

# iFood Marketing Campaign Optimization

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*Prepared for iFood by  
Strauss Consulting LLC*





Who here thinks targeted marketing is difficult?

(show of hands)

Good news:

It doesn't have to be!



# Agenda

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1. Business Introduction
2. Business Problem
3. Exploratory Analysis
4. Solutions (Models)
5. Conclusion





# PART 1 BUSINESS OVERVIEW

# What is iFood?

## Inside iFood's Business

iFood moves 0.53% of Brazil's GDP daily.

They strive to deliver the best experience for consumers, delivery people, restaurants, and partner establishments.

**+ 97 Million**

Orders delivered  
per month

**> 350,000**

Affiliated  
establishments

**> 1,500**

Cities across Brazil

**> 310,000**

Active couriers

**> 55 Million**

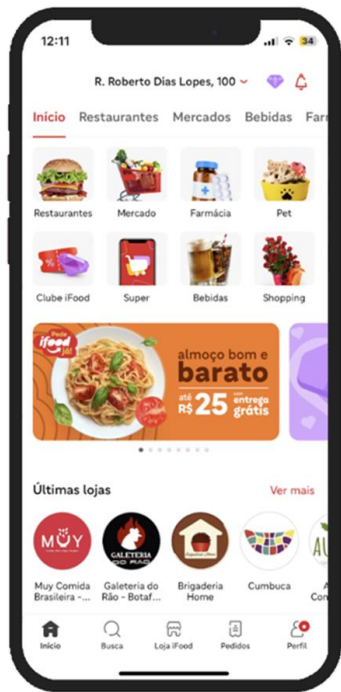
Active users

**> 5,000**

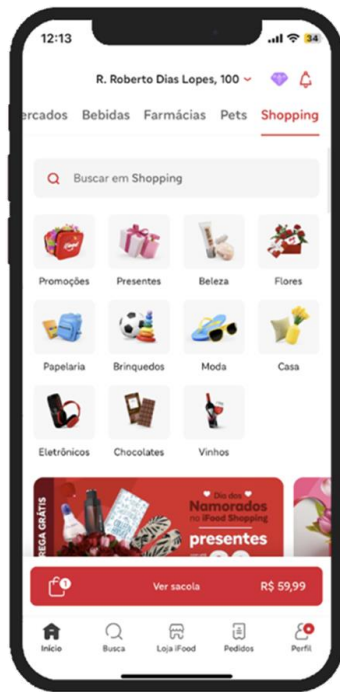
Business partners

- + Delivery model like uber eats/doordash
- + Boutique brand; High end products (meats, wines, etc.)
- + Brick-and-mortar "iFood marketplace" locations

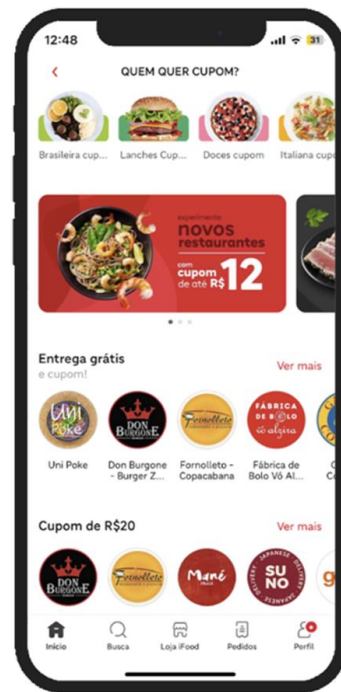
# Mobile Application



iFood Home Screen



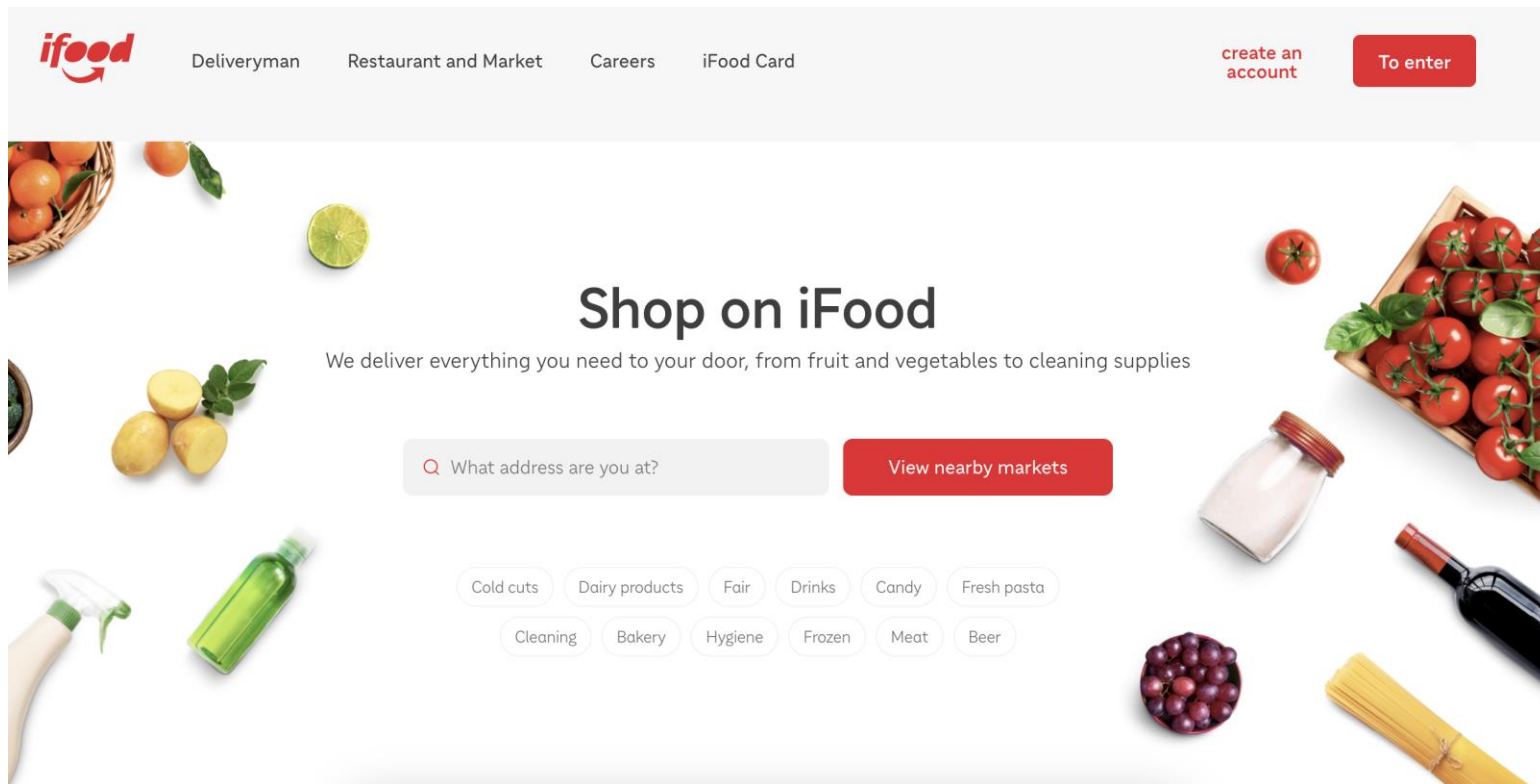
iFood has a variety of categories for different products



“Who wants a coupon ?”  
is the title of the app’s  
promotions page



# Website





# PART 2 BUSINESS PROBLEM



# Problem Statement

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The CMO of iFood has made it clear that the last 5 marketing campaigns have underperformed compared to competitors. How can we improve targeting of our marketing campaigns to increase profitability?

# Defining Our Objectives

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## Key Questions:

1. Campaign conversion rates have been suboptimal for the first 5 campaigns. Which campaigns do we invest more/less in?
2. How can we target the next marketing campaign (campaign 6) more effectively than previous campaigns?




## Objectives:

**Goal 1:** Invest more in successful campaigns, sunset unsuccessful ones.

**Goal 2:** Train a prediction model to target customers for the newest campaign (campaign 6)





# PART 3 EXPLORATORY DATA ANALYSIS



## Dataset Overview

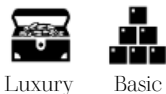


# What Data Was Collected?

## Products in 5 Major Categories:



## Further Divided into:



## 3 Sales Channels:



Column Name	Definition
Accepted Cmp1	1if customer accepted the offer in the 1st campaign, 0 otherwise
Accepted Cmp2	1if customer accepted the offer in the 2nd campaign, 0 otherwise
Accepted Cmp3	1if customer accepted the offer in the 3rd campaign, 0 otherwise
Accepted Cmp4	1if customer accepted the offer in the 4th campaign, 0 otherwise
Accepted Cmp5	1if customer accepted the offer in the 5th campaign, 0 otherwise
Response	1if customer accepted the offer in the 6 <sup>th</sup> (newest) campaign, 0 otherwise
Complain	1 if the customer complained in the last 2 years
DtCustomer	Date of customer's enrollment in the company
Education	Customer's education level
Marital	Customer's marital status
Kidhome	Number of children under 12 in a customer household
Teenhome	Number of children between 13 and 18 in a customer household
Income	Customer's yearly household income
MntFishProducts	Amount spent on fish products in the last 2 years
MntMeatProducts	Amount spent on meat products in the last 2 years
MntGoldProducts	Amount spent on gold products in the last 2 years
MntSweetProducts	Amount spent on candy products in the last 2 years
MntWines	Amount spent on wine products in the last 2 years
NumDealsPurchases	# purchases made with discount
NumCatalogPurchases	# purchases made using catalog
NumWebPurchases	# purchases made using internet
NumInStorePurchases	# purchases made in store

# Complicating Factors

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1. Ambiguity
2. Small sample size (2240 rows)
3. Blank cells, outliers, and unclean data

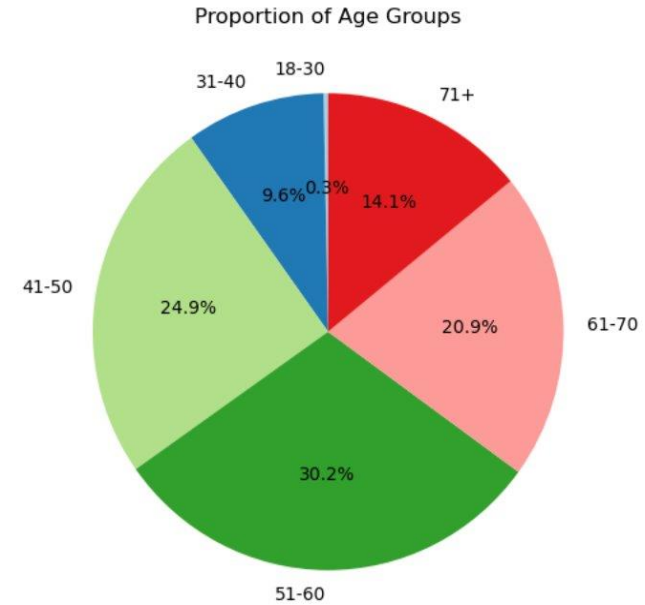
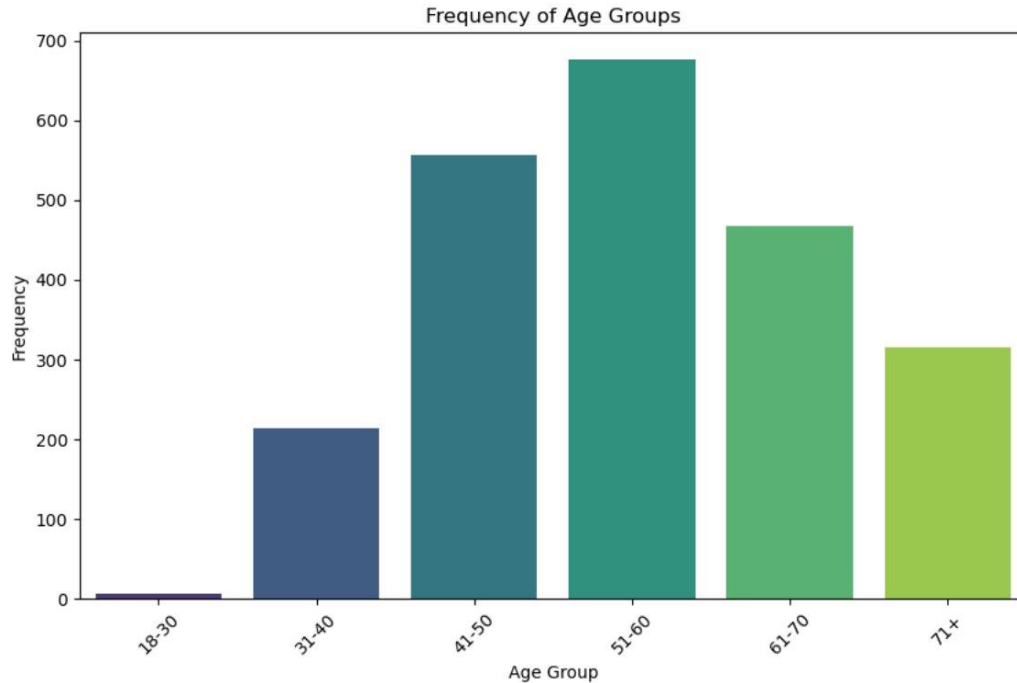


# Exploratory Analysis

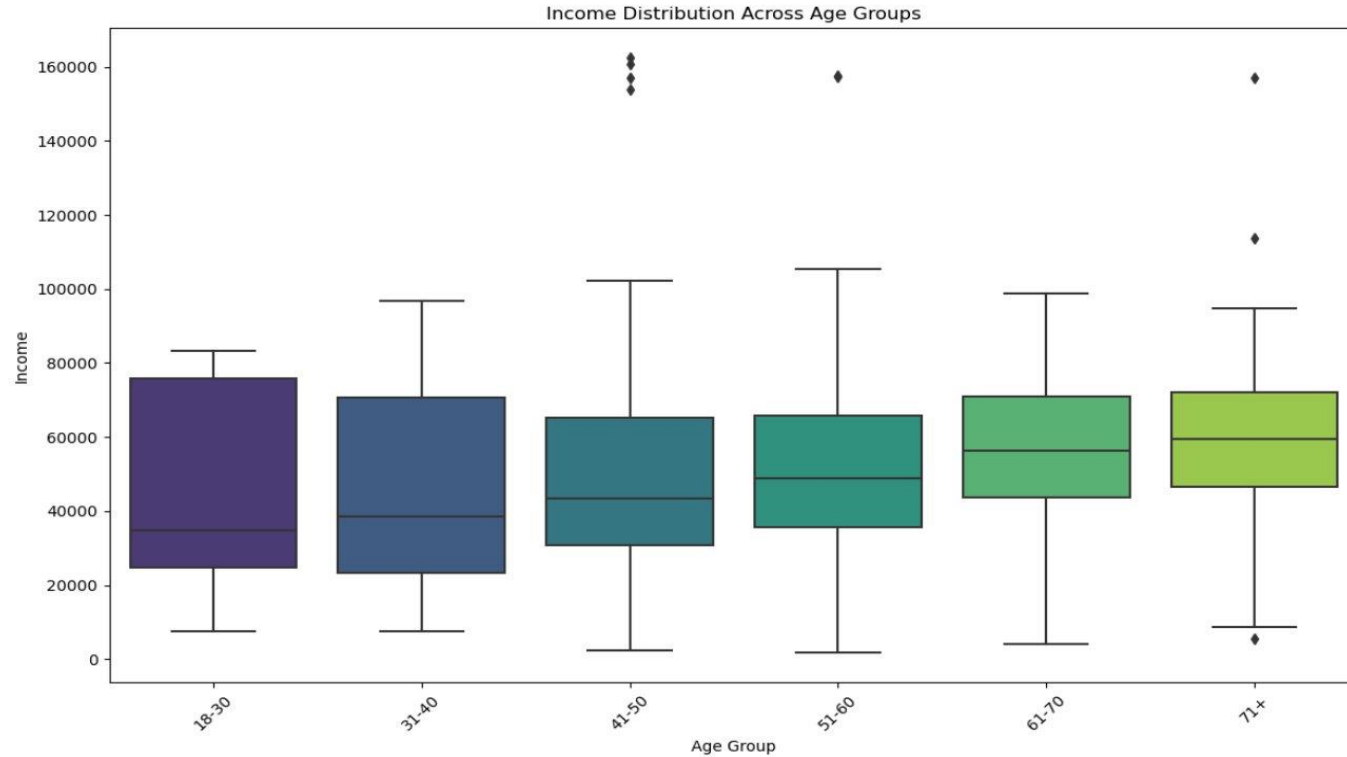


# iFood Has an Aging Customer Base

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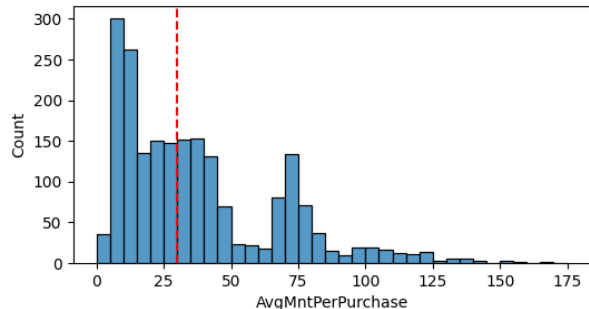
# As Age Increases So Does Purchasing Power



# People Use iFood To Order Takeout & Groceries

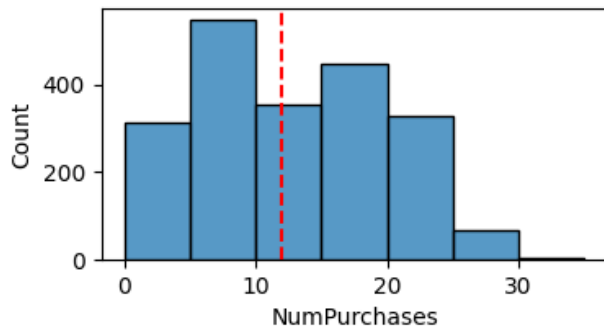
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Avg. # Products Per Purchase



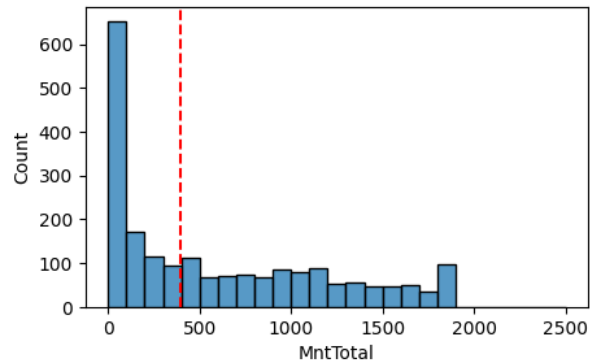
Median = 26.4

Avg. # of Purchases Per Customer  
(2 month window)



Median = 12.0

Avg. Overall \$ Spent Per Customer  
(2 month window)



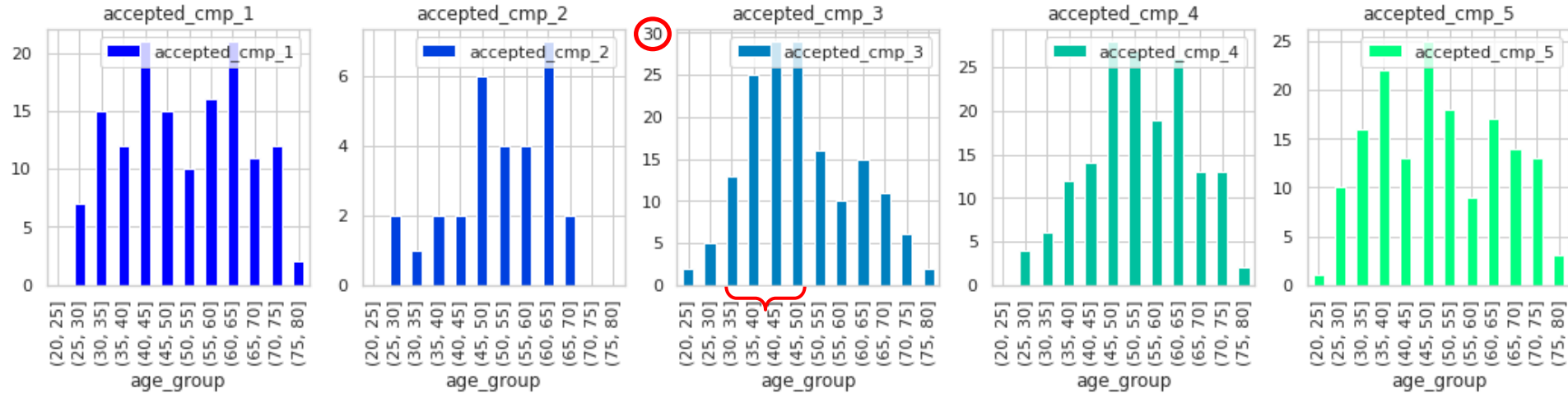
Median = \$396.50

# Previous Campaigns (1-5) Performed Worse Than 6

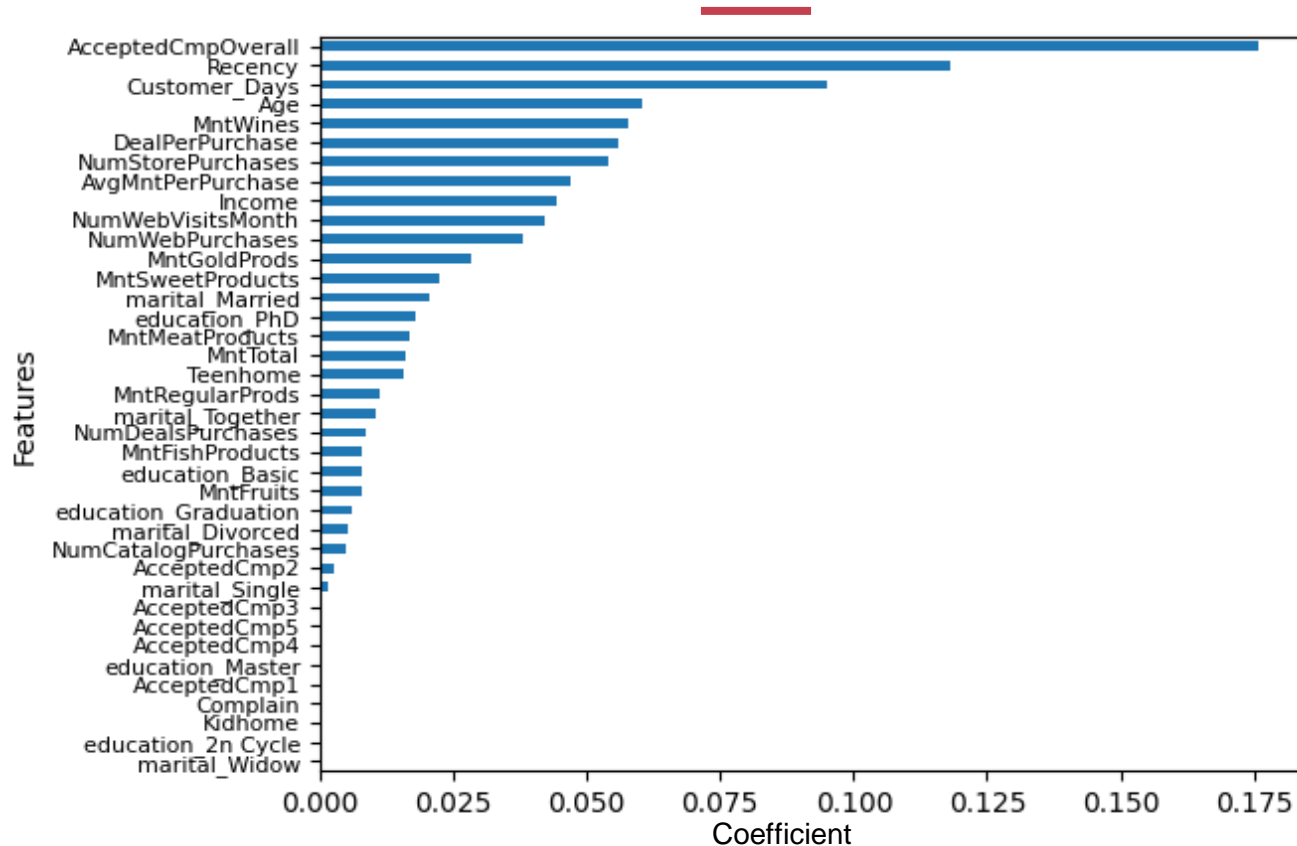
	AcceptedCmp1	AcceptedCmp2	AcceptedCmp3	AcceptedCmp4	AcceptedCmp5	AcceptedCmpOverall	Response (Cmp6)
Mean (response rate)	0.065598	0.012634	0.073372	0.076774	0.071914	0.300292	<b>0.152089</b>
stDev	0.247638	0.111714	0.260810	0.266297	0.258409	0.678305	0.359195




# Campaign 3 Converts Young Customers



# These Features Best Predict Campaign Acceptance







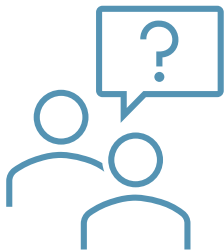
# PART 4 SOLUTIONS

# Reiterating Our Objectives

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## Key Questions:

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2. How can we target the next marketing campaign (campaign 6) more effectively than previous campaigns?



## Objectives:

**Goal 1:** Invest more in successful campaigns, sunset unsuccessful ones.

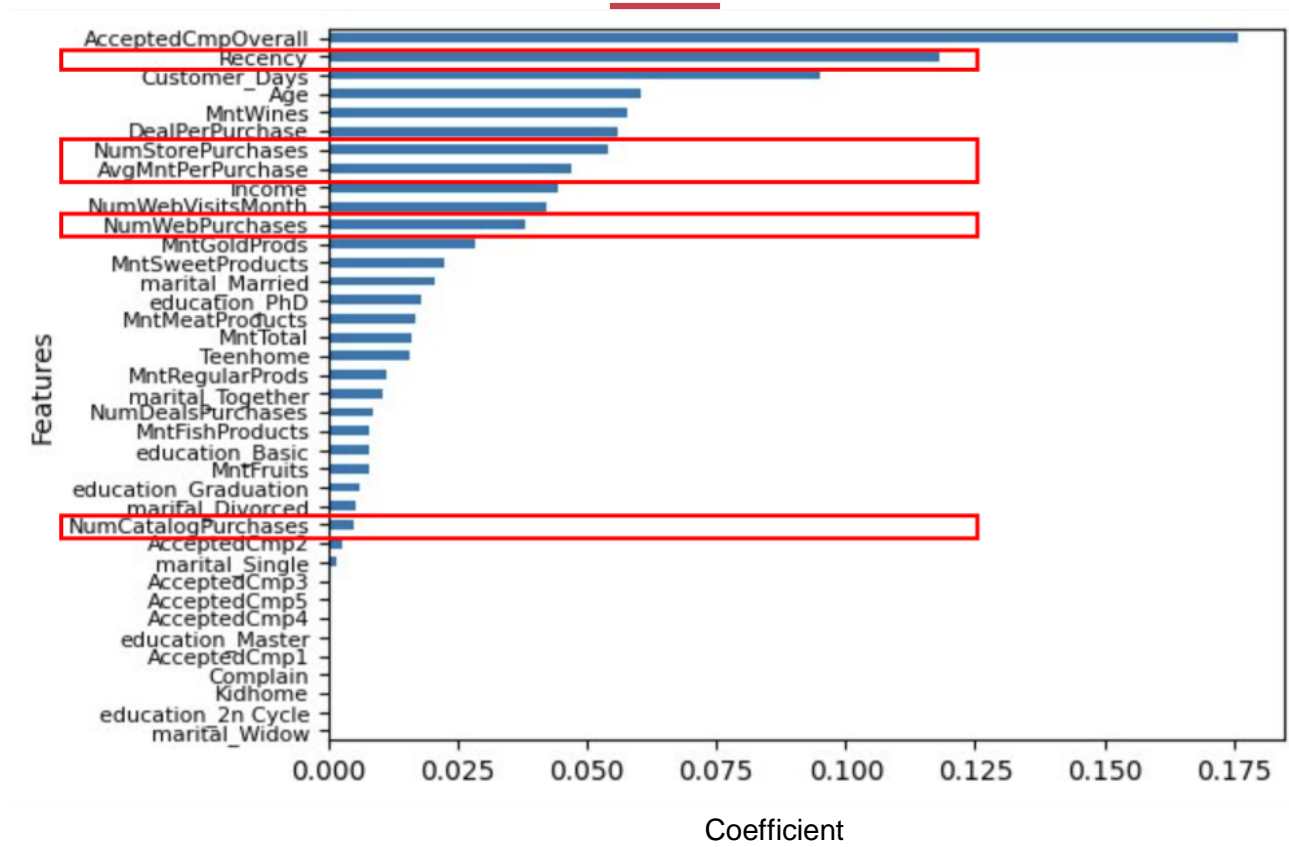
**Goal 2:** Train a prediction model to target customers for the newest campaign (campaign 6)



# Defining Our KPI's



# These Features Best Predict Campaign Acceptance



# RFM Is Our First Key Performance Indicator (KPI)

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## 1. Recency Frequency Monetary (RFM)

In order to maximize ROI for our direct marketing campaigns, we should target:

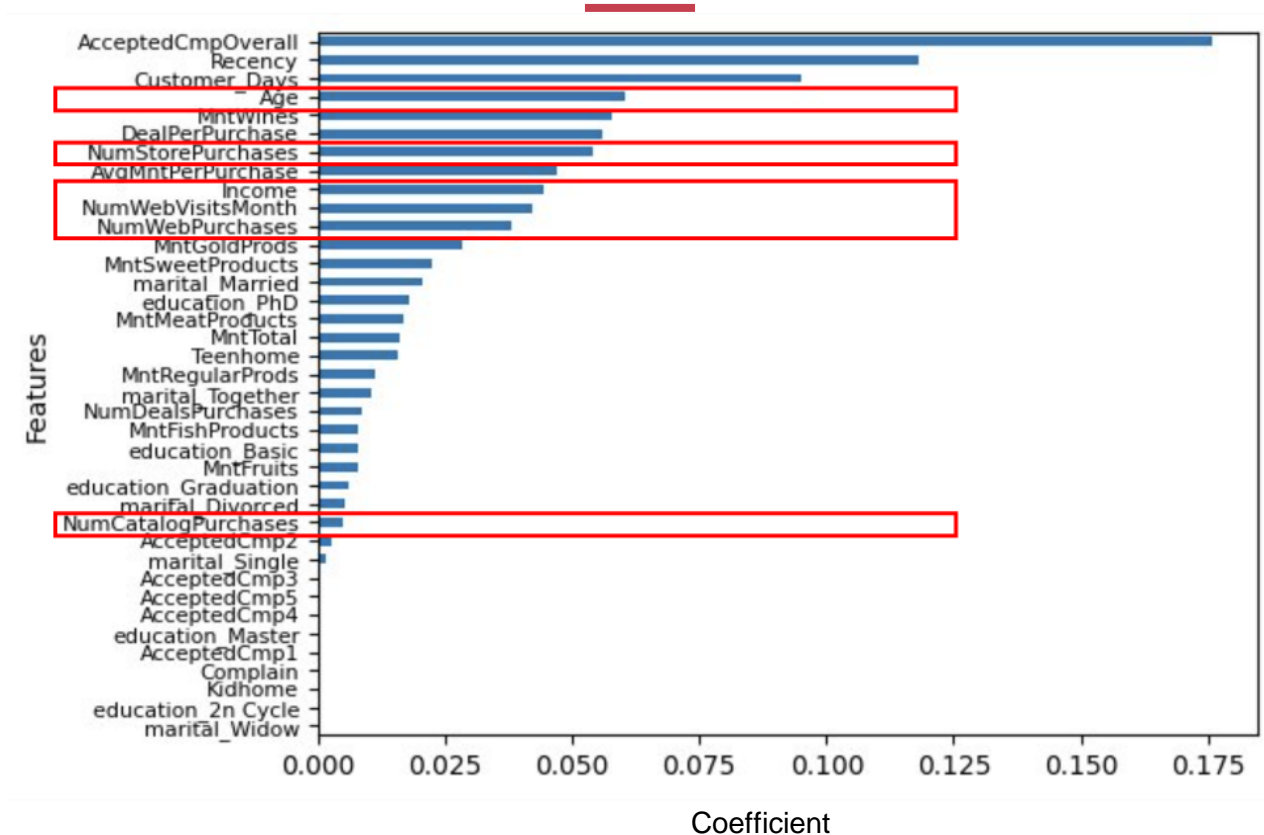
- The most **RECENT** customers
- The most **FREQUENT** customers
- The **HIGHEST SPENDING** customers



# RFM Definitions

	1 (lowest 25%)	2 (25-50%)	3 (50-75%)	4 (highest 25%)
Recency	The LEAST recent customers	Customers who are not very recent	Fairly recent customers	The MOST recent customers
Frequency	The LEAST frequent customers	Customers who are not very frequent	Fairly frequent customers	The MOST frequent customers
Monetary Value	The customers who SPENT THE LEAST	Customers who don't spend as much	The customers who spend a decent amount	The customers who SPENT THE MOST

# These Features Best Predict Campaign Acceptance





# AIC Is Our Second Key Performance Indicator (KPI)

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## 2. Age Income Channel (AIC)

In order to maximize ROI for our direct marketing campaigns, we should target:

- The most responsive **AGE GROUP**
- The **HIGHEST INCOME** customers
- The most responsive **CHANNEL**

# AIC Definitions

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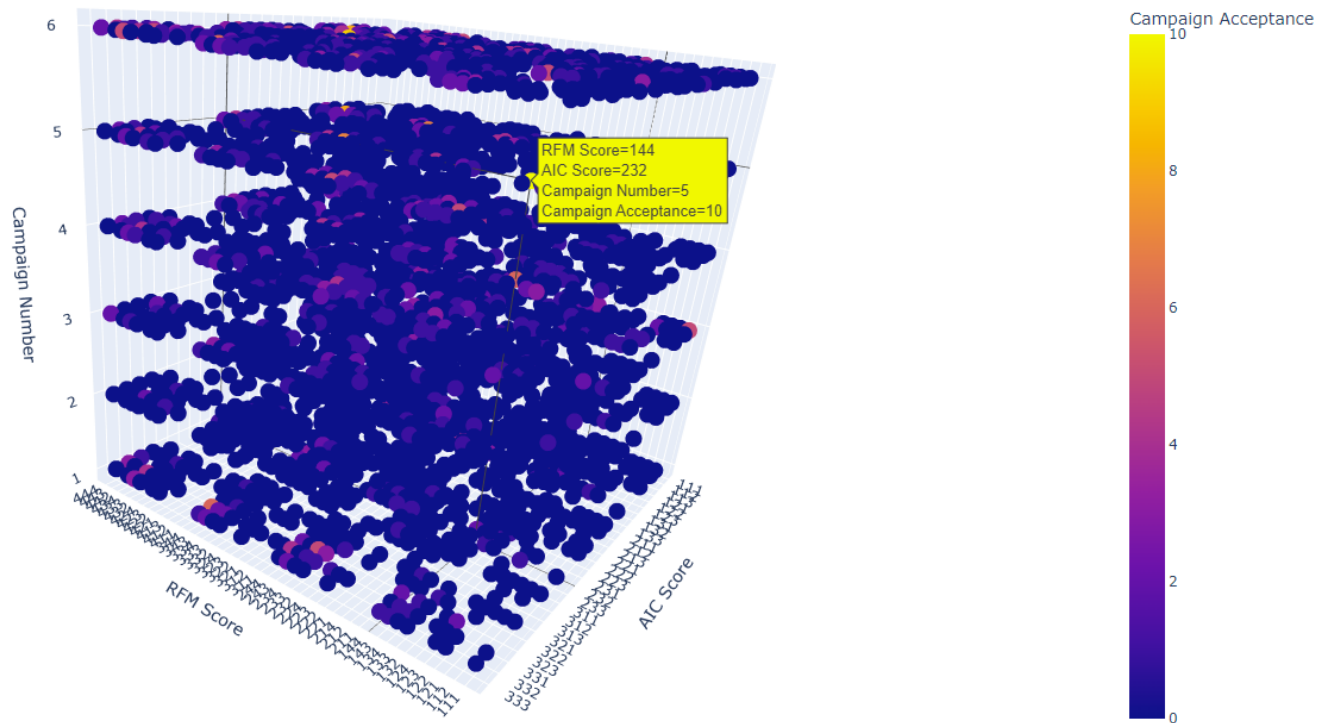
	1 (lowest 33%)	2 (33-67%)	3 (Highest 33%)
Age	Oldest	Middle	Youngest
Income	Low Income	Average Income	High Income
Channel	Catalogue	In-store	Web

Question 1:

Which Campaigns Do We Invest More Money In?  
Which Campaigns Should Be Sunset?



# RFM/AIC Model Demo



# Campaign Performance Insights & Recommendations

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1. Sunset Campaigns 1 + 2



2. Use Campaign 5 for targeted reacquisition marketing

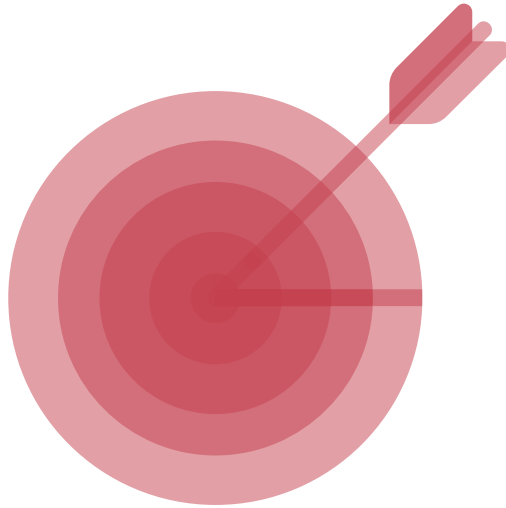


3. Use Campaign 3 to acquire new valuable customers  
(young, wealthy, internet native customers)



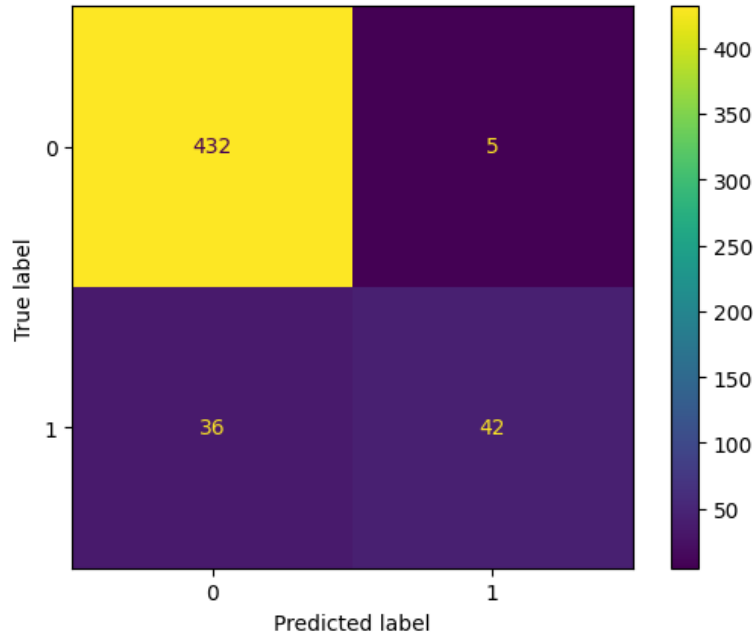
Question 2:

How Can We Target The Next Campaign  
More Effectively?



# Using Binomial Logistic Regression To Target Campaign 6

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Accuracy: 0.908738

Precision: 0.803922

Recall: 0.525641

F1 Score: 0.635659



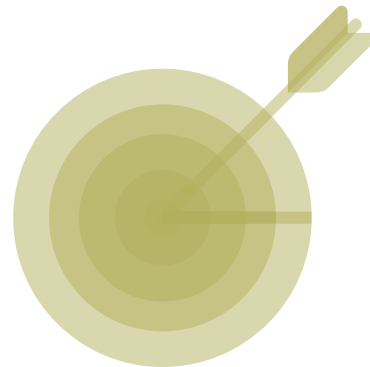
# Our Deliverables

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CleanTheData.py



ApplyTheModel.py



## Logistic Regression Results on Test Data

Accuracy: 0.908738

Precision: 0.803922

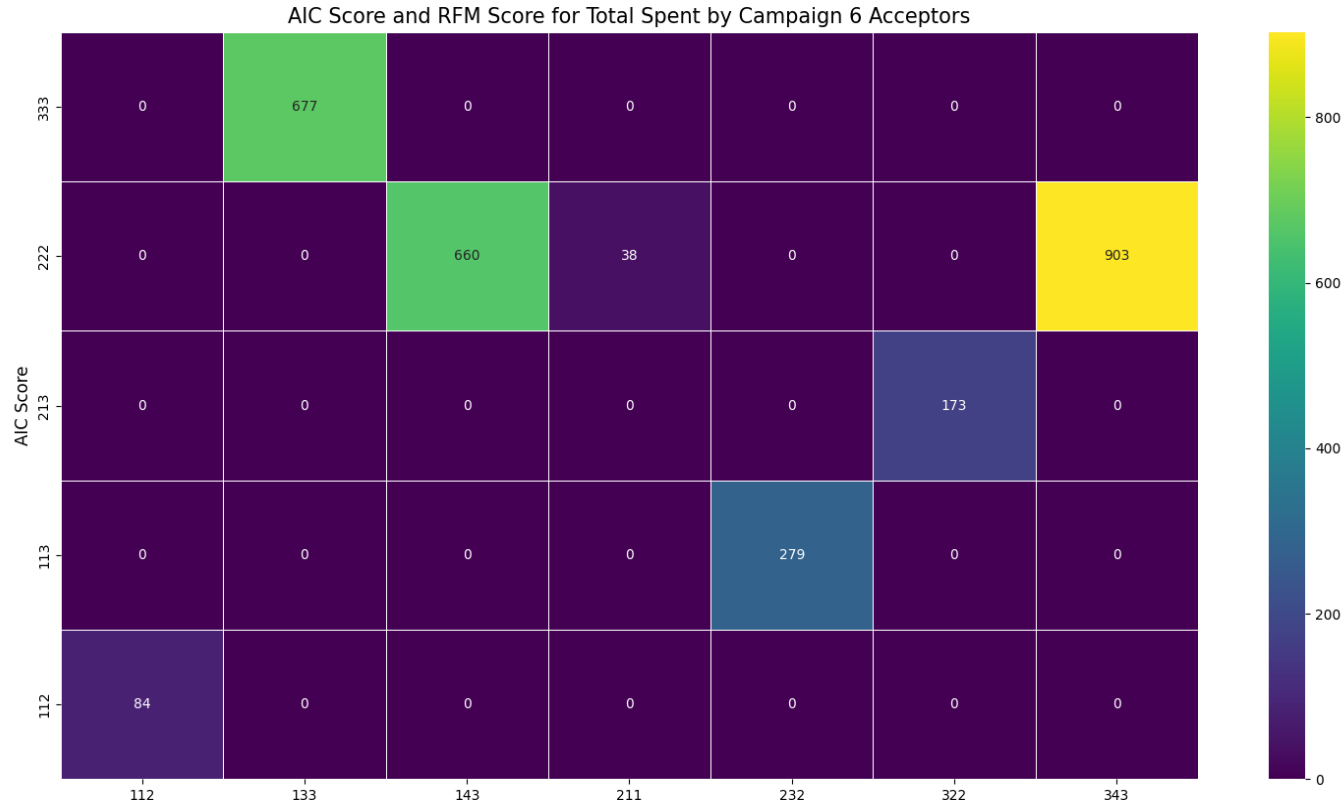
Recall: 0.525641

F1 Score: 0.635659

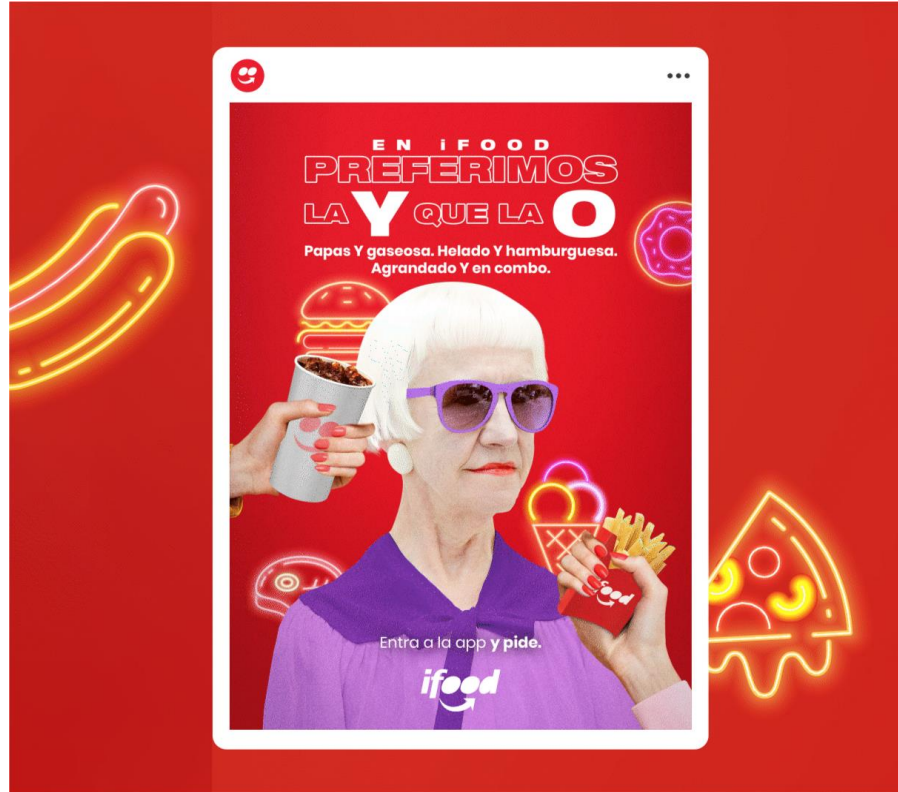
Rows where customer **is** predicted to accept the campaign:

[2201, 1250, 77, 1914, 559, 1504, 1958, 2030, 984, 1084, 1893, 376, 687, 1641, 575, 845, 1539, 676, 333, 2228, 1710, 2193, 1030, 1066, 1182, 1443, 15, 329, 591, 406, 1528, 2177, 763, 605, 1887, 126, 1922, 1111, 791, 1308, 787, 1334, 1280, 1809, 519, 53, 703, 1087, 644, 1272, 278]

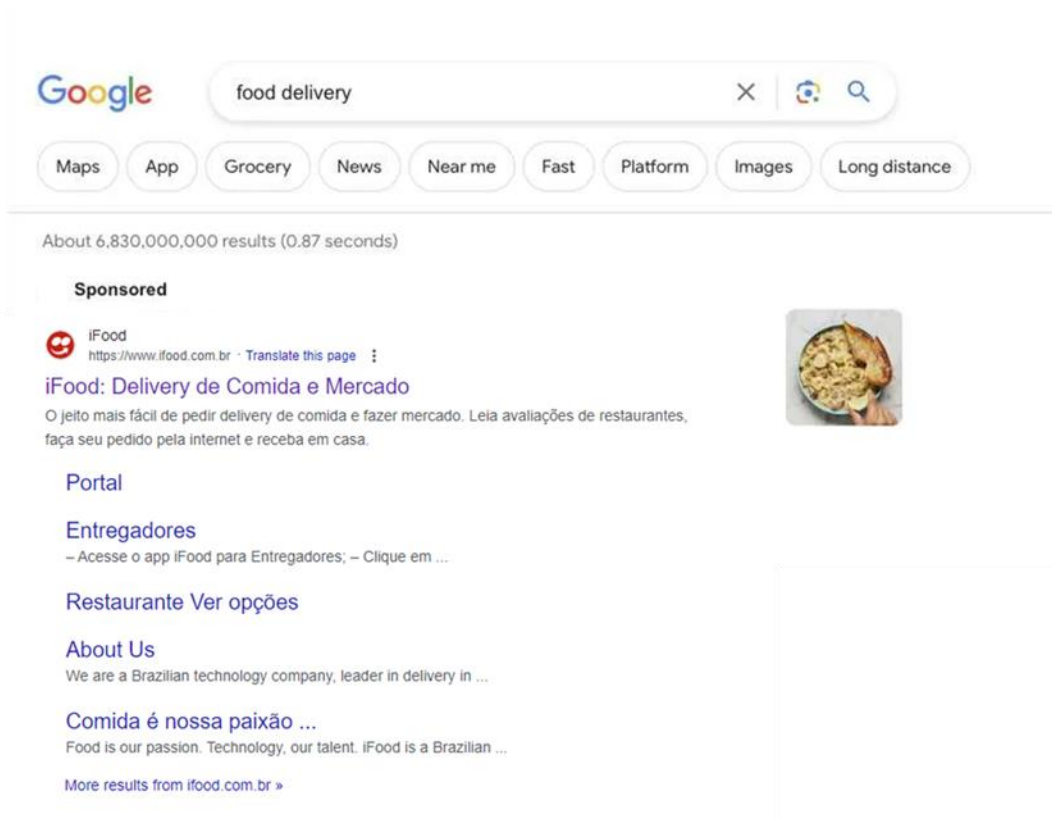
# RFM/AIC Model Campaign 6



# Campaign 6 Ad Example (Meta)



# Campaign 6 Ad Example (Paid Search)



# Campaign 6 ad Example (Email Marketing)



Se você não consegue visualizar esta mensagem corretamente, clique aqui.  
Se você não deseja mais receber e-mails do iFood, clique aqui.



# PART 5 CONCLUSION

# Executive Summary

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1  
2  
3

## Problem

iFood's marketing campaigns are under performing, how can we make iFood marketing campaigns more profitable? Who do we target?

## Solution

Using **RFM** and **AIC** metrics, we can identify & target high-performing customer segments with future marketing campaigns. Using Logistic regression, we can predict campaign 6 conversions.

## Execution Plan

1. Sunset underperforming campaigns.
2. Repurpose successful campaigns to targeted audiences.
3. Use predictive modeling to target high-value customer segments with new campaigns.

