Udacity
Marketing Analytics

Nanodegree Program
Project: Craft a Report

Objective Results

1-Increase total sales by 30% on Black Friday 2018 vs. Black Friday 2017.

I created pivot tables for both 2017 and 2018, as illustrated below, and successfully reached the goal with a change of 31.19%."

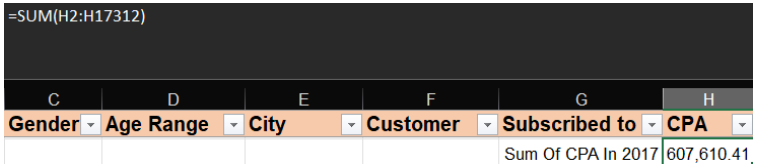
Product	Sum of Order Amount
Books	198067.52
Clothing	199092.78
Games	197660.34
Grocery	398167.37
Pets	408474.65
Toys	193451.19
(blank)	
Grand Total In 2017	**1594913.85**

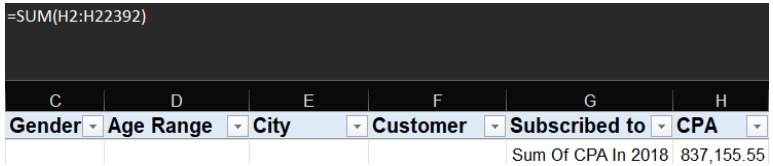
Row Labels	Sum of Order Amount
Books	259626.19
Clothing	267565.36
Games	261043.6
Grocery	525438.17
Pets	511712.65
Toys	267045.49
(blank)	
Grand Total In 2018	**2092431.46**

Objective Results

2-Decrease total ad spend by 30% from Black Friday 2017 to Black Friday 2018.

I employed the 'Sum' function to compute the total 'Cost Per Acquisition (CPA),' and as indicated below, the goal was not met due to an increase of 37.78% instead of a decrease.

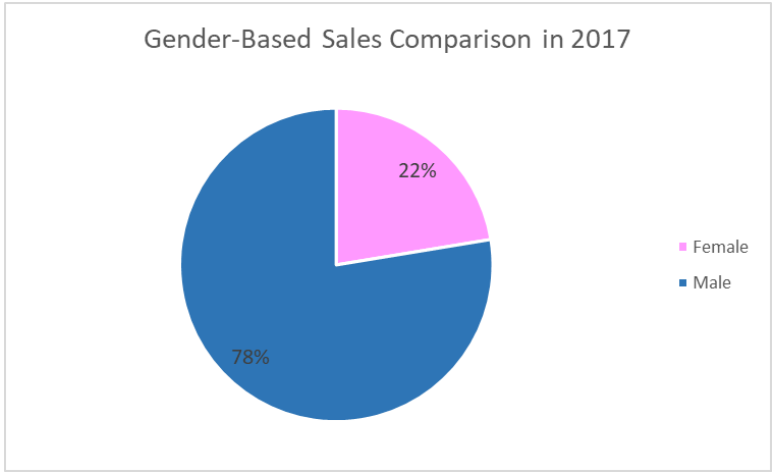


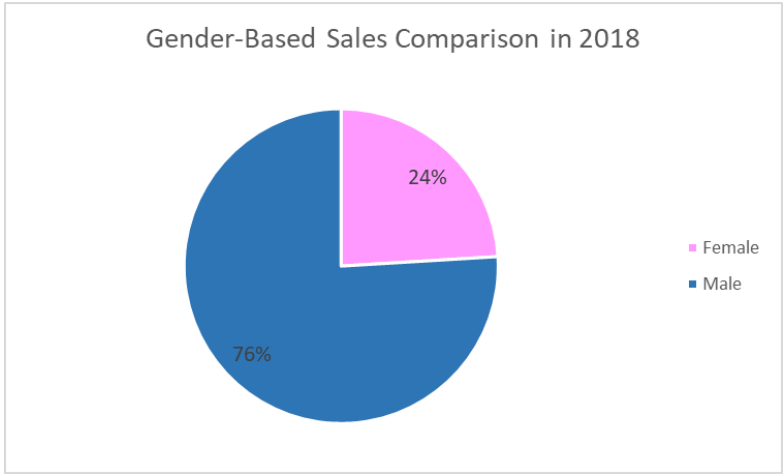


Evaluate the Audience

Who spent more, men or women?

As depicted in the pie charts, men spent more in both years. However, in 2018, the spending decreased by 2%.

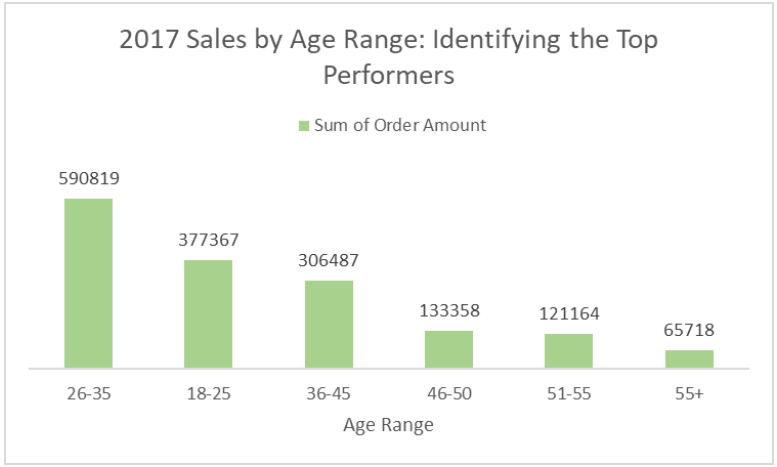


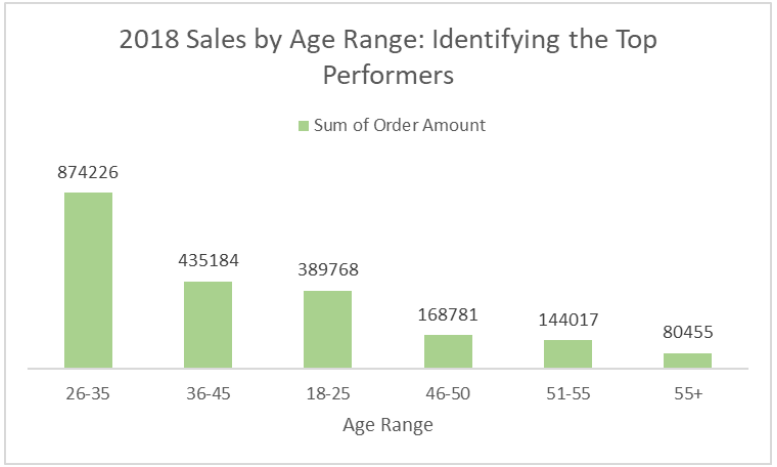


Evaluate the Audience

Which Age-Range generated the most sales?

The following clustered charts illustrate sales for each 'Age-Range' in 2017 and 2018, highlighting that the '26-35' group consistently represents the highest segment with substantial sales.





Evaluate the Marketing

Was the ROI on our Paid Channel positive or negative? What was it?

ROI= (Revenue - Cost/Cost)*100

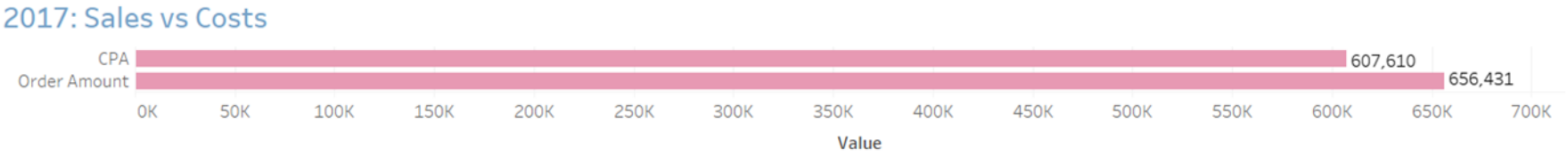
ROI in 2017= ((656,431 – 607,610)/607,610)*100=8.03%

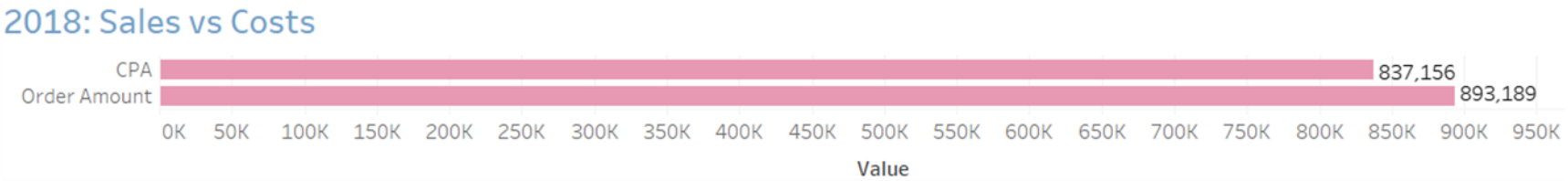
ROI in 2018= ((893,189 - 837,156)/837,156)*100=6.69%

The ROIs are positive.

Customer Source

- [ ] (All)
- [ ] Blog
- [x] Paid
- [ ] Social





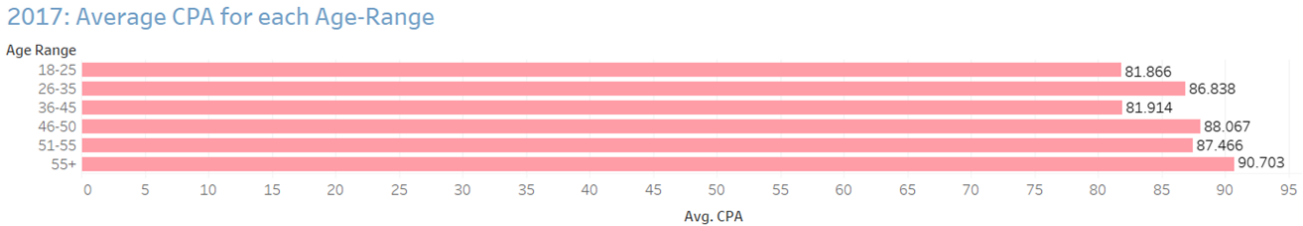
Evaluate the Marketing

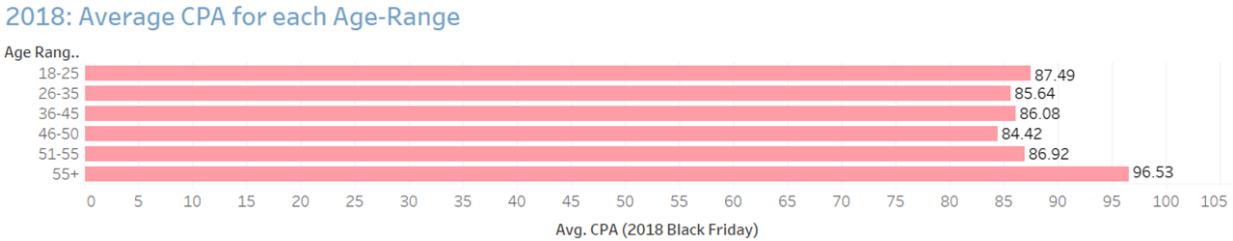
Which Age-Range had the best CPA?

In 2017, the Age-Range with the best CPA (lowest value) was 18-25, it means that acquiring customers or leads within that specific age group is more cost-effective compared to the other age groups. This finding suggests that targeting individuals between the ages of 18 and 25 may yield better results in terms of cost efficiency.

In 2018, it shifted to 46-50.

Combining both years, the 36-45 bracket recorded the lowest average value.



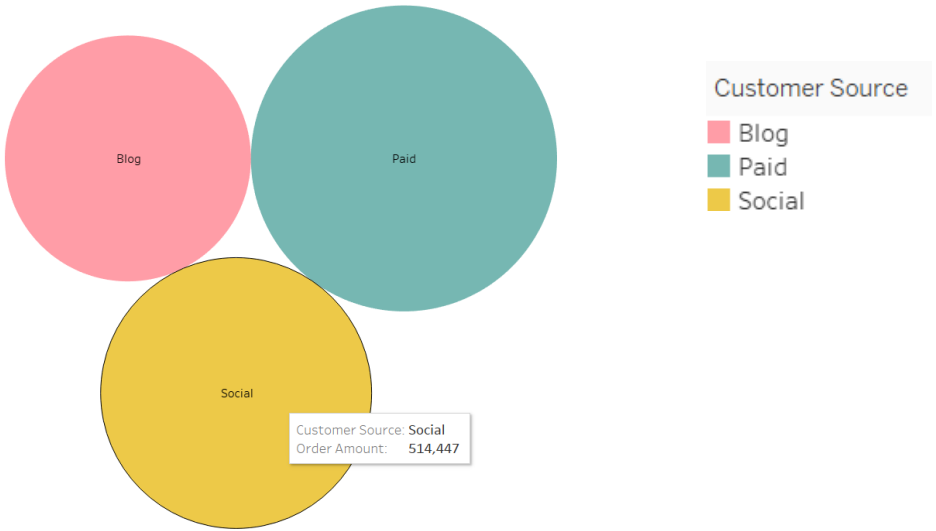


Evaluate the Marketing

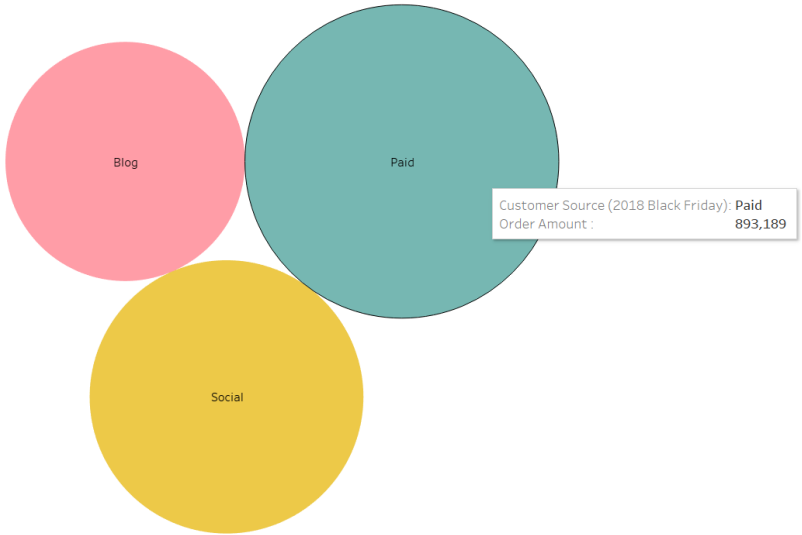
Total Sales By Channel: 2017 vs. 2018

As illustrated in the subsequent packed bubbles charts, it becomes evident that the largest contributor to customer acquisition is through “paid” channels, followed by “social” channels, with “blogs” being the least prominent source. This analysis leads us to conclude that paid marketing is the most effective channel for customer acquisition.

Total Sales By Channel in 2017



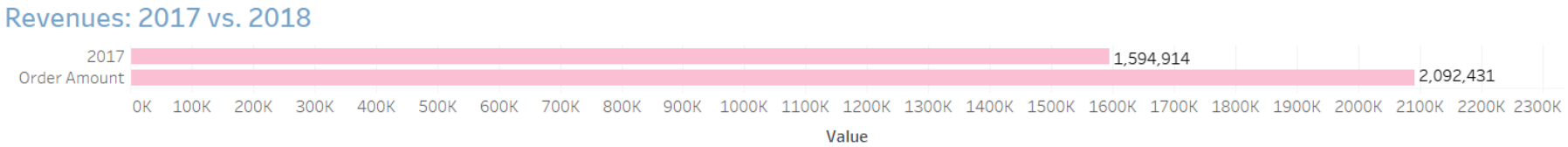
Total Sales by Channel in 2018



Evaluate the Sales

How much revenue did we generate in 2017? In 2018?

An increase of 31.19% was registered between the years.

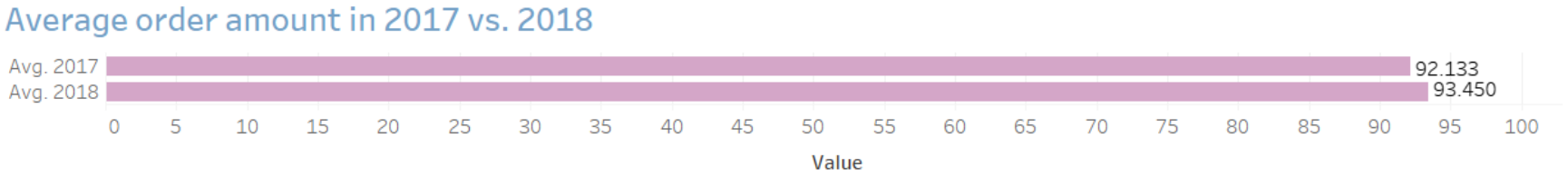


Note: “Order Amount” is 2018 but the chart didn’t get updated.

Evaluate the Sales

What was our average order amount in 2017 vs. 2018?

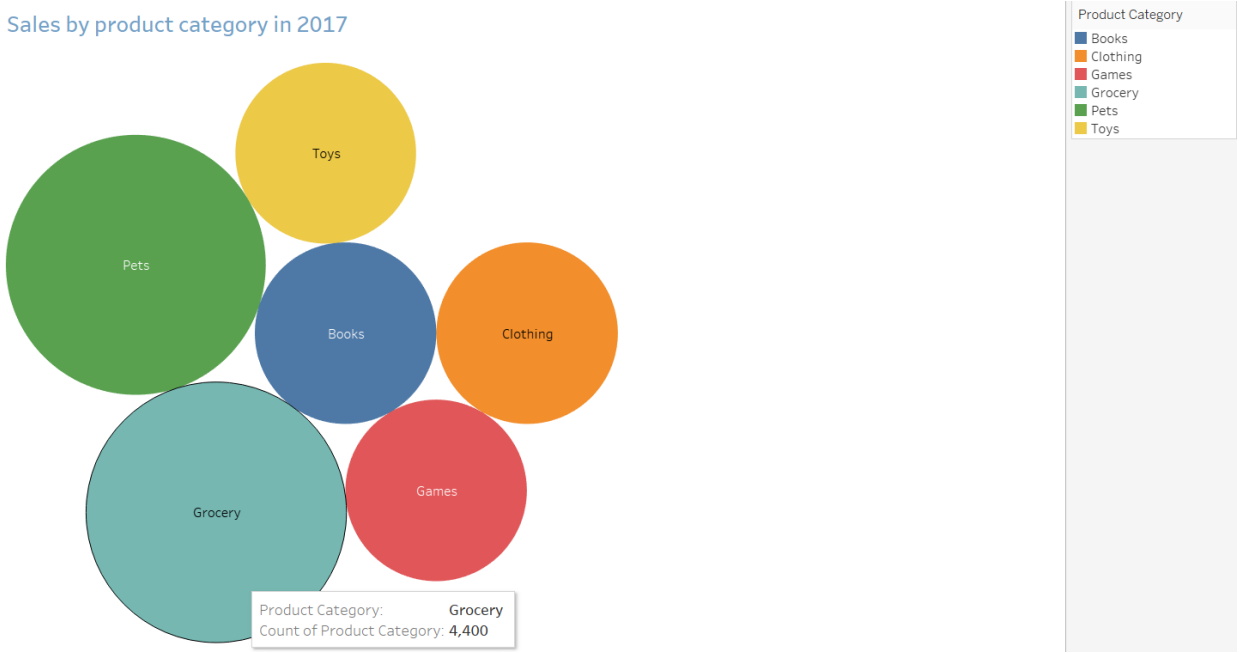
As evident in the horizontal bar chart, 2018 exhibits a notably higher average sales figure compared to 2017, signifying that 2018 was a more profitable year.



Evaluate the Product Categories

Which product category was most popular in 2017?

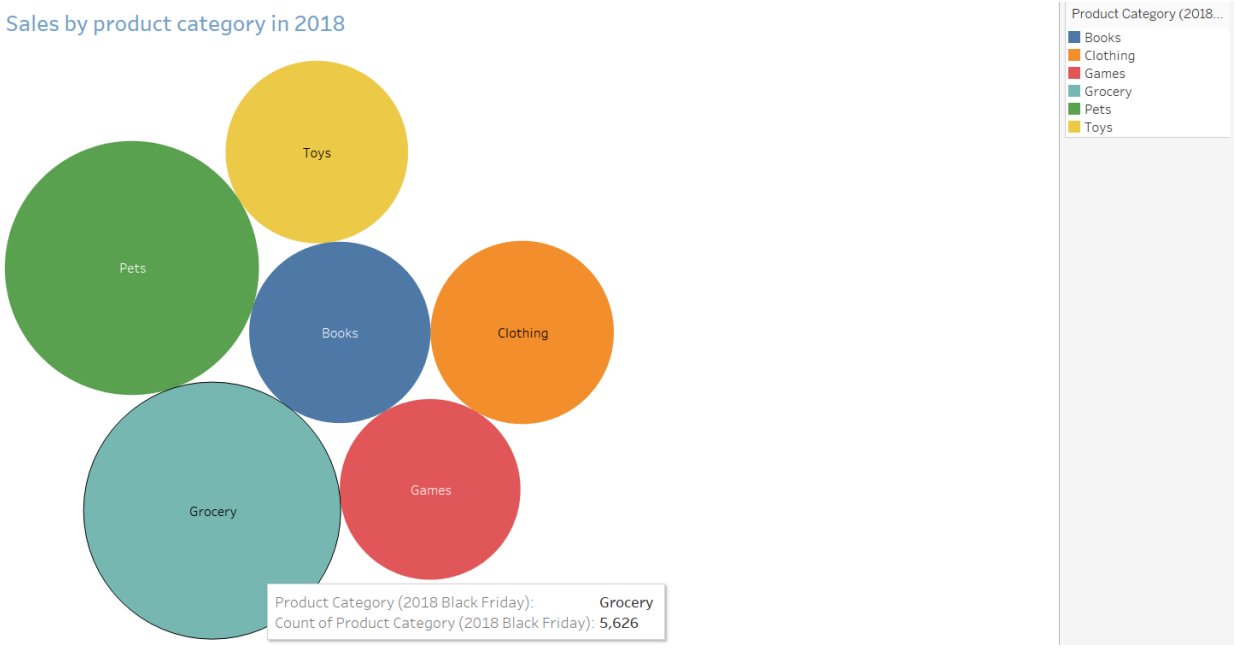
As depicted in the packed bubbles graph, it's clear that the “Grocery” category boasts the highest sales count, totaling 4,400, closely followed by the “Pets” category with a count of 4,381. This observation leads to the conclusion that these categories hold significant preference among our customers in 2017. Furthermore, they constitute the largest segments of our revenue, underscoring their critical importance as core product offerings.



Evaluate the Product Categories

Which product category was most popular in 2018?

As illustrated in the packed bubbles graph, it's evident that the “Grocery” category leads with the highest sales count, reaching a total of 5,626, closely trailed by the “Pets” category with 5,494 sales. This observation strongly suggests that these categories enjoy substantial favor among our 2018 customers. Moreover, they represent the most substantial contributors to our revenue, highlighting their paramount significance as essential product categories.



Evaluate the Product Categories

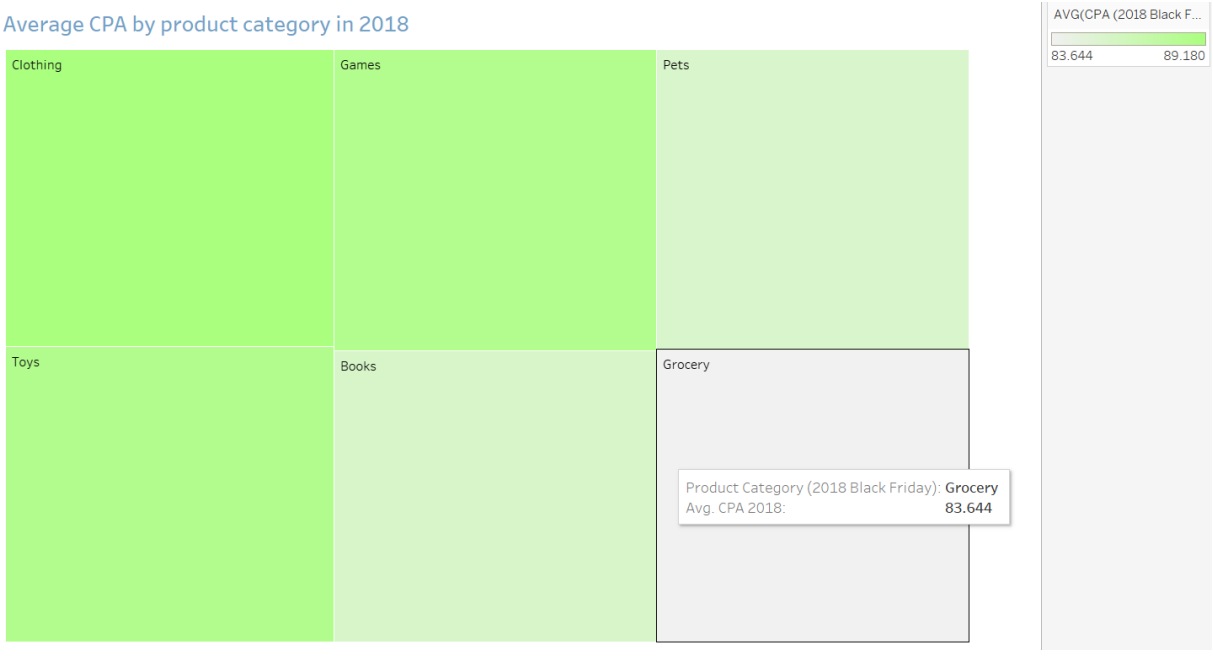
What is the breakdown of CPA (Cost Per Acquisition) by product category in 2017?

The “Games" category had the highest average CPA, it means that acquiring customers or leads within the “Games” category is more expensive compared to other product categories.

Evaluate the Product Categories

What is the breakdown of CPA (Cost Per Acquisition) by product category in 2018?

The “Grocery" category had the lowest average CPA, it means that acquiring customers or leads within the “Grocery” category is cheaper compared to other product categories.



Everything Else

You can find the dataset used for crafting this report here.

Note: I have used Excel and Tableau in the data visualization part.