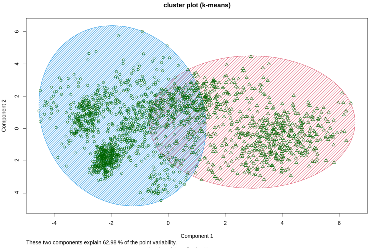
Target audience: marketing team, insights team, KPI team, and other stakeholders for improving sales.

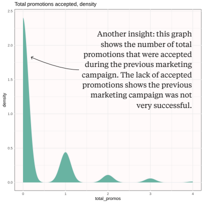
Goal: customer segmentation

Cluster 1
* Most definitely a parent, with one or more dependent
* Lower-income group
* Frugal life-style
* Spends less on average, relative to Cluster 2
* Frequent website visitor

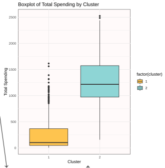
Cluster 2
* Most likely not a parent
* Less than likely to have a dependent
* High-income group.
* Most active consumer group

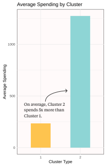


These two components explain 62.98 % of the point variability.


Total promotions accepted, density
Another insight: this graph shows the number of total promotions that were accepted during the previous marketing campaign. The lack of accepted promotions shows the previous marketing campaign was not very successful.
density
total_promos

Our story begins with k-means clustering (plot above), which detected patterns in the customer sales data and segmented or grouped them accordingly. According to what? Based on underlying characteristics in the data, according to key features like **parent status, income, dependents,** and **spending habits**. These charts examine the patterns and relationships deeper in a visual format. Let's explore each one and then develop a working description of each cluster based on these visual insights.
(Note this data is sourced from the company's marketing campaign of the last 2 years.)

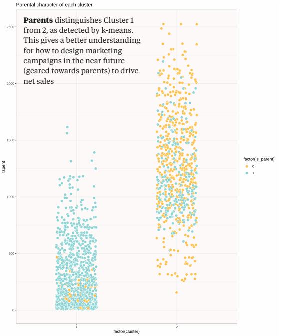


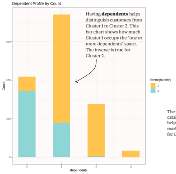


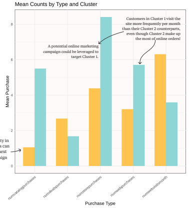
Spending habits vary greatly from one cluster to another.

...

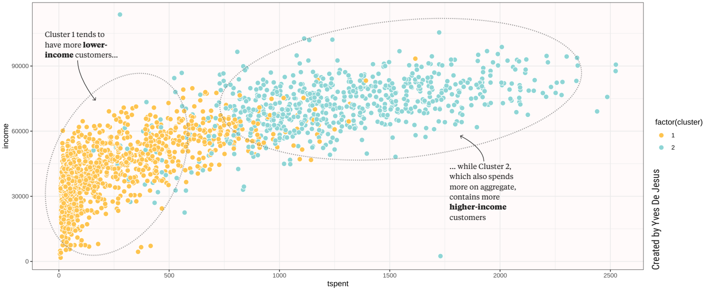
By living situation? Not so much. Whether a customer lives alone or with a partner, either group **spends** about the same on average.


Parental character of each cluster
Parents distinguishes Cluster 1 from 2, as detected by k-means. This gives a better understanding for how to design marketing campaigns in the near future (geared towards parents) to drive net sales
tspent
factor(cluster)
factor(is_parent)
0
1


Dependent Profile by Count
Having **dependents** helps distinguish customers from Cluster 1 to Cluster 2. This bar chart shows how much Cluster 1 occupy the "one or more dependents" space. The inverse is true for Cluster 2.
Count
dependents
factor(cluster)
1
2


Mean Counts by Type and Cluster
Customers in Cluster 1 visit the site more frequently per month than their Cluster 2 counterparts, even though Cluster 2 make up the most of online orders!
A potential online marketing campaign could be leveraged to target Cluster 1.
The steep disparity in catalog purchases can help inform the next marketing campaign for Cluster 1
Mean Purchase
numcatalogpurchases
numdealspurchases
numstorepurchases
numwebpurchases
numwebvisitsmonth
Purchase Type

Cluster's Profile Based on Income And Spending



Created by Yves De Jesus