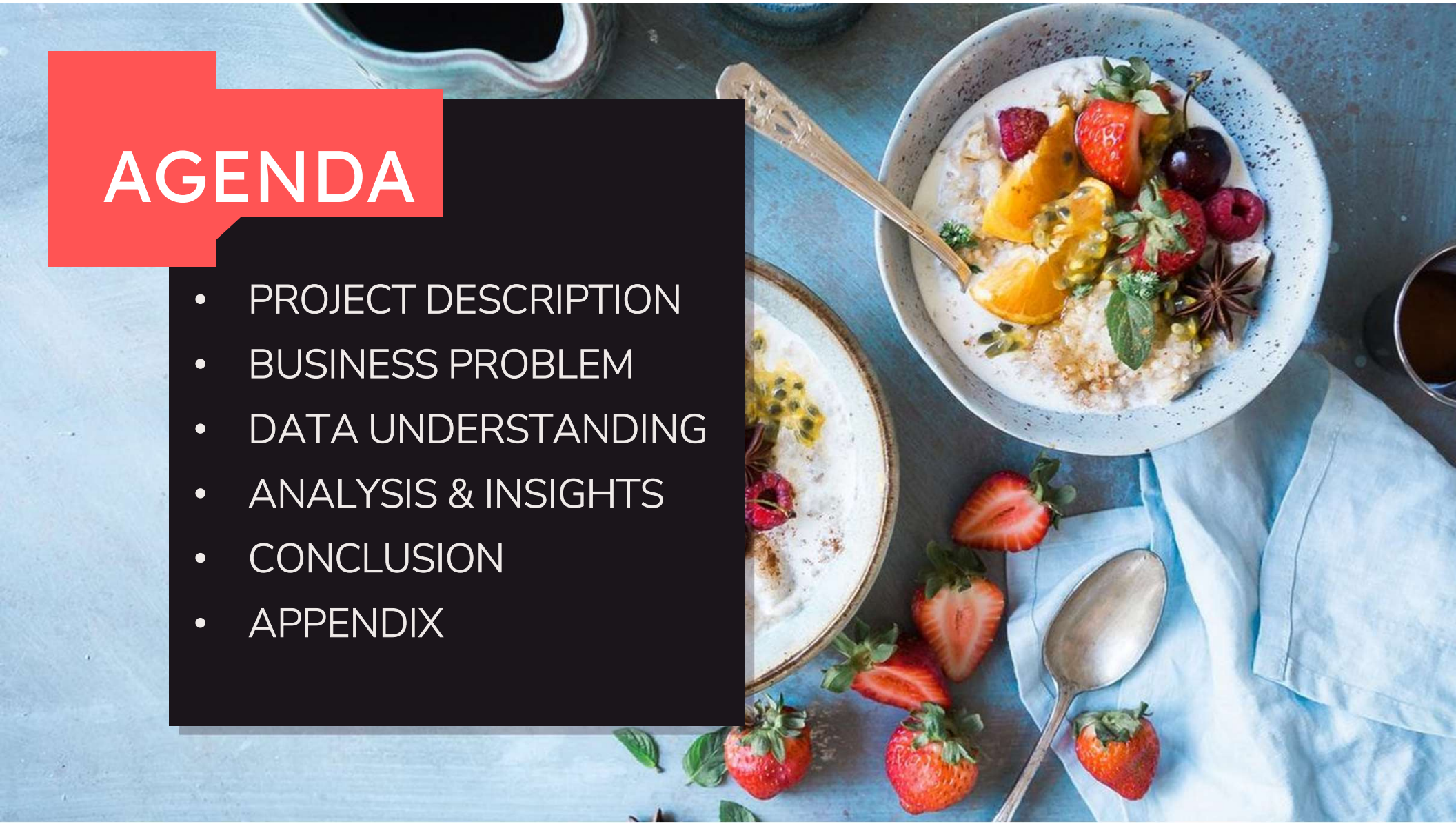

MARKETING
ANALYTICS

AGENDA

- PROJECT DESCRIPTION
- BUSINESS PROBLEM
- DATA UNDERSTANDING
- ANALYSIS & INSIGHTS
- CONCLUSION
- APPENDIX




iFood
A Brazilian food ordering
and delivering platform

Business Objective

To understand the characteristic features of customers, their purchase behaviour and the impact of iFood’s marketing activities

PROCESS FLOW

Understanding the company	Analyzing purchase behavior	Recommendations
Understanding iFood's current state and the different customer characteristics and its effect on sales	Identifying factors impacting sales and campaign effectiveness. Segmenting customers based on purchase behavior to target effectively and identifying best product combinations.	On the basis of our analysis, we will propose some suggestions for the company to maximize profit of the campaign.

DATA OVERVIEW

Customer Level Data
- 2205 Records

Demographic Information
- Age, Education, Income, Marital Status, Kids

Transaction Information
- Amount Spent across Food Categories,
- Instore and online purchases

Marketing Activity Information
- Campaign acceptances

ABOUT CUSTOMERS

Average Income

- $52K

Average Age

- 51 years

Education

- 89% College Graduate and above

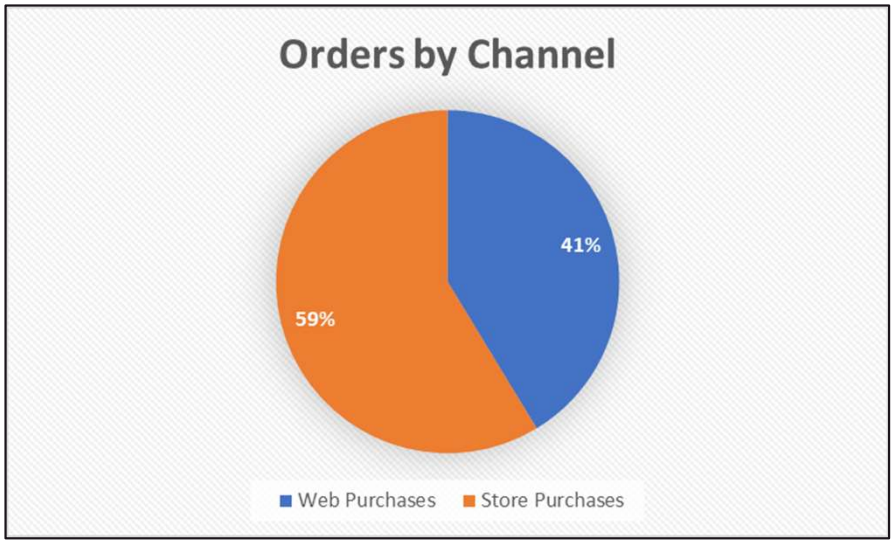
Family

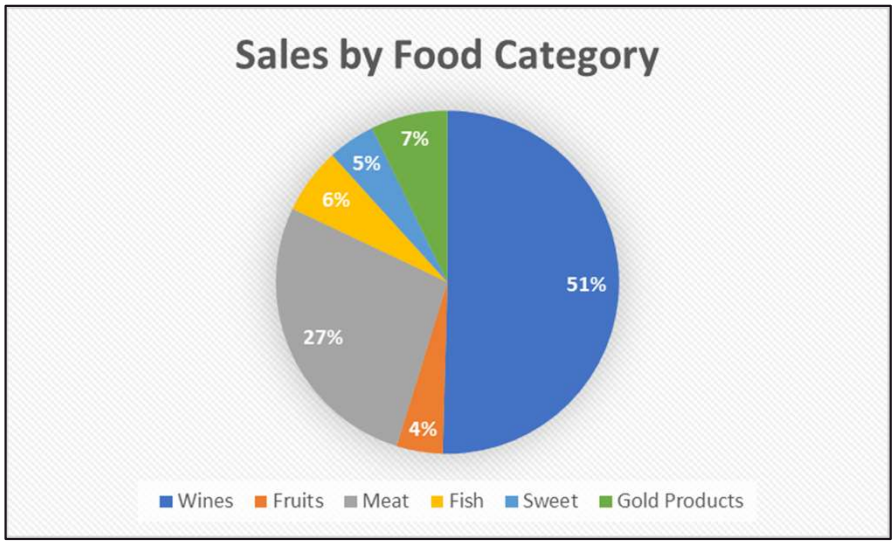
- 42% have young kids

Marital Status

- 65% have partners

CURRENT BUSINESS SCENARIO

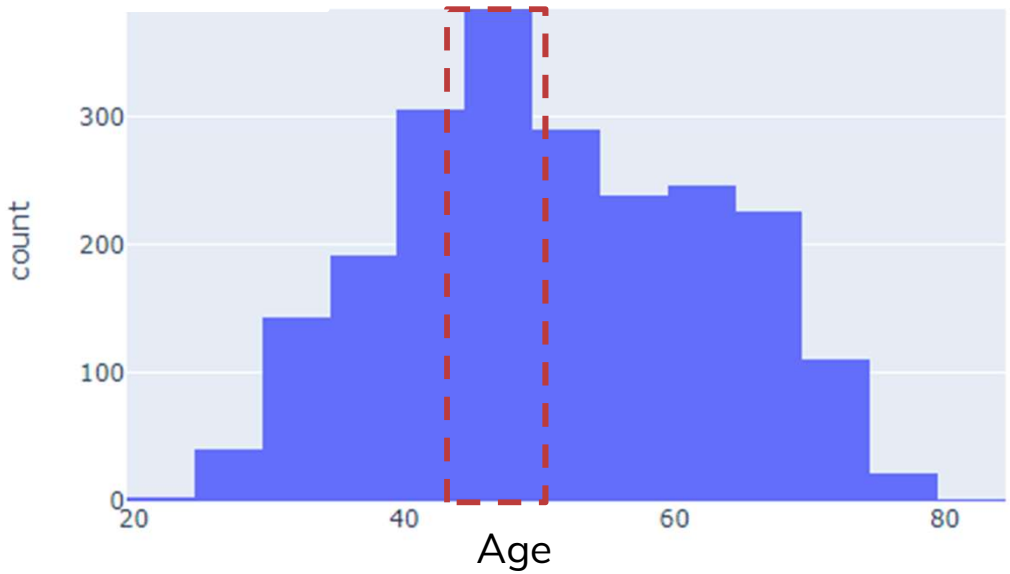




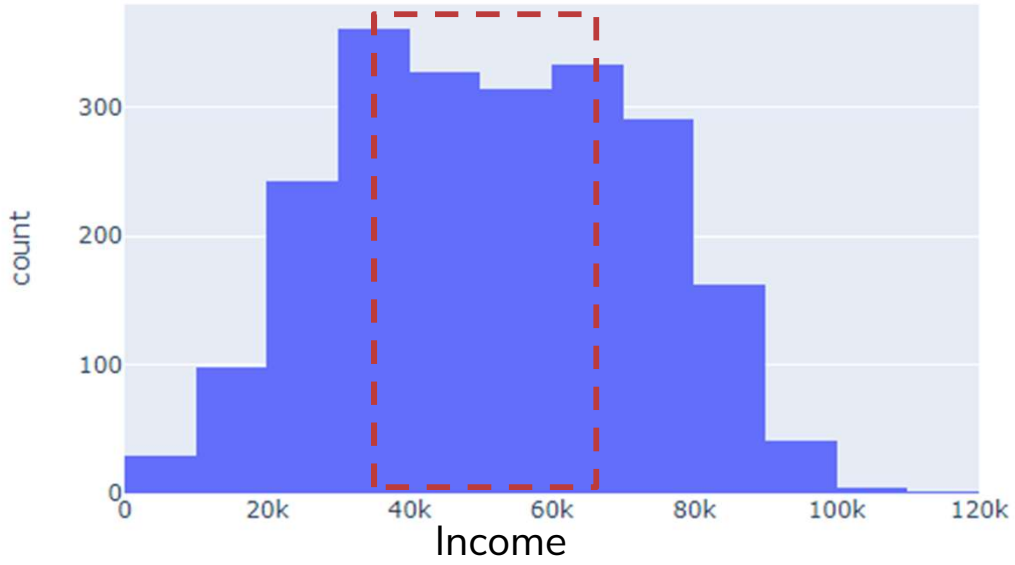
Observations:

- Volume of the store purchases is more than **1.4** times that of web purchases
- **Wine** is the most preferred item

EXPLORING CUSTOMER CHARACTERISTICS

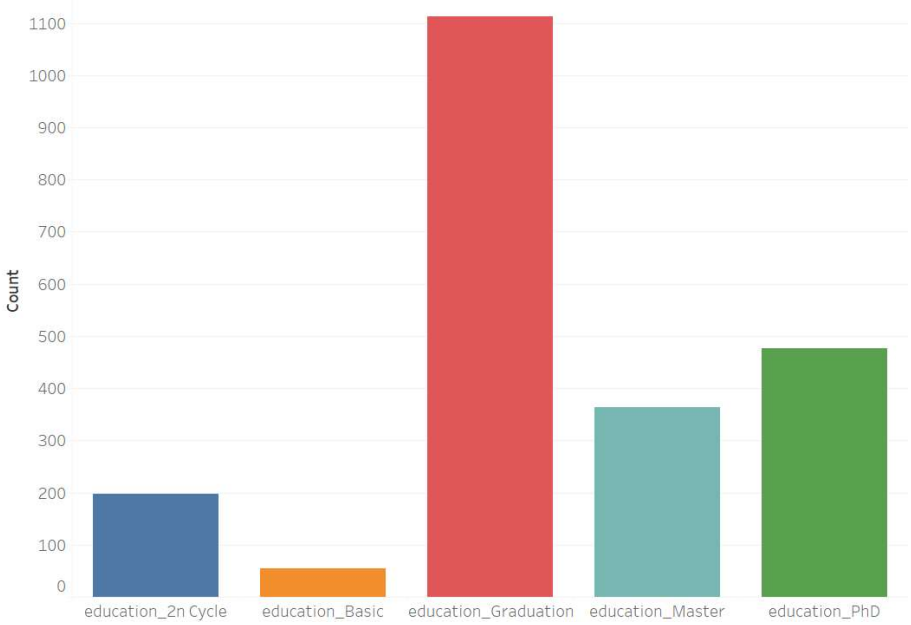


Most customers are between the age of 50-55

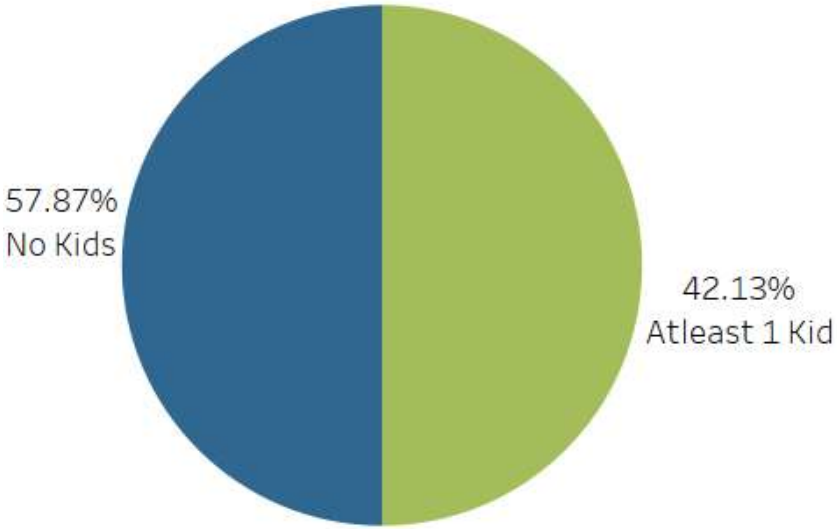


Most customers have income between 40k to 70k per annum

EXPLORING CUSTOMER CHARACTERISTICS

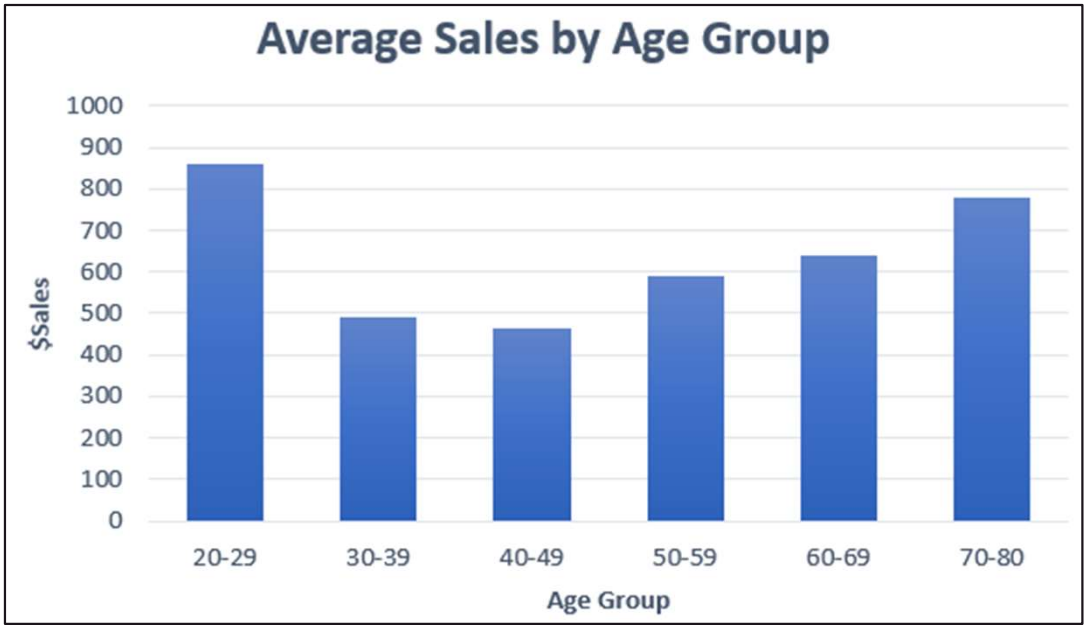


Most of customers are graduated



Majority of customers don't have children

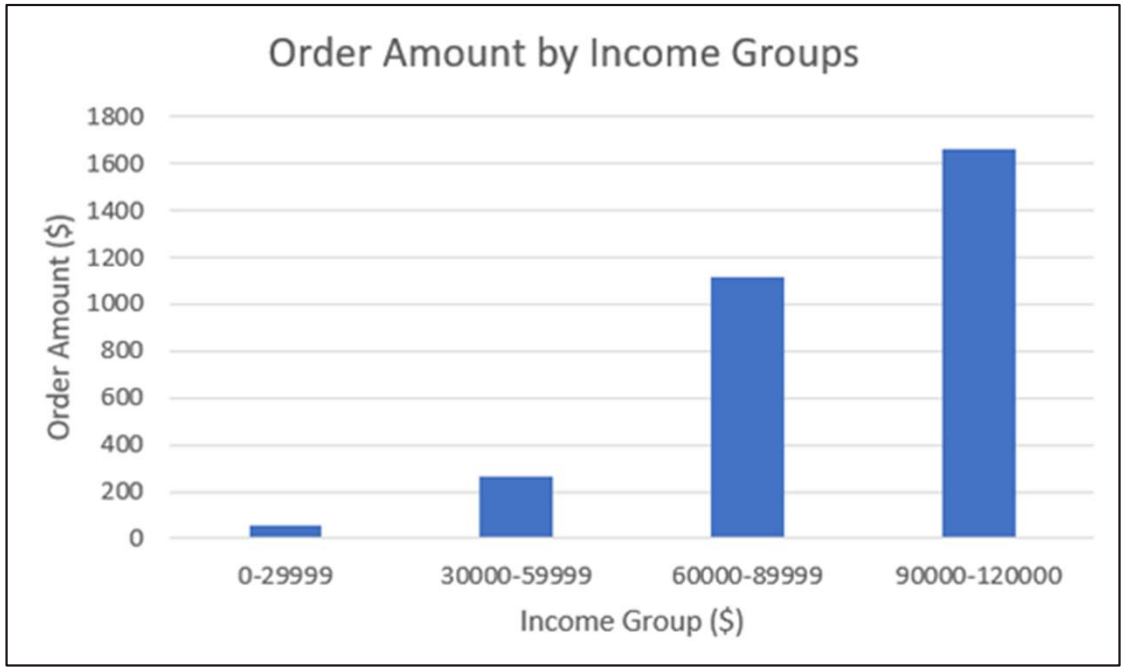
PURCHASE BEHAVIOR - I



As age increases, there is an **initial drop** in sales **followed by a rise**

On conducting a hypothesis testing:
H0: Sales are not impacted by age of customer
H1: Sales are impacted by age of customer
We get a p-value of 2.48e-08, which means we have enough statistical evidence to reject the null hypothesis and conclude that sales are impacted by age

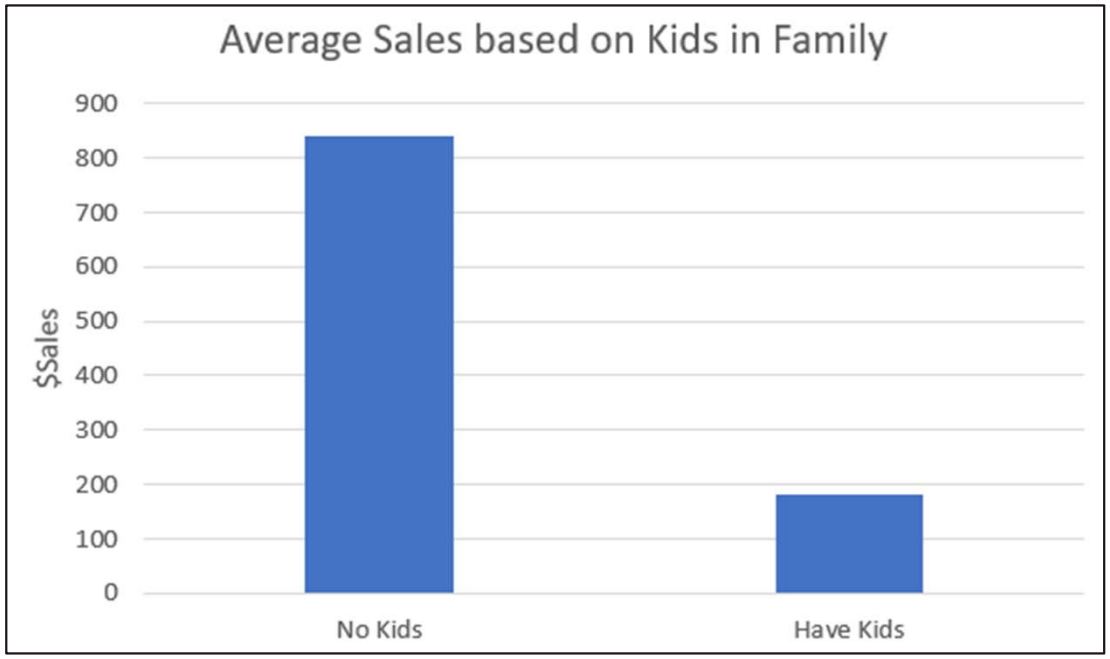
PURCHASE BEHAVIOR - II



On conducting a hypothesis testing:
H0: Sales are not impacted by income of customer
H1: Sales are impacted by income of customer
We get a p-value < 2e-16, which means we have enough statistical evidence to reject the null hypothesis and conclude that sales are impacted by income

Customers with **higher income** tend to order for more amount

PURCHASE BEHAVIOR - III



Customers without kids order for 4.7 times the amount as ones with kids

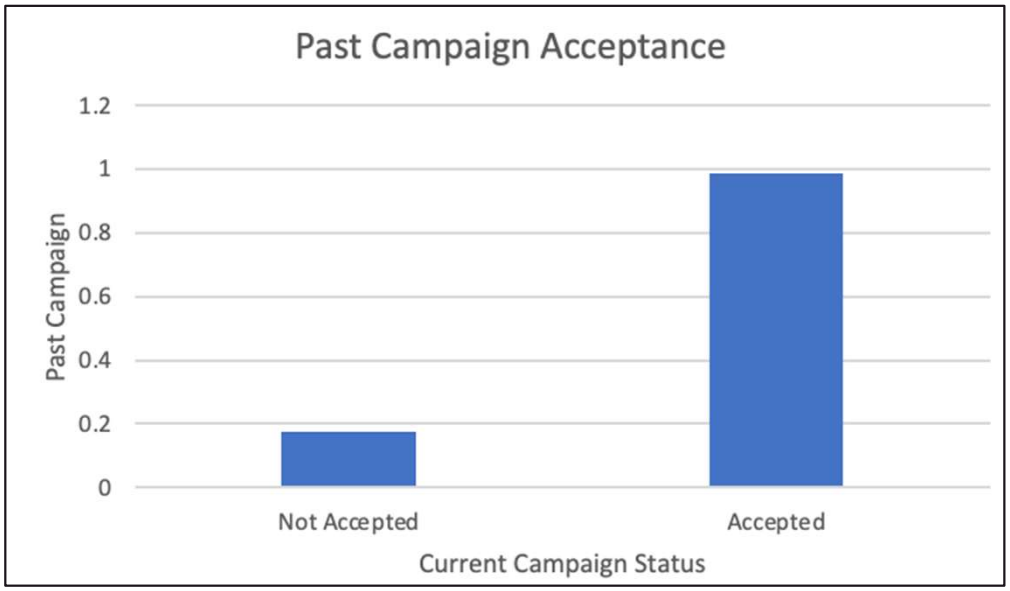
On conducting a hypothesis testing:
H0: Customers without kids do not spend more than customers with kids
H1: Customers without kids spend more than customers with kids
We get a p-value < 2e-16, which means we have enough statistical evidence to reject the null hypothesis and conclude that customer without kids spend more than customers with kids

FACTORS AFFECTING CAMPAIGN EFFECTIVENESS

Identifying factors impacting customers' propensity to accept a campaign:

- Model: Random Forest Classifier
- Major Factors Identified: Recency of Purchase, Past campaign acceptance, Customer Lifetime

On average, the customers who accepted campaigns in the past also showed tendency of accepting the current campaign.



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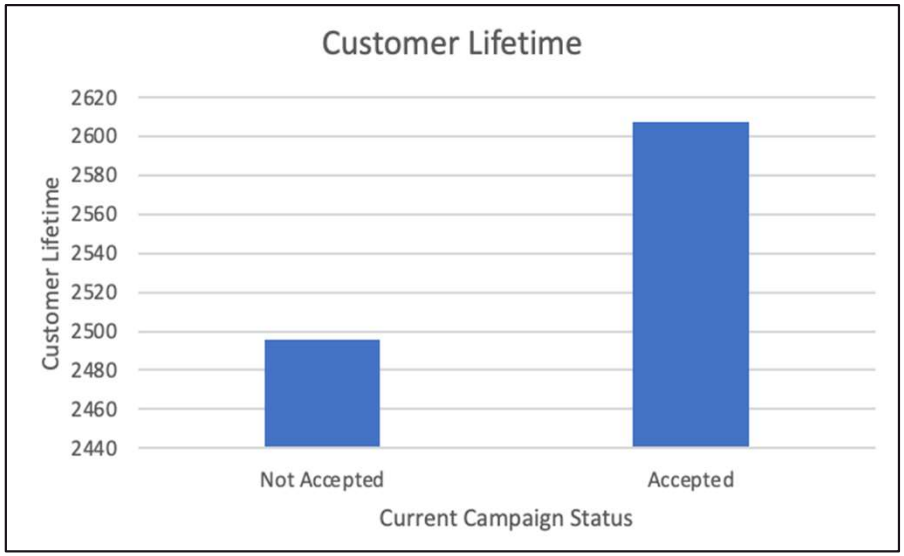
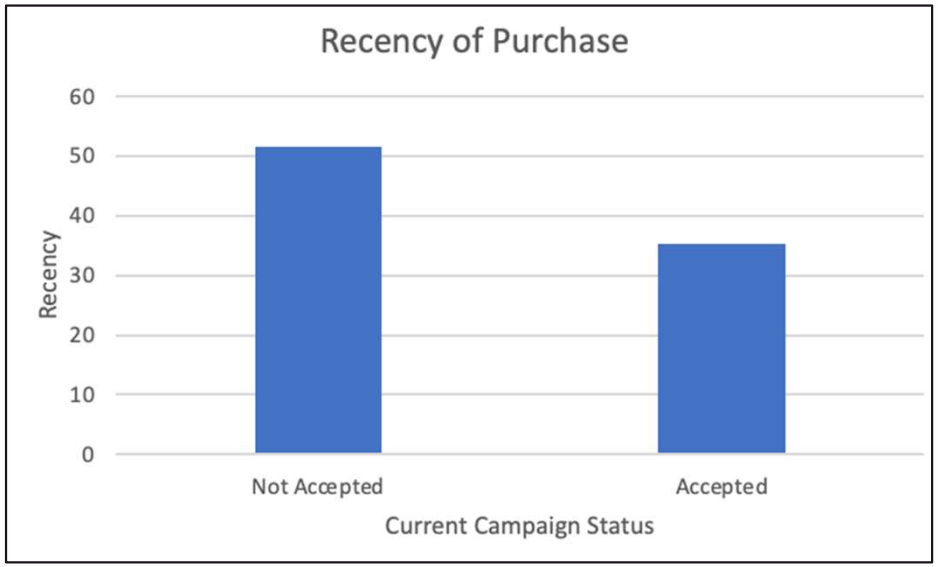




- Customers who accepted the campaign have higher customer lifetime.

- Campaign acceptance **higher** with customers who have made a more recent purchase.

CUSTOMER SEGMENTS

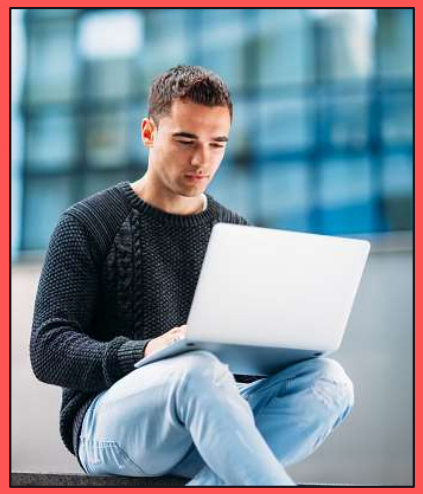
4 Customer segments were created using K-means on customer's **Order Recency, Frequency** and **Amount Spent**

Understanding the demographics and purchase behaviors of these segments will help iFood target them better.

Segment	Recency of Orders	Frequency of Orders	Order Amount
A	Recent	Low	Low
B	Recent	High	High
C	Not Recent	High	High
D	Not Recent	Low	Low

SEGMENT A

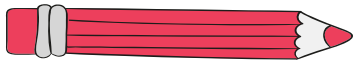
Digital David



- Relatively younger
- Relatively Low Income
- Visits website frequently
- Likely married

Order Recency : **Recent**

Order Frequency : **Low**



Customer Spend : **Low**

Recommendations

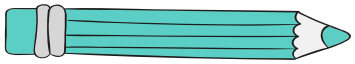
- Promote on websites
- Promotions based on minimum spend condition:
  Ex – 15% off for orders above $100

SEGMENT B

Ideal Iris

- Relatively High Income
- Use Catalogues frequently
- Higher propensity to accept discounts
- Relatively less educated

 Order Recency : **Recent**

 Order Frequency : **High**

 Customer Spend : **High**

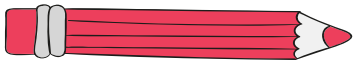
Recommendations

- Send catalogues with discounts via post
- Promotions focussed on Wines (Older customers have a higher spend on wine)

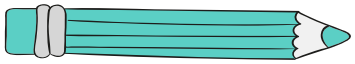
SEGMENT C

Rich Rose

- Relatively older
- Relatively High Income
- Use Catalogues frequently
- Higher propensity to accept discounts



Order Recency : **Not Recent**



Order Frequency : **High**

Customer Spend : **High**

Recommendations

- Send catalogues with discounts via post
- Promotions focussed on Wines (Older customers have a higher spend on wine)
- Offer loyalty points to incentivise them to buy often

SEGMENT D

Non-committer Nick

- Relatively Low Income
- Visits websites frequently
- Less affinity towards promotions

Order Recency : **Not Recent**

Order Frequency : **Low**

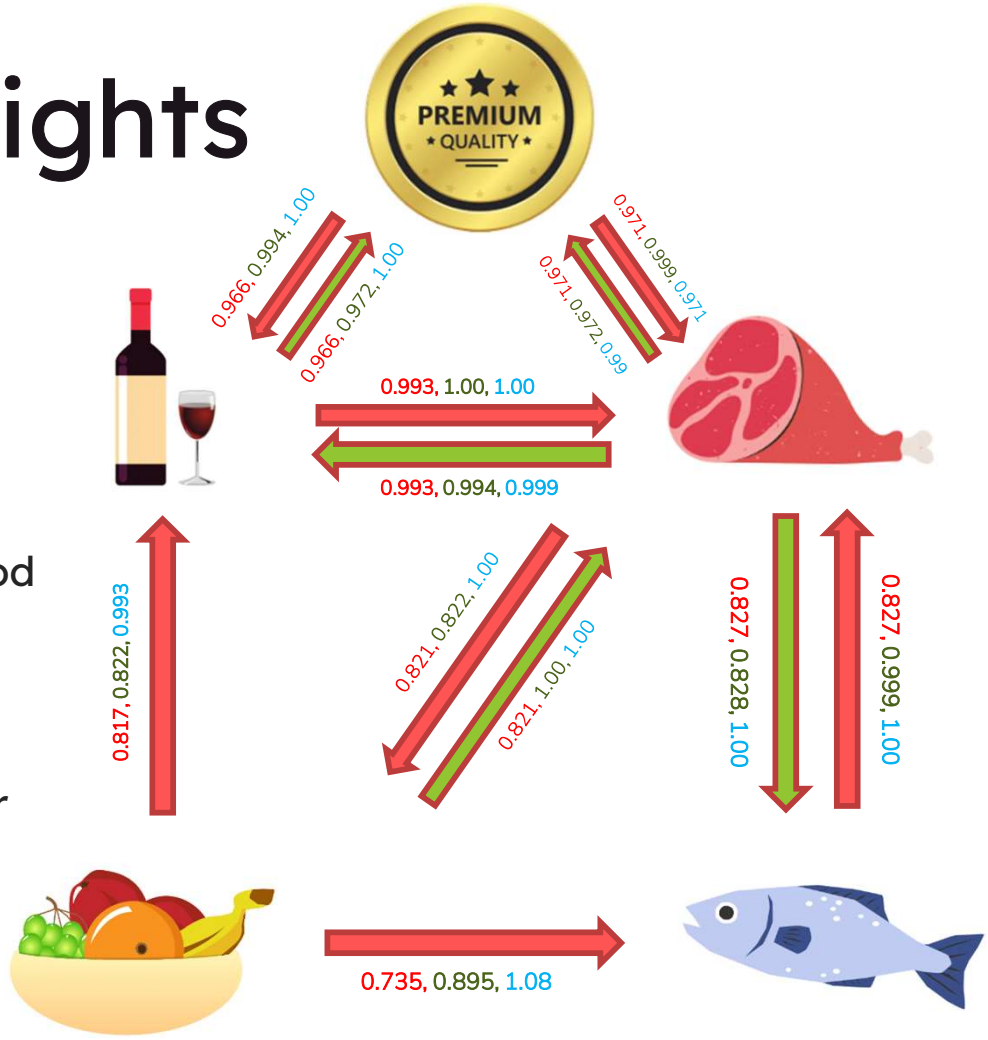
Customer Spend : **Low**

Recommendations

- Less emphasis on such customers

Association Rule Insights

- **Support**: This is the measure of the frequency with which a particular item or combination of items appears in transactions.
- **Confidence**: This is the measure of the likelihood that one item will be purchased if another item has already been purchased.
- **Lift**: This is the ratio of the observed support for a combination of items to the expected support if the items were purchased independently.



Recommendations

In future campaigns, focus on customers with a high customer lifetime, made recent purchases and who have accepted campaigns before

Implement customer segment-based promotions to target these segments effectively

Products of having a high probability of being purchased together should be placed together in stores (or recommended on websites)


THANK
YOU