iFood CRM Data Analyst Case

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Description

A food company wants to produce the highest profit for the next direct marketing campaign, scheduled for the next month.

A pilot campaign involving **2.240 customers** was carried out, customers who bought the offer were properly labeled. The total cost of the sample campaign was 6.720MU and the revenue generated by the customers who accepted the offer was 3.674MU.

Globally the campaign had a profit of -3.046MU and the success rate of the campaign was **15%**.

Objectives

The objective is of the team is to develop a model that predicts customer behavior and to apply it to the rest of the customer base.

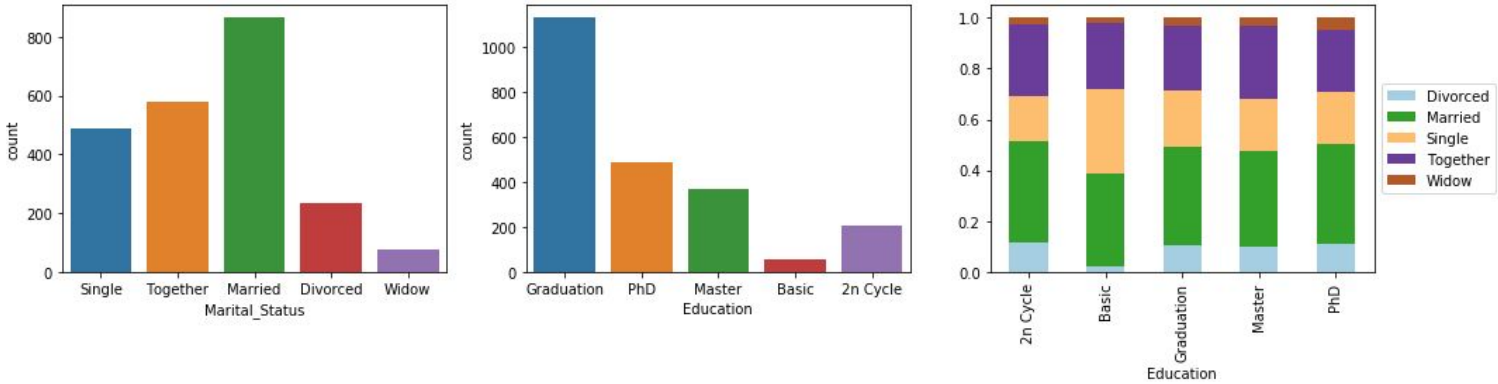
Moreover, other than maximizing the profit of the campaign, the CMO is interested in understanding to study the characteristic features of those customers who are willing to buy the gadget. The steps are:

- Data Exploration;
- Segmentation;
- Classification Model;

Data Exploration

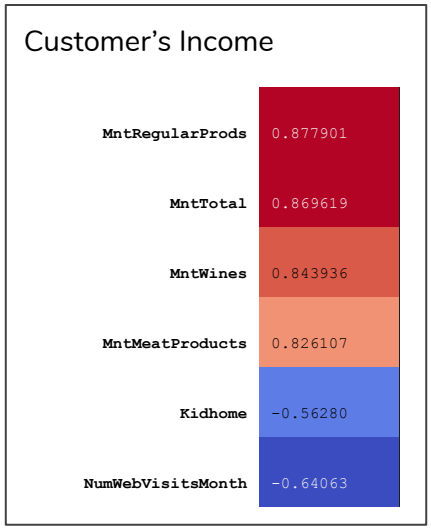
Customer Profile Analysis

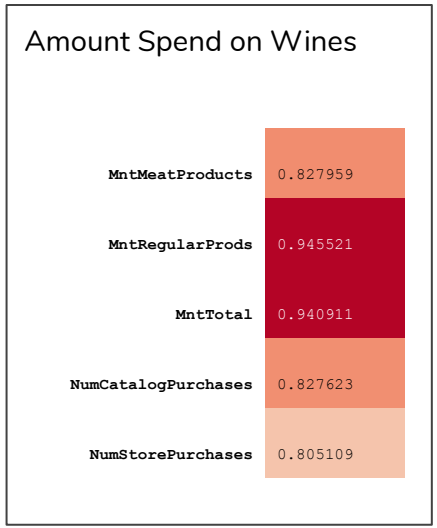
The majority of the customers are married and highly educated, there is no significant correlation between those two categorical information.

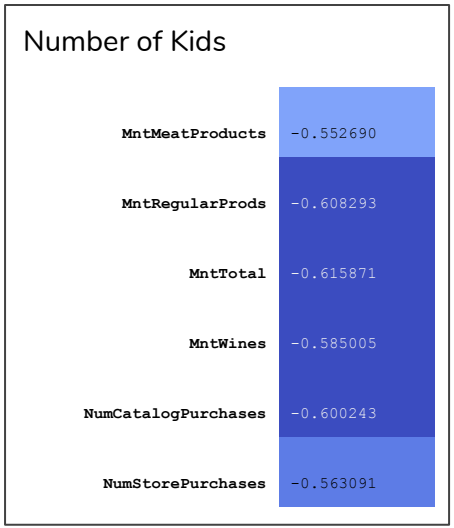


Correlation

- **Income** is a proxy for several other features, such as the amount spend, positively driven by meat and wine and it has a negative correlation with visits on the websites.
- The **amount spend on Wine** is, besides being related to high income, to the amount spend on Meat and it's purchased or in Catalog or in Stores.
- The **number of kids** is negative related to income, amont spend in total and, consequently, related to wine.
- **Higher Income** is also related to accept Campaigns.







Segmentation

Customers Segmentation

Cluster 0 - Low Income

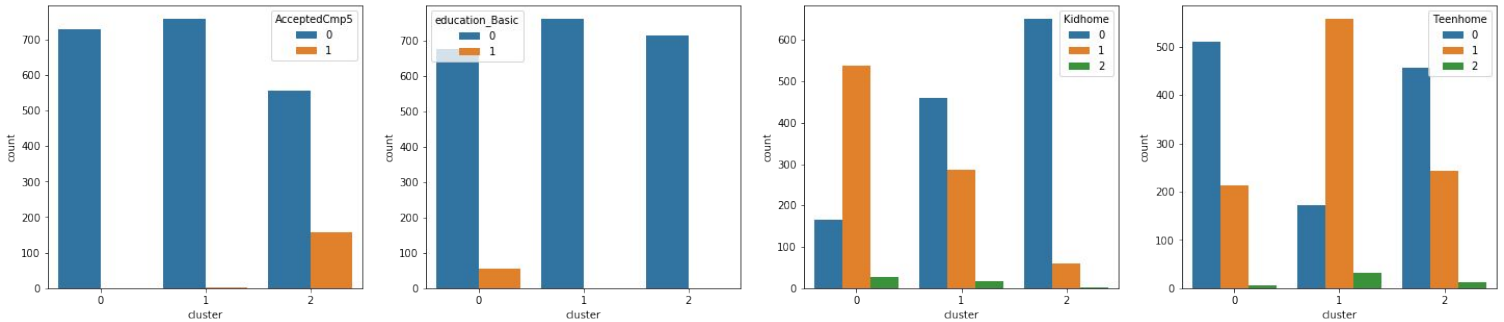
- **730** customers
- Represents the most part of Basic Education customers
- The majority have just one Kid

Cluster 1 - Avg Income

- **761** customers
- The majority has 1 Teenager at home

Cluster 2 - High Income

- **714** customers
- Buy more, in special **Wine**
- Accept more Campaigns, in special **Cmp 5**
- The majority has no kids
- High Store purchases and low Web Visits



Classification Model

Classification results

For the new campaign we develop a predictive model that classifies if the customer will accept the offers or not.

We can classify with **87% of accuracy**

The history of past Campaigns, the Income and the customers fidelity (Age as a customer and Recency) are crucial factors to this prediction.

Feature	Importance
Recency	8.475428
AcceptedCmpOverall	8.151117
Customer_Days	7.842309
Income	5.412607
MntTotal	5.098285
MntWines	4.935032
MntRegularProds	4.713860
MntMeatProducts	4.602892