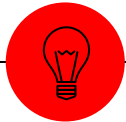


iFood CRM Data Analyst Case

Guilherme Gomes





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Introduction



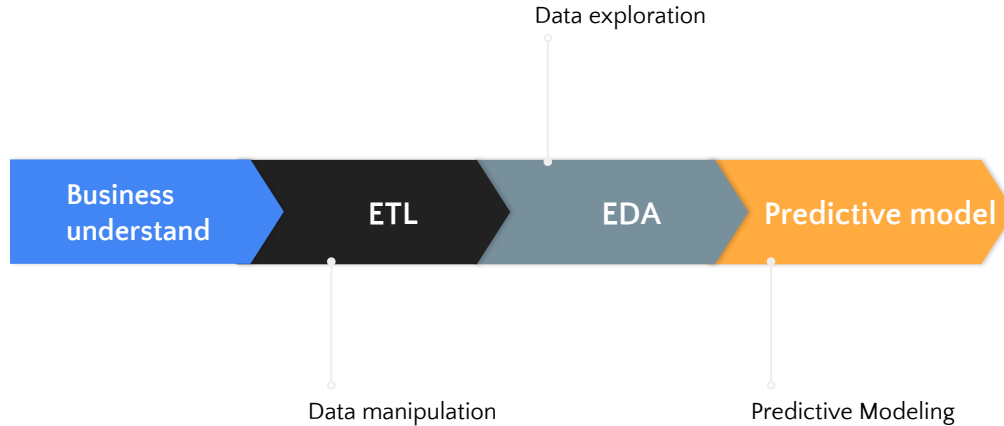
Introduction

After 3 years with a globally solid revenue, the company doesn't have a good growth profit perspective for the next 3 years. An alternative to solve it is improving the marketing campaign performance by using data analysis and machine learning.

In order to do this, we need to answer some questions:

- What's the main behaviour of the respondents?
- Is it possible to indicate how respondents will accept the campaign?

Analysis steps



Tools:

- Python
- Pandas
- Scikit-learn
- Jupyter notebook

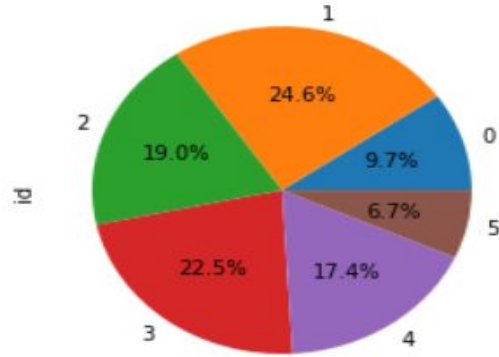
2

Customer segmentation

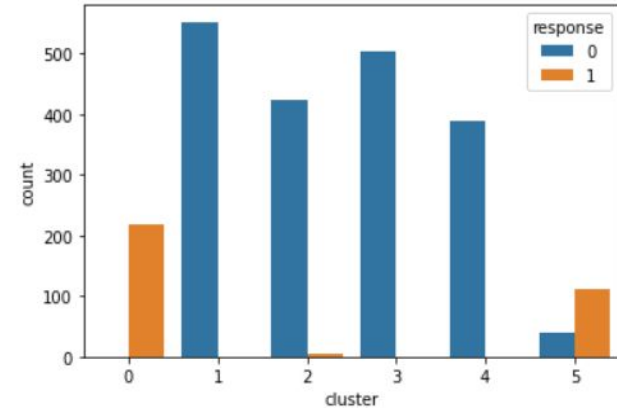


Customer segmentation

1. % of customers by cluster



2. # of campaign success

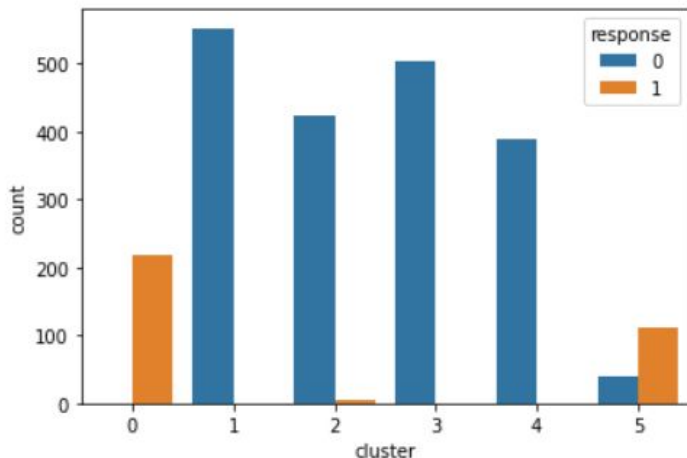


- The K-Means method returned 6 customer segmentations (cluster).
- The second chart shows the people that buy a new item after the last campaign: being **0 the people that didn't buy** any item and **1 people that bought** some item.

Customer segmentation

- It is possible to notice that **more than 300 persons** that are in **cluster 0 and 5** bought something after the campaign. Let's see the **main characteristics** of this clusters:

2. # of Campaign Success



- **Cluster 0:**
 - Income: \$ 30,000.00
 - LTV between 3312 days and 3485 days
 - Age between 40 years and 60 years
 - Marital status is single
 - Education: Graduation
- **Cluster 5:**
 - Income: \$ 80,000.00
 - LTV between 2780 days and 2963 days
 - Age between 40 years and 60 years
 - Marital status is married
 - Education: Graduation

3

Predictive model



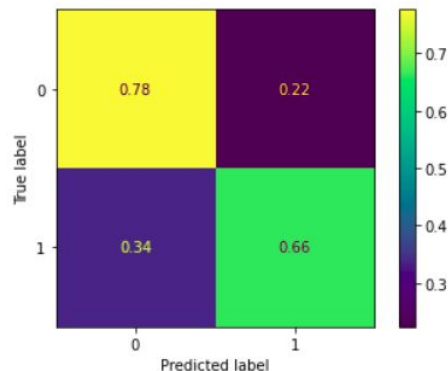
Predictive model

The model can provide a person with 76% of certain!

Model metrics

	precision	recall	f1-score	support
0	0.93	0.78	0.85	577
1	0.33	0.66	0.44	95
accuracy			0.76	672
macro avg	0.63	0.72	0.64	672
weighted avg	0.85	0.76	0.79	672

Confusion matrix



Precision: % of true positive

Recall: % of all true class

F1-score: harmonic average
between precision and recall.

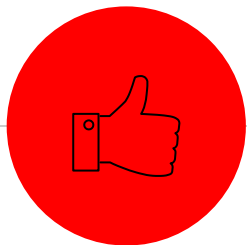
4

Conclusion



Conclusion

- With this model the success rate improved from 15% to 29%.
- The actual ROI is -45%, but we could improve it to 0,05%.



Thanks!

Questions?

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