Customer Segmentation

Offering Personalized Marketing Campaigns

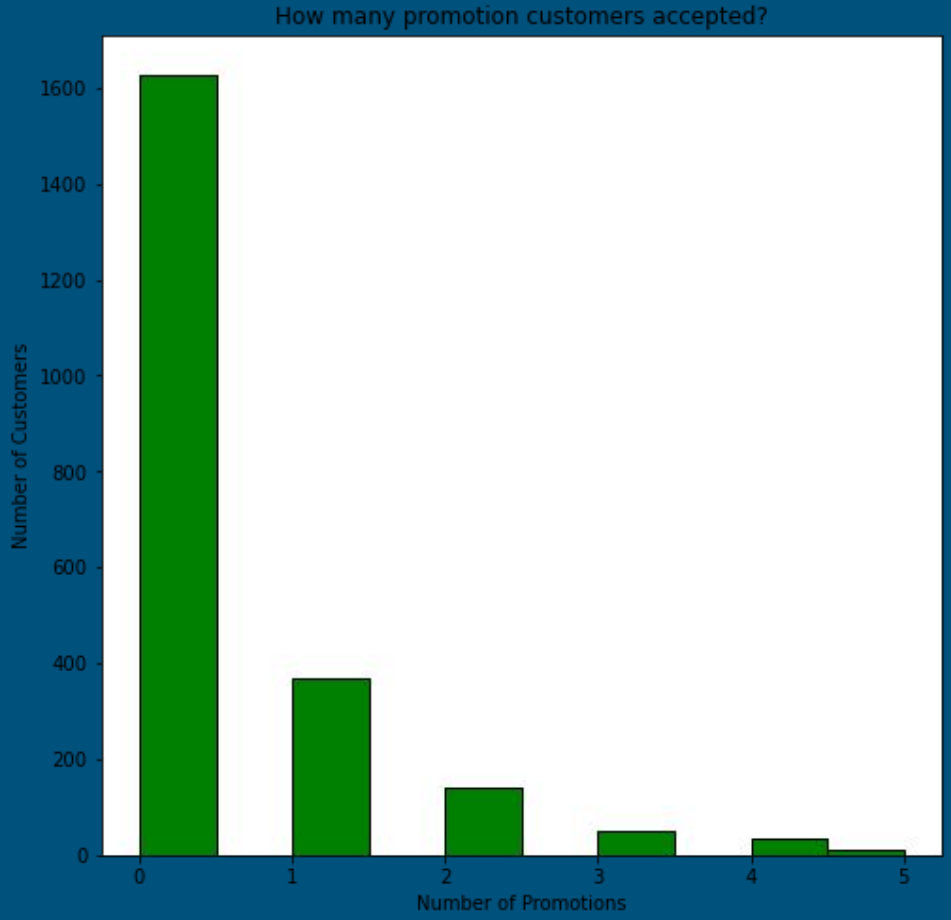
Problem Identification

Problem: Marketing team would like to create more personalized campaigns for customers but struggles to identify customer needs

Solution: As data team we will use the customer data to gain insights and build clustering models to form customer segments

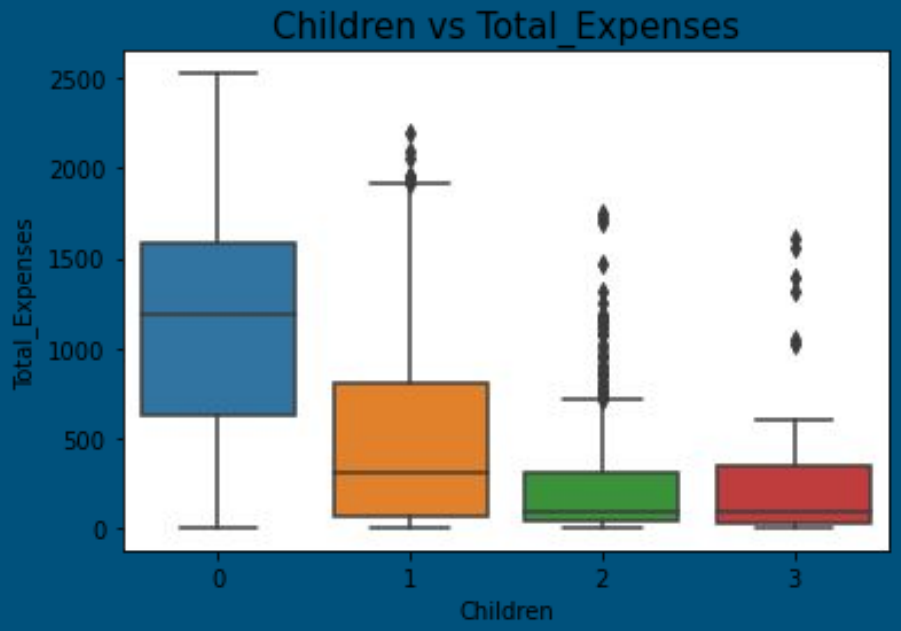
Are promotions effective?

- The graph reflects that %72.8 of customers did not accept any promotion at all
- There is definitely a room for improvement to increase promotion acceptance rate



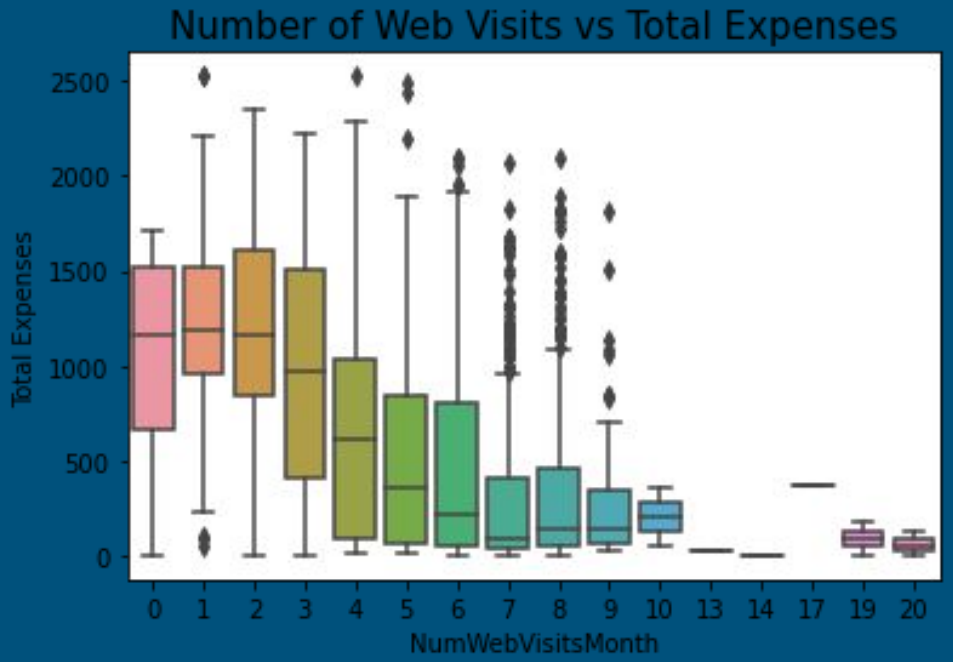
Interesting Insights - Children vs Total Expenses

- On the contrary to general belief, there is a negative relationship between Total Expenses and Number of Children
- This shows that our products more suitable for people not having any children



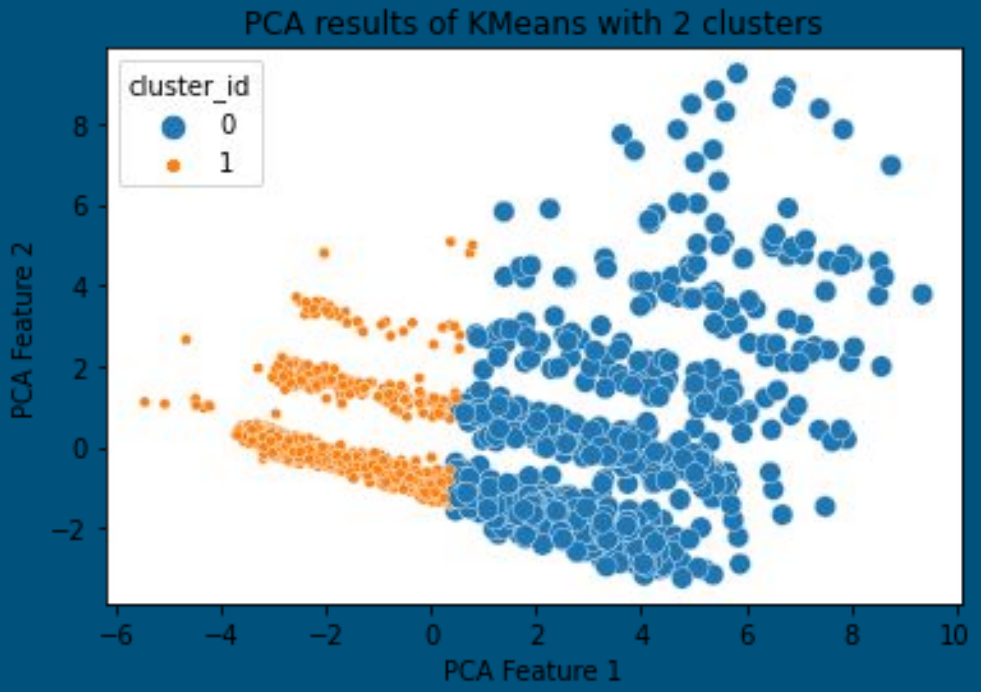
Interesting Insights - Web Visits vs Total Expenses

- Even though it is expected to see that people visiting website tend to have higher total expenses, the graph shows that it is the opposite
- This shows that there is a room for improvement in our website to drive more sales



Clustering Customers

- After comparing performance score of k-means and hierarchical clustering, I found that k-means is performing better.
- Elbow and silhouette method showed that optimal number of clusters is 2

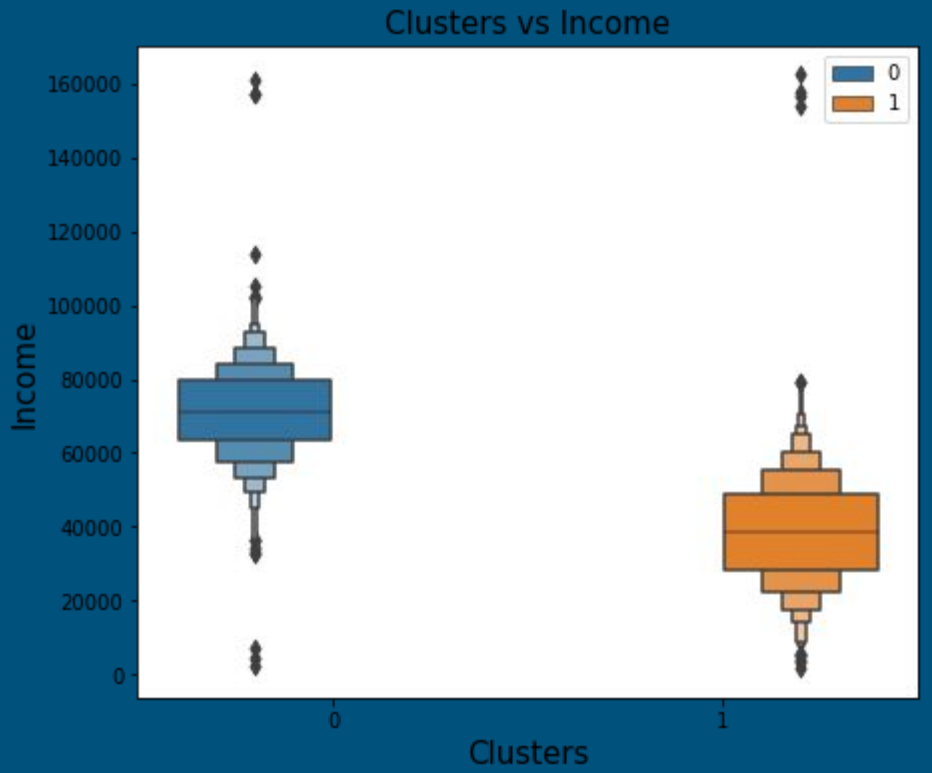


What features makes Clusters different?

- Income
- Expense
- Total Accepted Marketing Campaigns
- Web Purchases
- Monthly Web Visits
- Deal Purchases
- Education
- Number of Children
- Age

Income

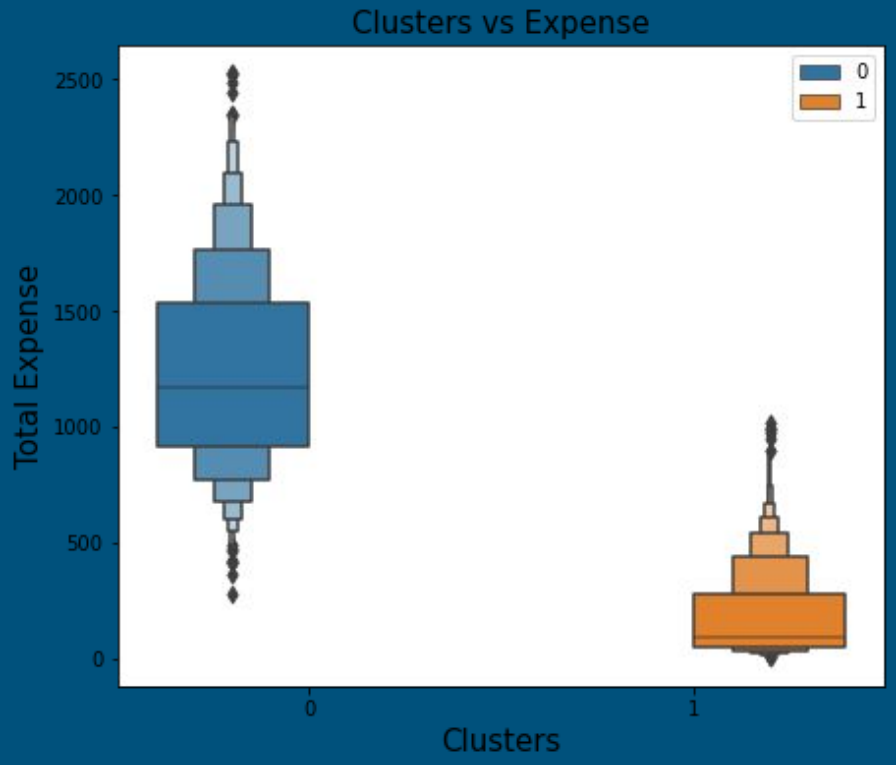
- Cluster 0 has a higher total income which indicates that they have a higher budget for product purchases



Expense

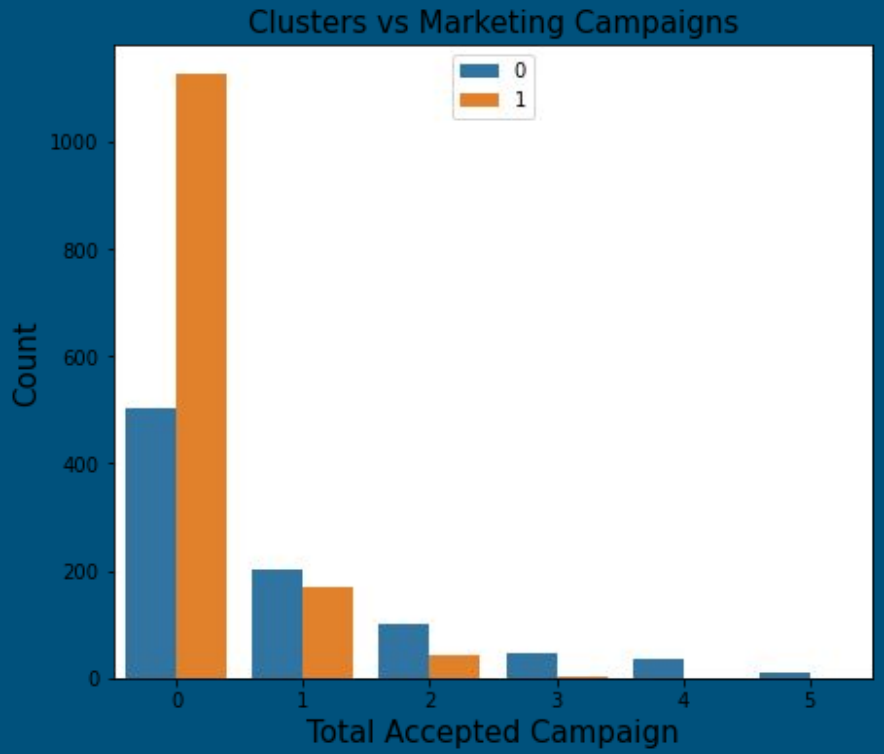
- Total expenditure of Cluster 0 is significantly higher than Cluster 1
- Cluster 0 / Cluster 1 Income ratio: 2

  Cluster 0 / Cluster 1 Expense ratio: 5
- Having higher expense ratio indicates that Cluster 0 tend to buy more of our products independent of Income

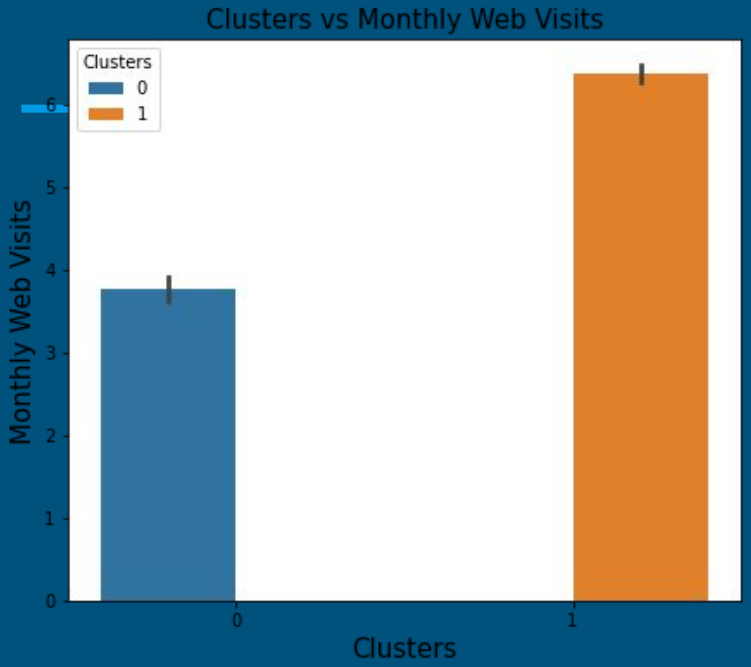


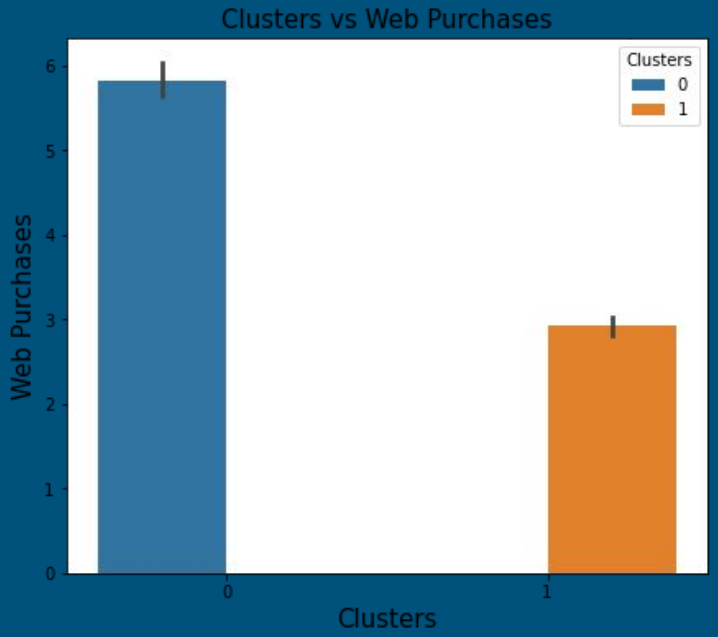
Total Accepted Marketing Campaigns

- Marketing campaigns not very effective for both clusters but Cluster 0 tend to be more influence by the campaigns
- Personalized campaigns can be beneficial to reach higher acceptance rates



Monthly Web Visits & Web Purchases

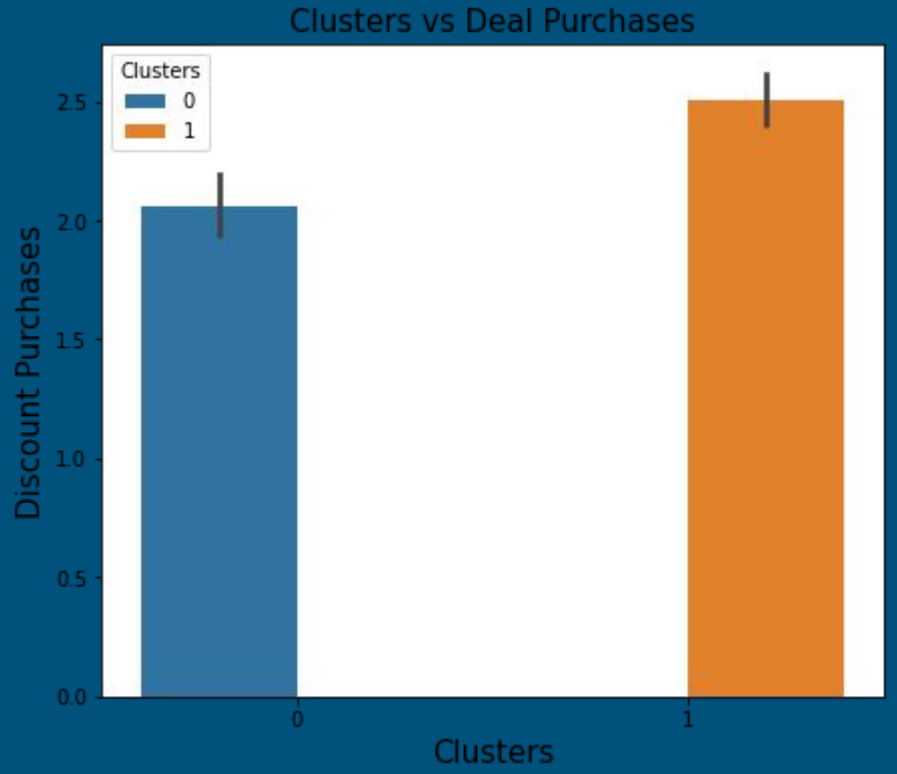




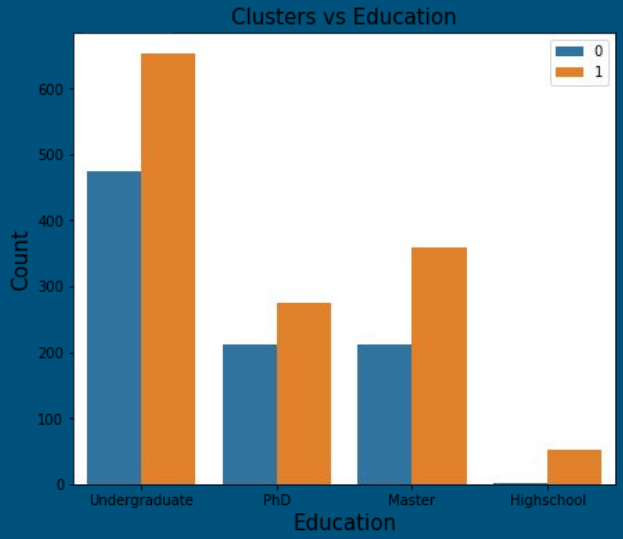
- Even though Cluster 1 has more web visits, Cluster 0 has more web purchases
- This indicates that improving user experience on the website can help driving more sales for Cluster 1

Deal Purchases

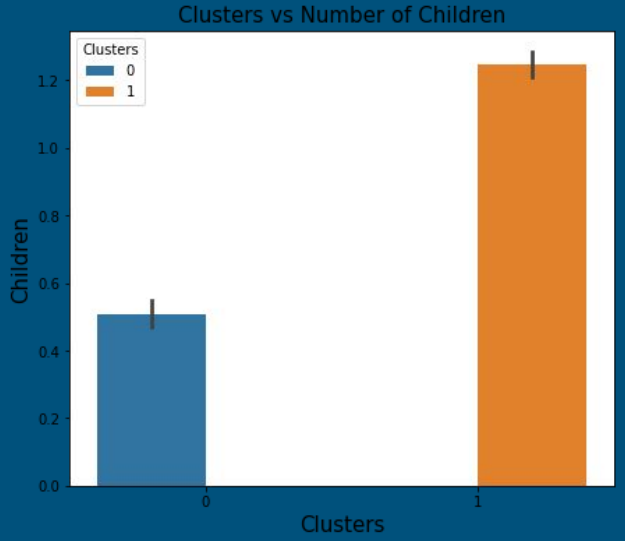
- Cluster 1 makes more discount purchases even though their promotion acceptance rate is lower than Cluster 0
- This indicates that Cluster 1 cares more about price of the products



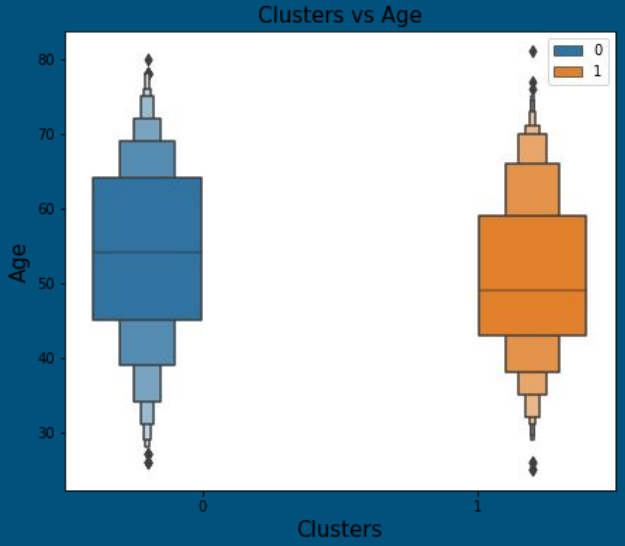
Demographics of Clusters



Cluster 0 is slightly more educated



Cluster 1 has higher number of children



Cluster 1 is slightly older population

Cluster 0

- High socioeconomic status
- Very high total expenditure
- Moderate marketing campaign acceptance rate
- More web purchases
- Less monthly web visits
- Fewer discount purchases
- Slightly more educated
- Fewer number of children
- Relatively older population

Cluster 1

- Lower socioeconomic status
- Significantly lower total expenditure
- Low marketing campaign acceptance rate
- Fewer web purchases
- More monthly web visits
- More discount purchases
- Slightly less educated
- Higher number of children
- Relatively younger population

Cluster 0 - Marketing Strategy

- Promoting company’s website to drive more traffic
- Emailing the information of newly arrived items
- Creating customer loyalty rewards program
- Ask them why they are choosing our products to understand what features makes our products different than competitors

Cluster 1 - Marketing Strategy

- Increasing the customer experience on the website and making the purchasing process less time consuming
- Promoting the discounted items by sending emails and displaying them in the main page of the website
- Advertising how our products different from the competitors by using feedback of Cluster 0
- Promoting children products more like toys and kids clothing

Image Resource

- https://www.surveylegend.com/customer-insight/5-types-of-market-segmentation-how-to-segment-markets-effectively/