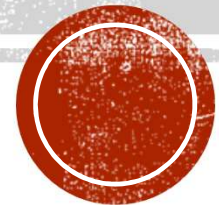


IFOOD CRM DATA ANALYSIS

Laís Machado Ferraz

Julho/2020



NEW MARKETING CAMPAIGN (6TH GADGET)

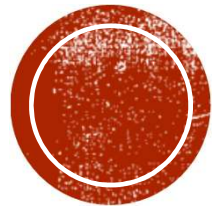
PILOT CAMPAIGN

- Pilot Campaign made to 2240 customers
- Customer selected at random and contacted by phone

Objectives

- Produce the highest profit
- Develop a model that predicts customer behavior and apply to rest of the database
- Cherry pick customers that are more likely to purchase the offer
- Understand the characteristics of those customers who are willing to buy the gadget

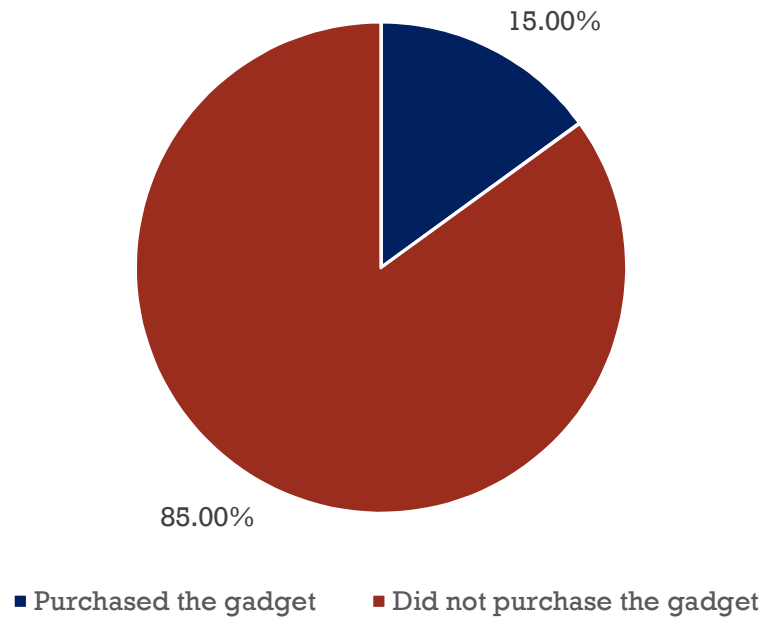




EXPLORATORY DATA ANALYSIS



Response



TOTAL COST = 6.72MU

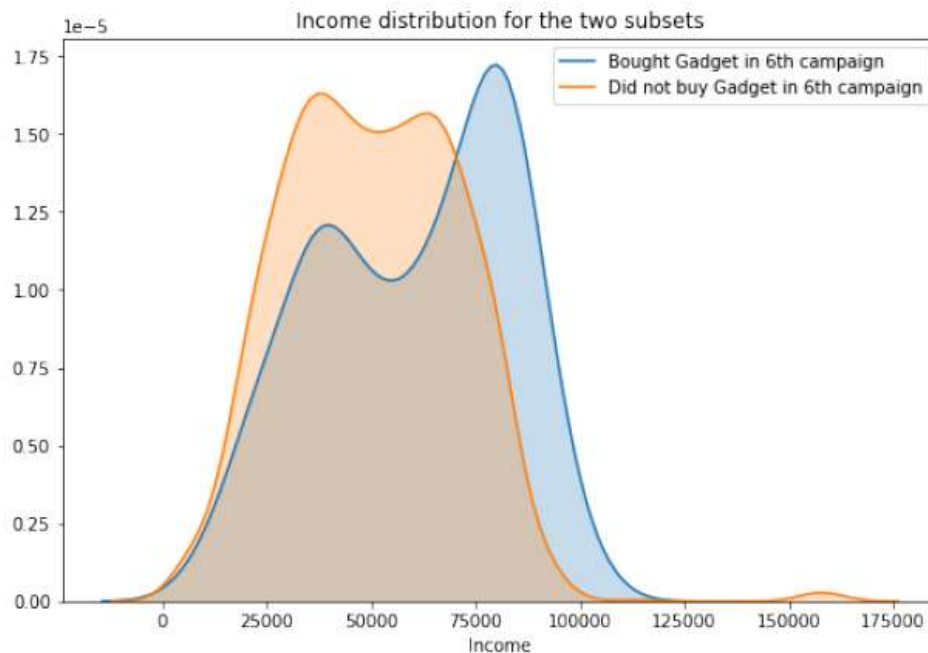
TOTAL REVENUE = 3.67MU

PROFIT = -3.046MU

**HOW TO IMPROVE RESULTS?
AIM CAMPAIGN TO THE
MOST LIKELY TO BUY!**

EXPLORATORY DATA ANALYSIS

CUSTOMER SEGMENTATION



Define who is most likely to buy based on customer segmentation

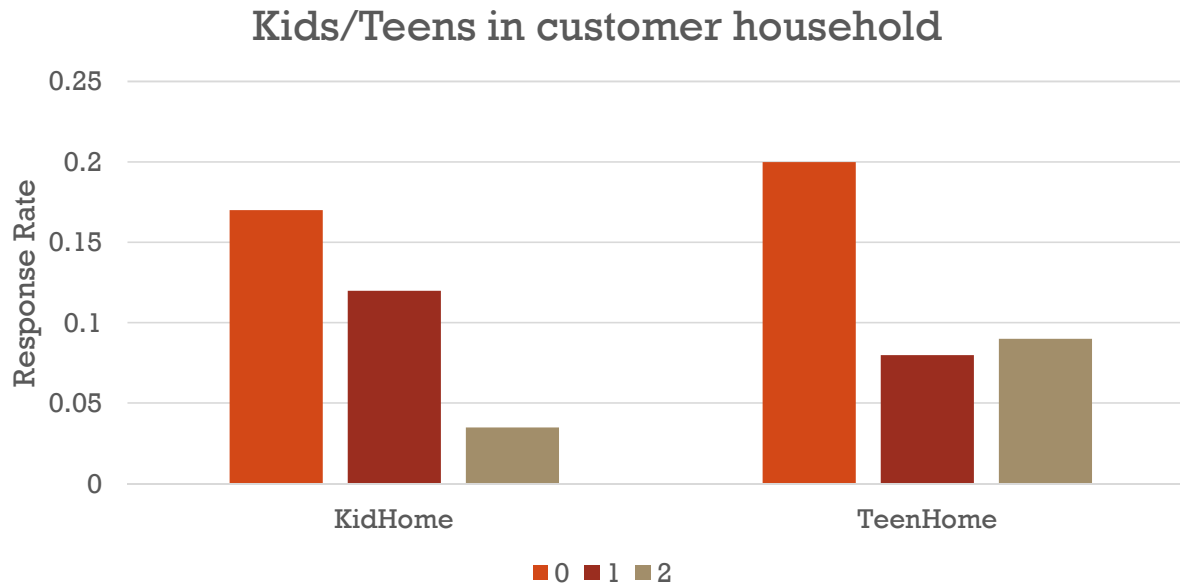
Segmentation

- Customer with High Income (higher than mean + 1.5 standard deviation)
- Usually divorced or single
- High level of education

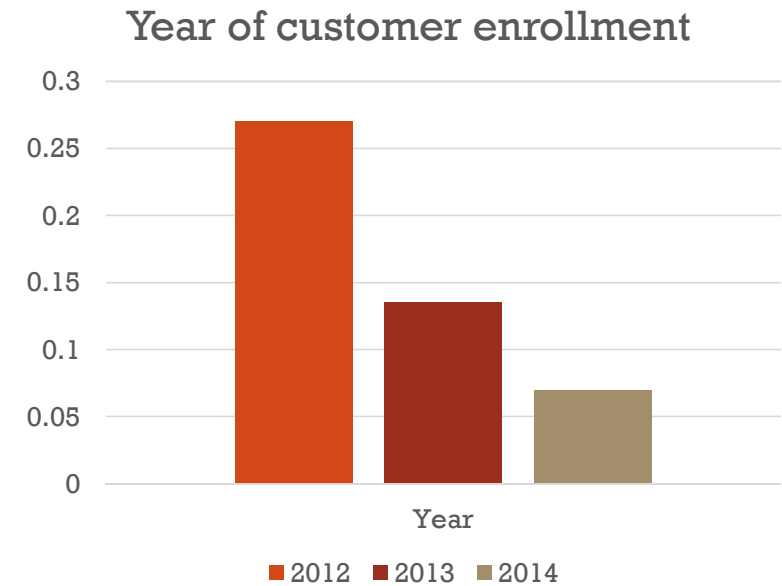


EXPLORATORY DATA ANALYSIS

CUSTOMER SEGMENTATION



No kids or teens at home



Old customer



EXPLORATORY DATA ANALYSIS

CUSTOMER PURCHASES

Items bought before	Probability of buying last campaign
Bought any item	40.60%
Bought 1 item	31.08 %
Bought 2 items	50.60 %
Bought 3 items	79.55 %
Bought 4 items	90.91 %

- Frequent customers more likely to accept the 6th campaign
- The probability of accepting the gadget in the last campaign increases with the number of campaigns the user has bought before
- Gain customer loyalty!

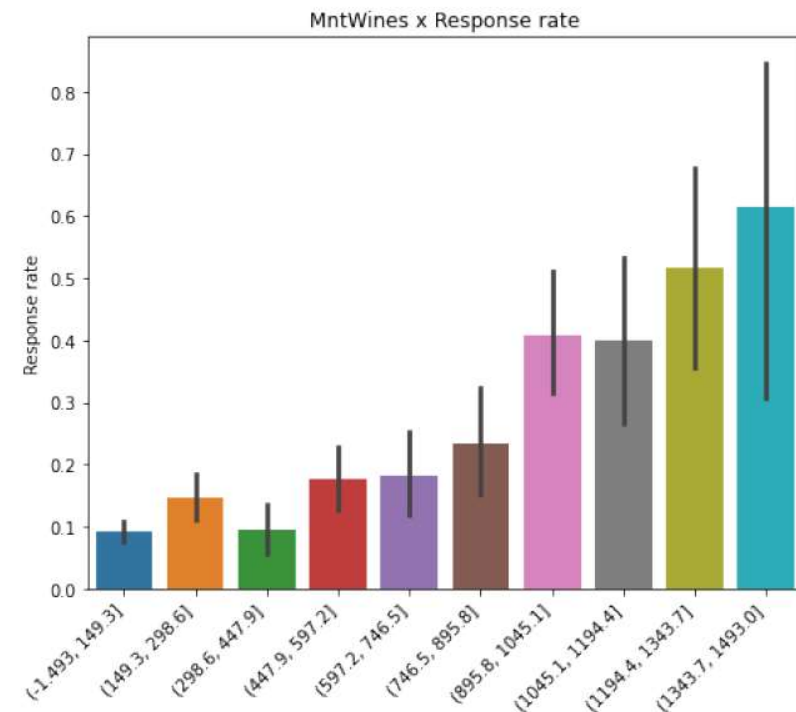


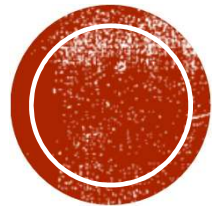
EXPLORATORY DATA ANALYSIS

CUSTOMER PURCHASES

Segmentation based on Purchases

- Customer who purchased recently more likely to buy again – keep customer buying
- Catalogue buyers
- Spends high amounts in Wines and Meat Products
- Visits more than 4 times the website in the last month





PREDICTIVE MODEL



NEW MARKETING CAMPAIGN (6TH GADGET) COMPANY STRATEGY

- Ratio of cost/revenue = 3.6
- **No profit scenario (long term):**
 - For each person who buys, can have 2.6 people who do not
 - Even if a person does not buy the deal, they may contribute to an organic growth
 - Wider recognition of the brand and product
- **Highest profit scenario (short term):**
 - Send the campaign only to customers with high scores



NEW MARKETING CAMPAIGN (6TH GADGET)

SUMMARY

- 29 columns

3 Categorical columns
26 Numerical columns
- **Model:** RandomForestRegressor
- **Validation:** Cross validation method
- **Score metric:** Area Under the ROC Curve (ROC AUC)

Mean score = 0.880

A Regressor model was chosen in order to give scores to customer and turn possible to cherry-pick the most likely to buy based on the marketing budget.





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