

# Udacity

# Marketing Analytics

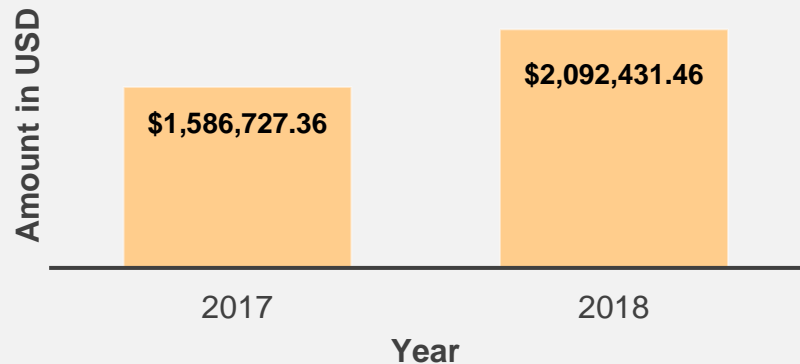
Nanodegree Program  
Project: Craft a Report

By Hunter Sparrow

## Objective Results

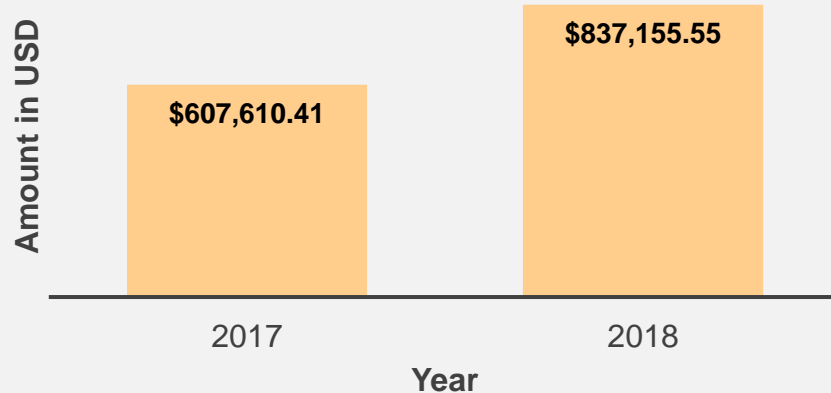
- Evaluate sales were increased by 30% on Black Friday in 2018 vs 2017

### Total Sales Black Friday



- Did ad spending decrease by 30% from 2017 to 2018 for Black Friday?

### Ad Spending Black Friday



Year	Ad spending	Total Sales
2018	\$837,155.55	\$2,092,431.46
2017	\$607,610.41	\$1,586,727.36
% change	38%	32%

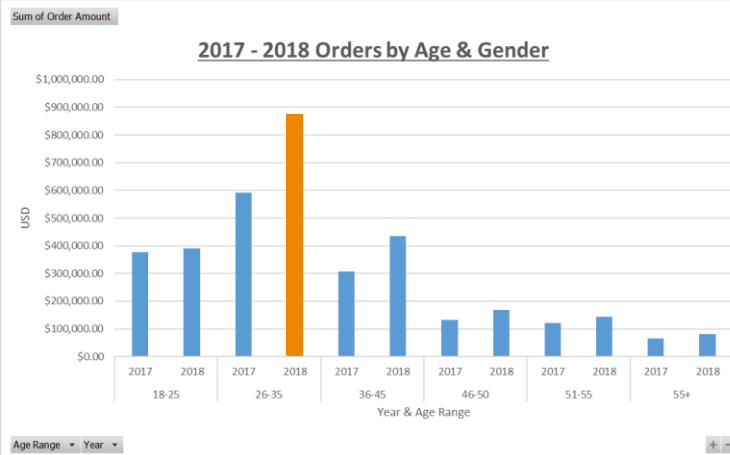
### Result:

- 1) Sales increased by 38% from 2017 to 2018 (goal met).
- 2) Ad spending did not decreased but increased by 32% (goal not met).

# Evaluate the Audience

What product categories did each gender spend their money on?

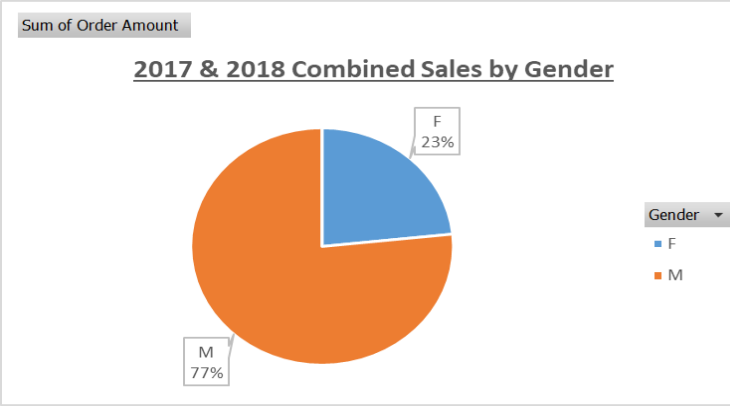
Which age group spend the most money in 2017 and 2018?



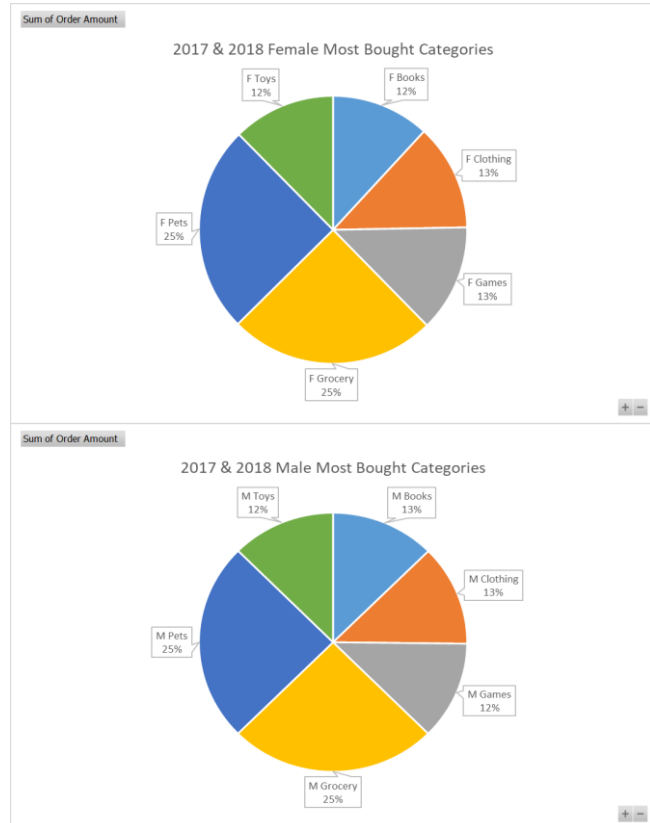
2018 had the most orders by the 26-35 age group. Compared to the previous year in 2017 by the same age group there was almost \$300,000 difference in spending. The age group with the lowest spending was 55+ in 2017.

2017 for all age groups was less than all age groups for 2018.

Which gender spent the most money for 2017 & 2018?



Out of the total purchases males accounted for 77% of all transactions. Whereas females had much less with 23%.



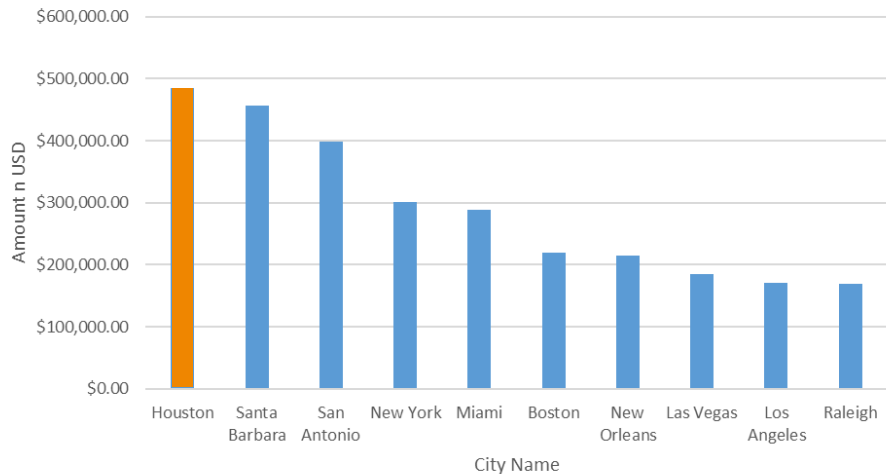
Both genders purchased very similar product categories percentages. However the difference being the total amount each gender spent. Grocery and Pets was the highest category for both genders with 25%

Males: \$ 2,826,990.56 / Females: \$ 860,354.75

# Evaluate the Audience

Top 10 cities with the most orders for 2017 & 2018?

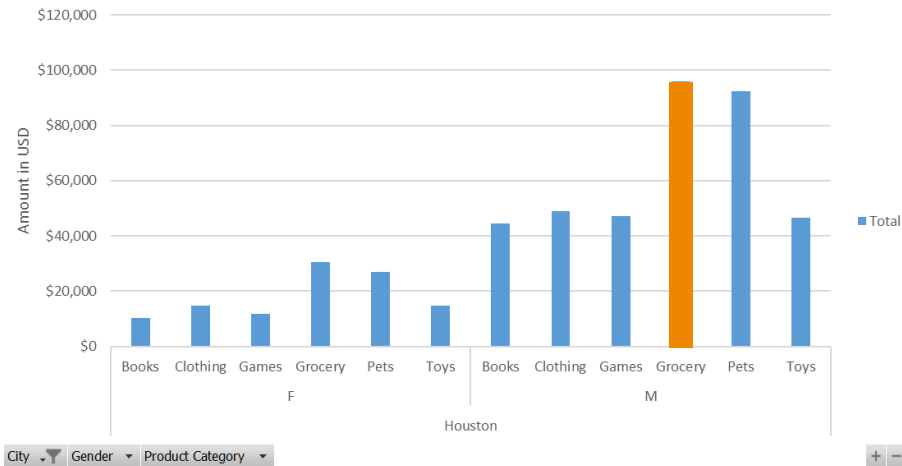
**Total orders by City 2017 & 2018**



Out of 21 cities from the data - Houston, Santa Barbara and San Antonio generated the most sales for 2017 & 2018 combined.

What did people of Houston buy by gender

**By Gender Houston Category Sales 2017 & 2018**



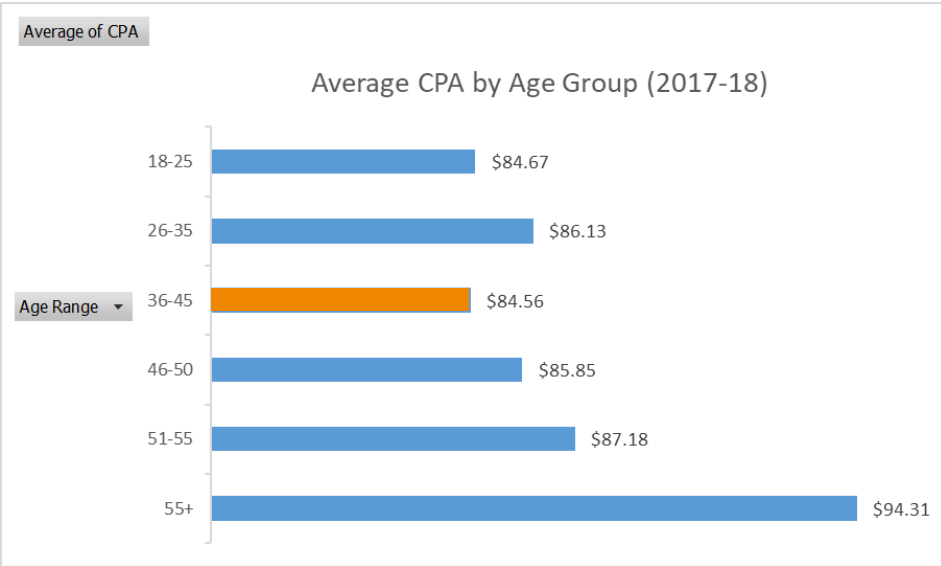
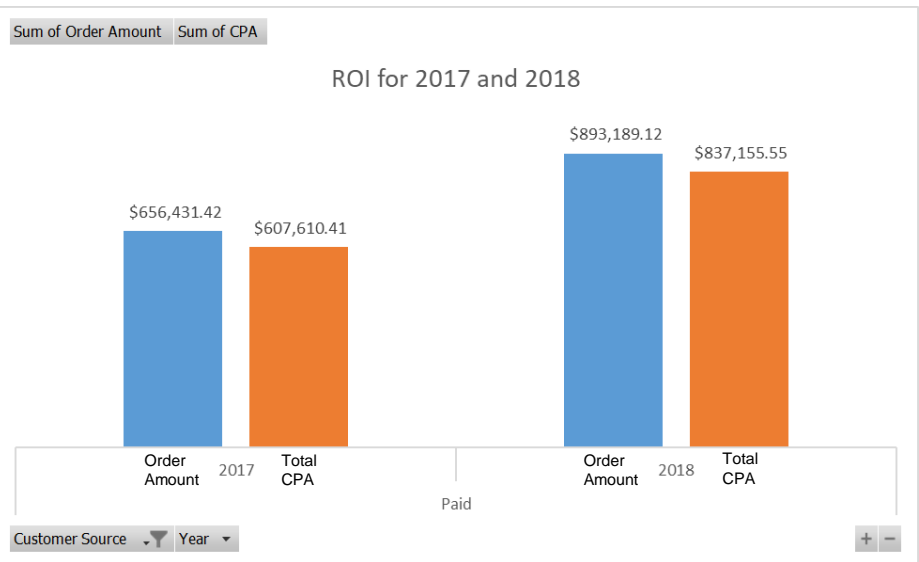
Analyzing Houston by gender and product category we can see what they bought. Both genders spent the most money on grocery followed by pets. The least spend category for both was books.

Knowing what customers buy and where they buy them can help stores prepare for inventory and estimate sales numbers more accurately. Also if a chain has multiple stores across states they can identify high selling items and strategize better for those products.

# Evaluate the Marketing

Row Labels	Sum of Order Amount	Sum of CPA	ROI
Paid	\$ 1,549,620.54	\$ 1,444,765.96	
2017	\$ 656,431.42	\$ 607,610.41	8.03
2018	\$ 893,189.12	\$ 837,155.55	6.69
Grand Total	\$ 1,549,620.54	\$ 1,444,765.96	7.26

The data shows an average of 7.26% ROI because 2017 ROI was 8.03% and 2018 was 6.69%.



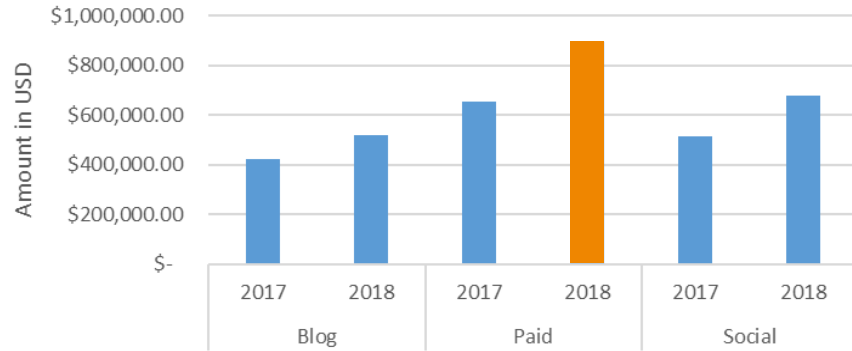
- Age range 36-45 has the best CPA with \$84.56
- Age 18-25 had the second lowest CPA with \$84.67
- Age 55+ had the highest CPA with \$95.31

# Evaluate the Marketing

Which Channel & year yielded the most success for orders?

Sum of Order Amount

Total Orders from Marketing



Customer Source ▼ Year ▼

+ -

Paid channel performed the best in 2018 with \$893,189.12 and again in 2017 with \$656,431.42

All forms of marketing increased in 2018 compared to 2017, however paid marketing had the highest increase with 36% increase. Social 32% increase and Blog 22% increase.

Analyzing Paid and Social marketing channels by improving the message, focus on target demographic and start A/B testing could be beneficial for 2019 marketing plan.

# Evaluate the Sales

Sum of Order Amount

## Total Revenue 2017 vs 2018

\$1,594,913.85



2017

\$2,092,431.46



2018

Year ▼

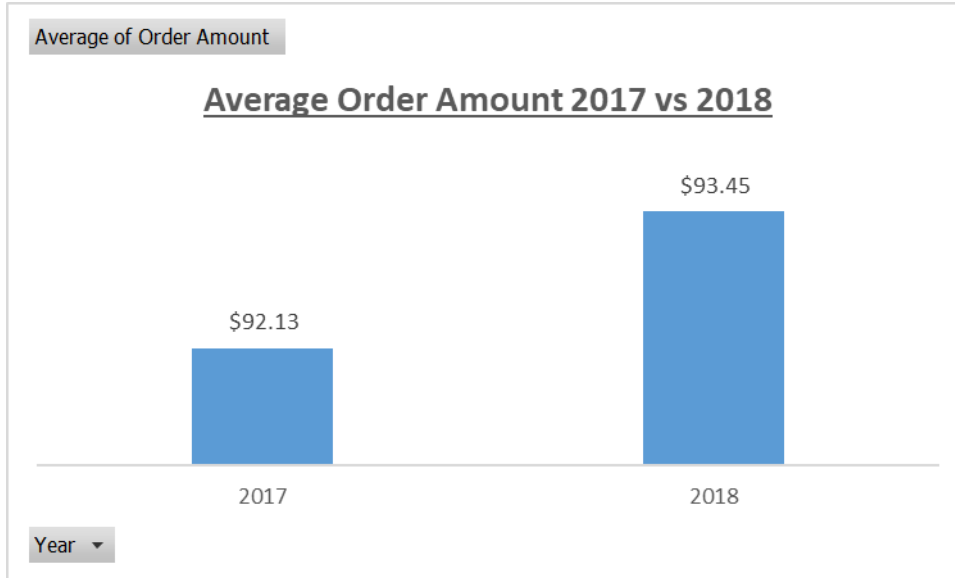
Total revenue and percent difference for 2017-2018 ?

The total revenue for 2017 was \$1,594,913.85 and 2018 was \$2,092,431.46

2018 saw a increase in total revenue by 31% (\$497,517.61)

# Evaluate the Sales

## Average order amount in 2017 Vs 2018



The average order for 2017 was \$92.13 while 2018 was \$93.45.

A small increase by 1.4% / \$1.32

The average order for both years combined is \$92.87

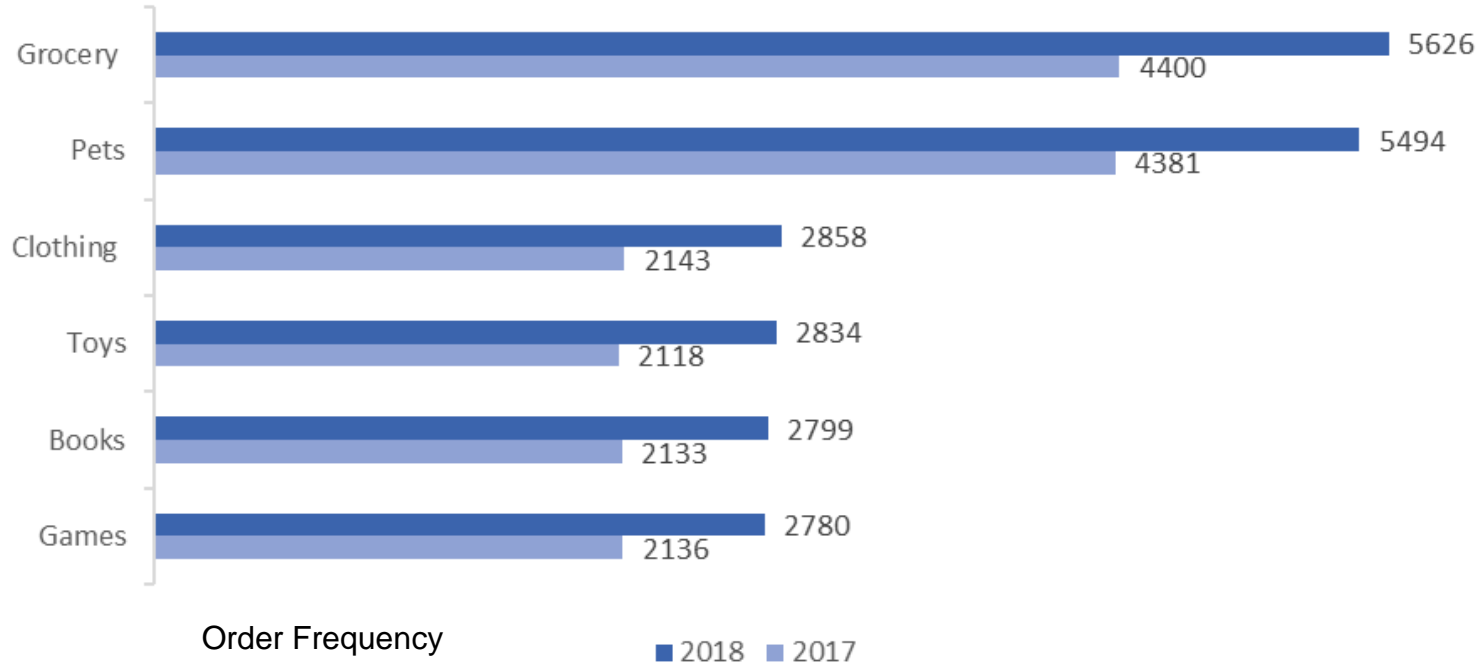


# Evaluate the Product Categories

What are order trends for product categories in 2017 vs 2018?

Which product category was the most popular in 2017 & 2018 ?

## Product Category Most Ordered 2017-18



Grocery was the most ordered category in both 2017 and 2018. Total of 4,400 order in 2017 And 5,626 orders for 2018

Pets being the 2<sup>nd</sup> most ordered category for both years as well. 4,381 for 2017 and 5,494 for 2018.

# Evaluate the Product Categories

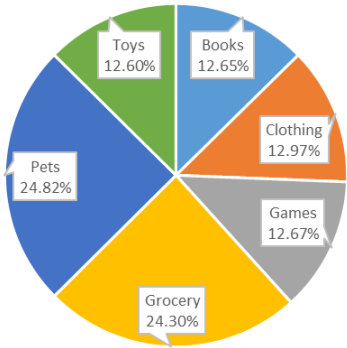
## Determine Sales by Product Category

Grocery and Pets were the two biggest influences on total sales. These two categories are almost double all other categories. Grocery with 24.30% / \$923,605.54 and Pets with 24.82% / \$920,605.54 .

Other categories (books, Games, Toys and Clothing) are around 12.0-12.97% / \$457,693.00 – \$467,658.00 range.

Sum of CPA

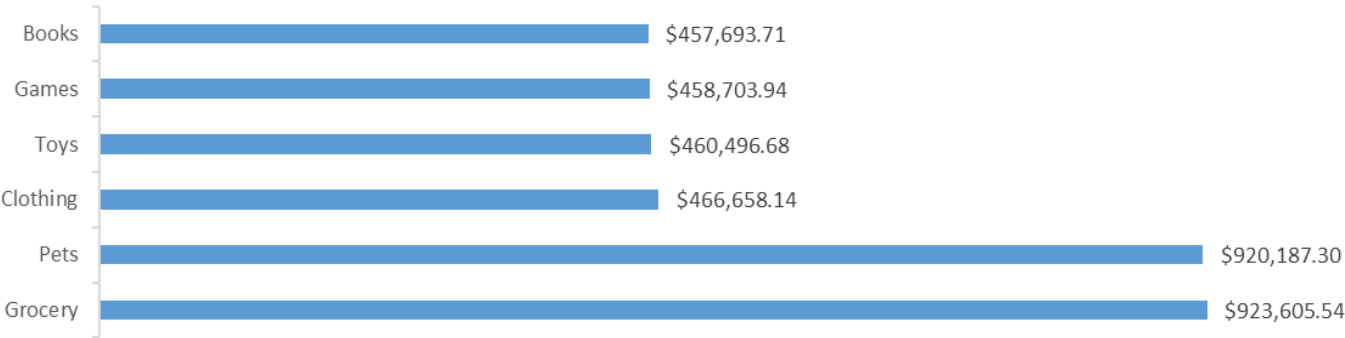
Product Category Total Sales 2017 -18



Sum of Order Amount

Product Category Total Sales Trend 2017-18

Product Category ▼



# Everything Else

Data used for this analysis can be found here:

<https://docs.google.com/spreadsheets/d/16vMeTCWDybJHPFk75EL7PaO4kqnwSyhh/copy>

All charts and visual were created in Excel. All charts are interactive but for this project just screenshots were used.