

# Udacity Marketing Analytics

Nanodegree Program  
Project: Craft a Report

# Objective Results

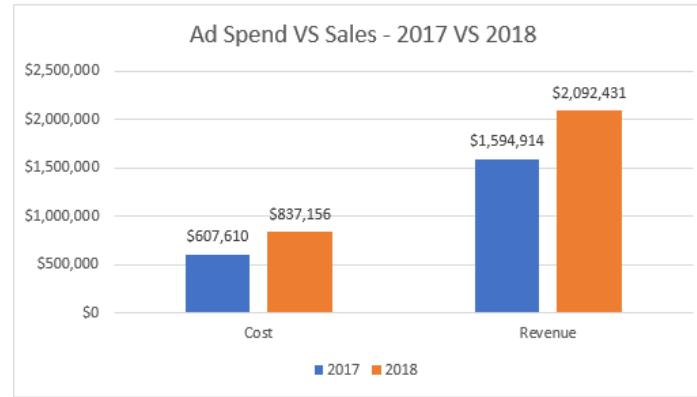
The objective of increasing sales by 30% on Black Friday 2018 against 2017 was met, since it attained an increase of 31%.

The objective of decreasing ad spend by 30% from Black Friday 2017 against 2017 was not met, as a value of 38% increase was the reported value.

The growth formulas are:

$\text{Cost}_{2018}/\text{Cost}_{2017}-1$

$\text{Revenue}_{2018}/\text{Revenue}_{2017}-1$

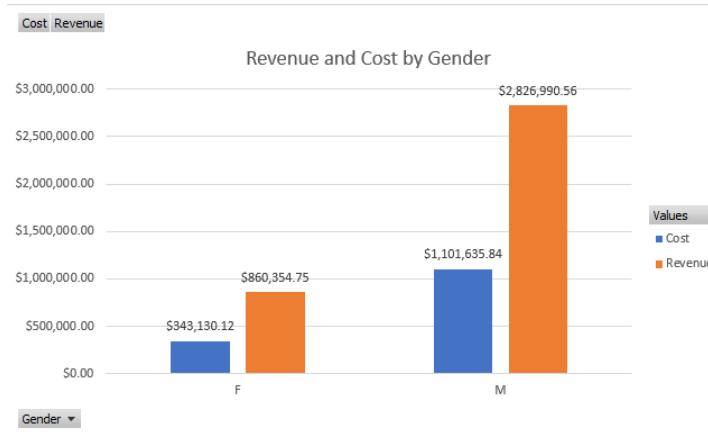


Year	Cost	Revenue
2017	\$607,610	\$1,594,914
2018	\$837,156	\$2,092,431
Evolution	38%	31%
Grand Total	\$1,444,766	\$3,687,345

# Evaluate the Audience

Question: Which gender generated most sales and cost?

The male gender generated 76.25% and 76.67% of the Cost (1,101,636\$) and Revenue (2,826,991\$), respectively, more than women on both aspects.



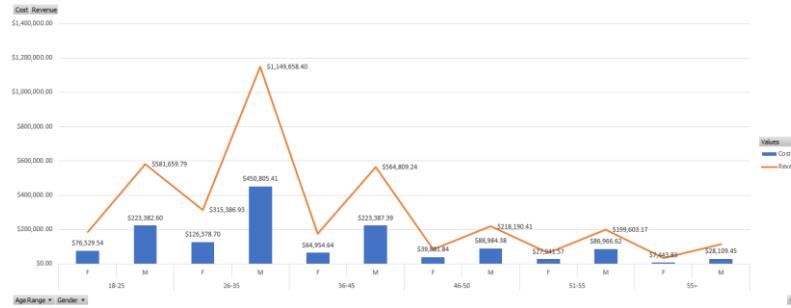
Gender	Cost	Cost %	Revenue	Revenue %
F	\$343,130.12	23.75%	\$860,354.75	23.33%
M	\$1,101,635.84	76.25%	\$2,826,990.56	76.67%
<b>Grand Total</b>	<b>\$1,444,765.96</b>	<b>100.00%</b>	<b>\$3,687,345.31</b>	<b>100.00%</b>

# Evaluate the Audience

Question: Who spend and contributed more to revenue by Gender and Age group?

The age range from 26 to 35 was the biggest, with revenue from men of 1,149,658\$.

The next best performers are the 18-25 year olds.



Age Range	Gender	Cost	Cost %	Revenue	Revenue %
18-25	F	\$76,529.54	5.30%	\$185,475.02	5.03%
	M	\$223,382.60	15.46%	\$581,659.79	15.77%
18-25 Total		\$299,912.14	20.76%	\$767,134.81	20.80%
26-35	F	\$126,378.70	8.75%	\$315,386.93	8.55%
	M	\$450,805.41	31.20%	\$1,149,658.40	31.18%
26-35 Total		\$577,184.11	39.95%	\$1,465,045.33	39.73%
36-45	F	\$64,954.64	4.50%	\$176,861.98	4.80%
	M	\$223,387.39	15.46%	\$564,809.24	15.32%
36-45 Total		\$288,342.04	19.96%	\$741,671.22	20.11%
46-50	F	\$39,881.84	2.76%	\$83,948.80	2.28%
	M	\$88,984.38	6.16%	\$218,190.41	5.92%
46-50 Total		\$128,866.22	8.92%	\$302,139.21	8.19%
51-55	F	\$27,941.57	1.93%	\$65,577.95	1.78%
	M	\$86,966.62	6.02%	\$199,603.17	5.41%
51-55 Total		\$114,908.18	7.95%	\$265,181.12	7.19%
55+	F	\$7,443.83	0.52%	\$33,104.07	0.90%
	M	\$28,109.45	1.95%	\$113,069.55	3.07%
55+ Total		\$35,553.27	2.46%	\$146,173.62	3.96%
Grand Total		\$1,444,765.96	100.00%	\$3,687,345.31	100.00%

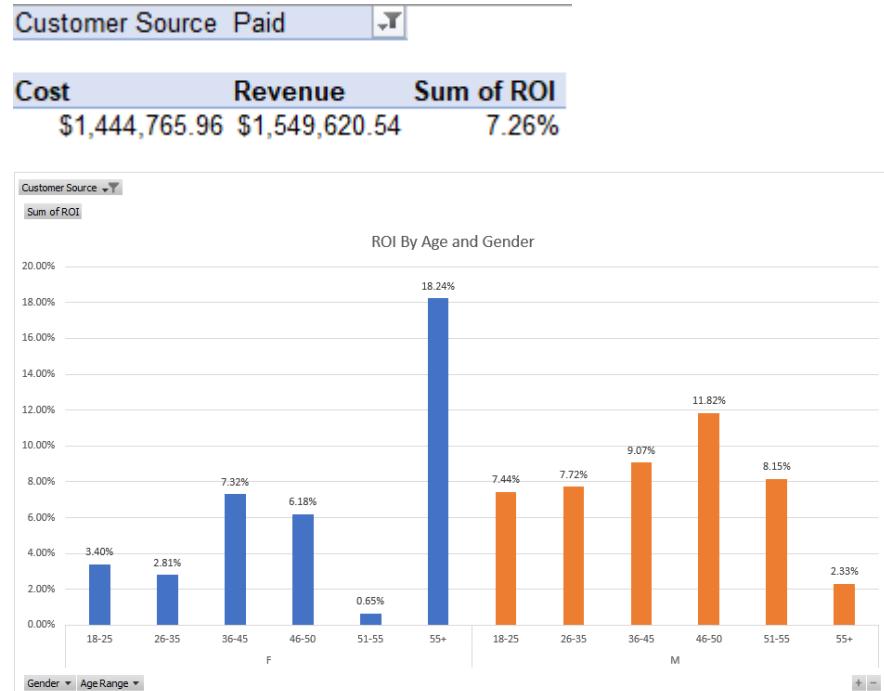
# Evaluate the Marketing

Question: Were our Marketing efforts were successful, ROI is a useful metric, calculated as:

(Revenue-Cost)/Cost

It is 7.26%, which is positive for the paid channel, which is positive.

From the bar charts, it's possible to see that the highest ROI by age group and gender, were a little far way from the rest, which was 55+ for Females (18.24%), followed by 46-50 for males (11.82%).

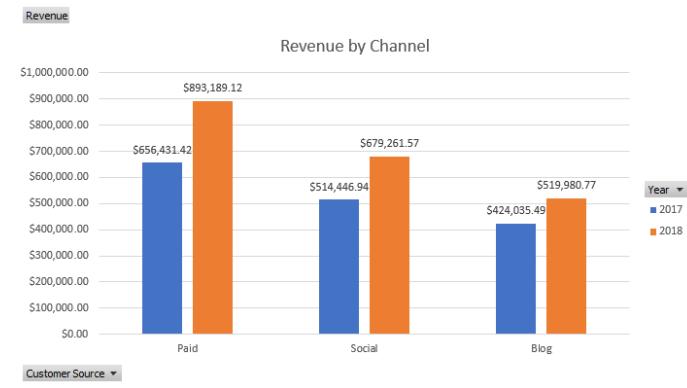


# Evaluate the Marketing

Question: Which channel contributed most to sales?

We find that paid was the largest driver for both years, followed by Social and Blog.

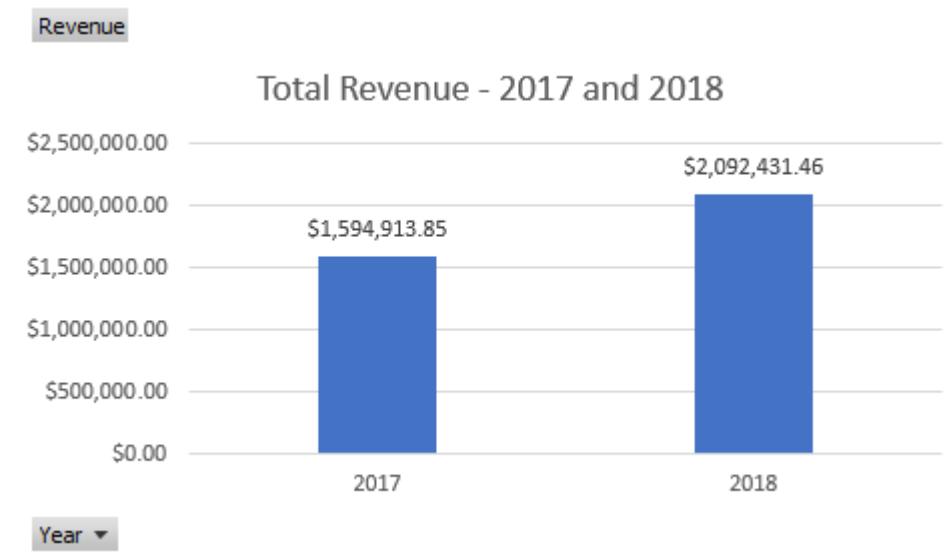
The trends remained stable for both years.



# Evaluate the Sales

Question: How much revenue was generated over time?

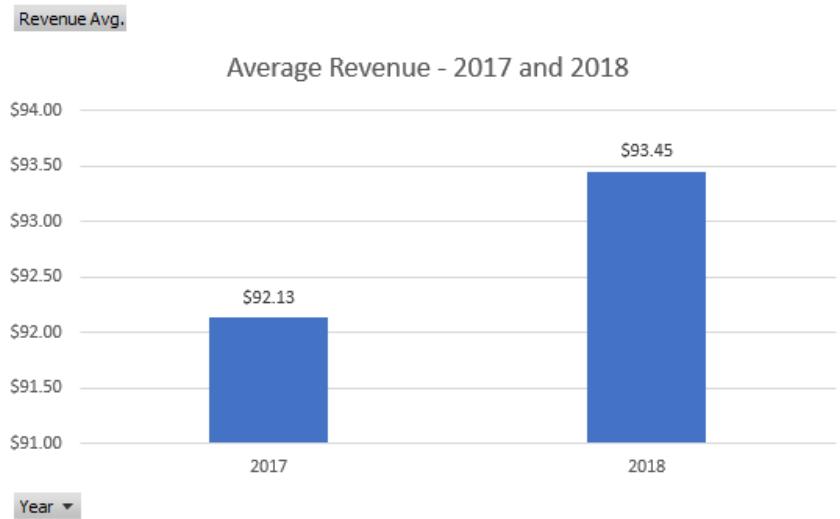
A revenue of 1,594,913.85\$ and 2,092,431.46\$ were reported for 2017 and 2018, respectively.



# Evaluate the Sales

Question: What was the average revenue over time?

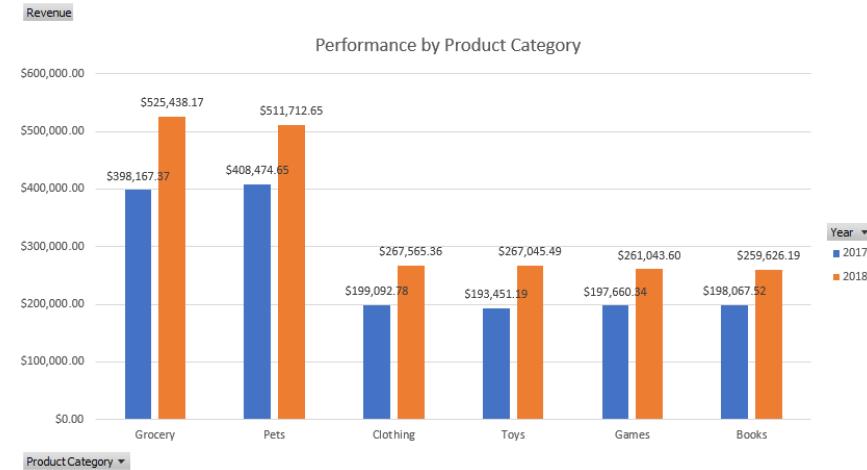
The average revenue was 92.13\$ and 93.45\$ in 2017 and 2018, respectively.



# Evaluate the Product Categories

Question: Which were the most popular categories for both years?

The top revenue category for 2017 was Pets, while in 2018 it was surpassed by Grocery.



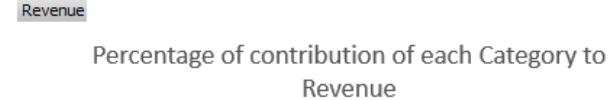
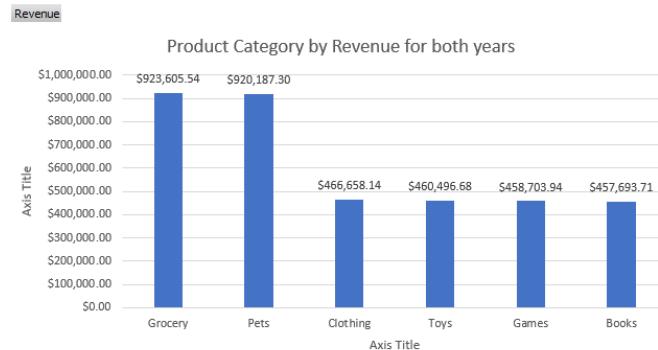
# Evaluate the Product Categories

Question: What is the distribution of revenue by product category and its % of the total?

From the charts we can see that Grocery was the largest contributor (923,605.54\$, 25.05%), followed by Pets (920,605.54\$, 24.96%).

We can see that both these categories are very close in revenue generated.

The four remaining categories are approximately 12% of the total.



- Product Category ▾
- Grocery
  - Pets
  - Clothing
  - Toys
  - Games
  - Books

## Everything Else

The dataset was merged in Excel to provide these findings in an easier way.

Further analysis can be conducted to extract insights from Cities and Newsletter subscriptions.

Sources:

<https://www.laptopmag.com/articles/excel-2013-pivot-table-from-multiples>