed, what kind of customers (age group, income level, kids at home or teen at home) the campaigns were able to attract and what products were sold the most through each campaign.

https://public.tableau.com/app/profile/hiral.lunkad/viz/MarketingDashboard-IdentifyingIdealCustomerSegmentsforMarketingCampaigns/Dashboard3?publish=yes

A screenshot of a marketing dashboard

Description automatically generated **5. Describe the BI product produce**

* With the help of tableau, we got an overview of what is exactly going with the company by getting the dashboard with visualization.
* The dashboard has some charts which indicate what most of the business is going on and on which part it is inclined the most.
* We have huge data, and this helps us to focus on every part of that and make us to understand the market easily.
* Our charts show what age group and which product and how the customers like to purchase, and our majority of customers are from what kind of background and what else we can have to cover most of the part.
* From the Consumer Behavior dashboard, it is being analyzed that based on the age group, education, and income the maximum number of amounts was being spend on the Wine Products and they can be considered as ideal customers while they need to focus on the decreasing sales of fruit products, fish products and gold products and need to produce some discount offers or improve the quality of products so the customers will get attracted towards those products as well.
* Another interesting fact in this dashboard was that as the income of the person increases the sales also increases which is being depicted by a trend line.
* For the Sales Channel dashboard, it is being analyzed that based on the marital status, age proportion, education, and income it can be concluded that the store purchases were the most within the Level 5 income and the educational domain as Graduation considering any of the age proportion and marital status. Further it was the least purchase from the catalog and web.
* In the marketing dashboard, we can analyze the effectiveness of campaigns held by the company based on education and age group. We have also studied how the campaigns lead to increase in sales of different products and how the campaigns encouraged the mode through which the products were bought. When seen collectively for all age groups and all education categories most sales are through in – store and most bought product are the wine. The company needs to focus upon the Number of purchases through Deals and the other products too except wine and meat.