



Deliver fresh produce to your door

Identify key consumers to drive sales

Yi Lin

07/10/2023



Background

Objective: To build a predictive model that will help budget allocation to the customers who are likely to spend more money.

Pilot survey: 2.240 customers selected at random and contacted by phone. During the following months, customers who bought the offer were properly labeled.

Question

How does our key customers look like?

**Know the features of our key customers,
More accurate marketing strategy,
Help drive our gross sales!**

Glance of data

Feature	Description
Background	
Education	customer's level of education
Marital	customer's marital status
Kidhome	number of small children in customer's household
Teenhome	number of teenagers in customer's household
Income	customer's yearly household income
Purchasing behaviours	
MutFishProducts	amount spent on fish products in the last 2 years
MntMentProducts	amount spent on meat products in the last 2 years
MntFruits	amount spent on fruits in the last 2 years
MntSweet Products	amount spent on sweet products in the last 2 years
MntWines	amount spent on wines in the last 2 years
MntGoldProds	amount spent on gold products in the last 2 years
NumDealsPurchases	number of purchases made with discount NumCatalogPurchases number of purchases inde using catalogue
NumStorePurchases	number of purchases made directly in stores
NumWehPurchases	number of purchases made through company's web site
Num WebVisitsMonth	number of visits to company's web site in the last month
Offer acceptance	
AcceptedCmp1	1 if costumer accepted the offer in the 1st campaign, O otherwise
AcceptedCmp2	1 if costumer accepted the offer in the 2nd campaign, O otherwise
AcceptedCmp3	1 if costumer accepted the offer in the 3rd campaign, O otherwise
AcceptedCmp4	1 if costumer accepted the offer in the 4th campaign, O otherwise
AcceptedCmp5	1 if costumer accepted the offer in the 5th campaign, O otherwise

Regression Model

Iteration 1 - created dummies for categorical variables

- R-squared: **0.799**

Iteration 2 - log transformed and normalised

- R-squared: **0.911**

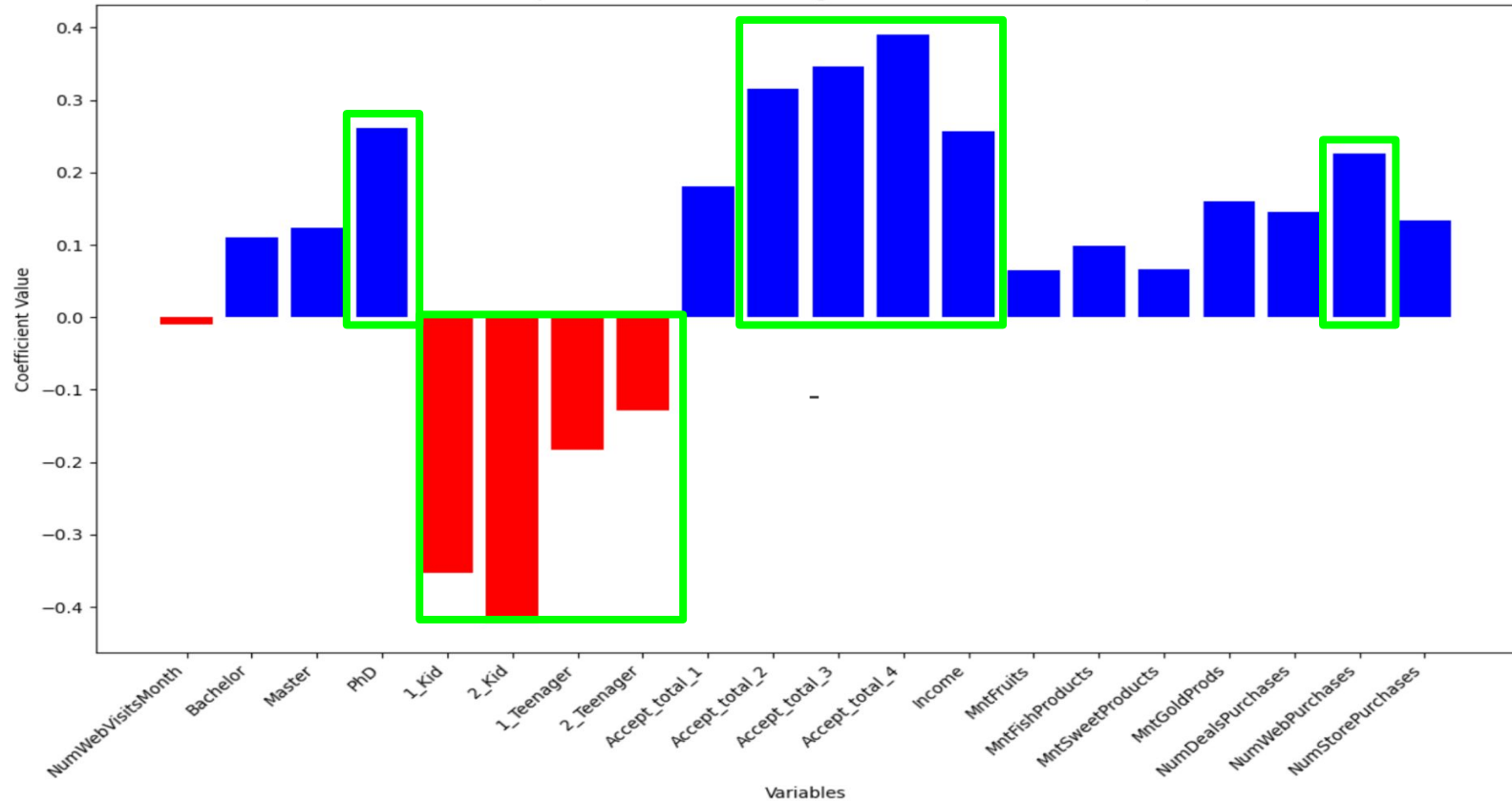
Iteration 3 - removing high p-value variables

- R-squared: **0.911**

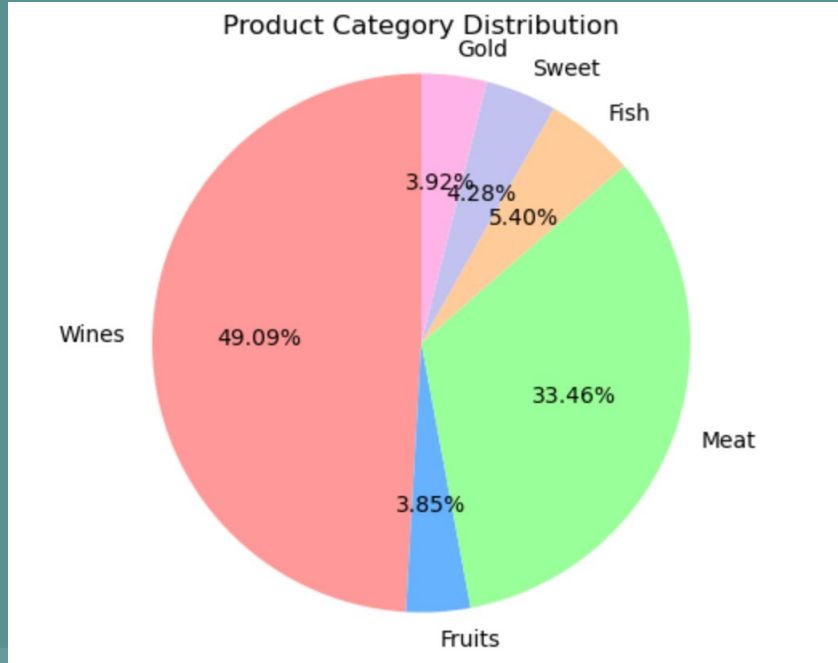
Data validation: Cross data validation

1. Average cross-validation score: **0.906**
2. Train = **0.087**, Test = **0.094** (mean squared error)

Relationship between customer background, behaviours and their spent



Most purchased category



Category:

1. Wines 49.09%
2. Meat 33.46%
3. Fish 5.40%
4. Sweet 4.28%
5. Fruits 3.85%
6. Gold 3.92%

Average monthly spent: \$61.91

Insight

Key Customers:

- Highly educated, high income
- Have no children, no matter married or not
- Prefer online shopping
- Have accepted previous offer
- Prefer wines and meat
- Monthly spent: \$61.9

Suggestions:

- Dinner package (M9 steak+wine, Salmon fillet+wine)
- \$1 to get fruit/sweet when people buy a meat/wine
- Offer: spend 77 dollars to get 10 dollars cash back/double rewards points

Q&A

Yi Lin

07/10/2023