# Analyzing Amazon Sales Data

Detailed Project report

Apeksha Khare

# Project Details

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| **Project Title** | Analyzing Amazon Sales data |
| **Technologies** | Business Intelligence |
| **Domain** | E-commerce |
| **Project Difficulties level** | Advanced |

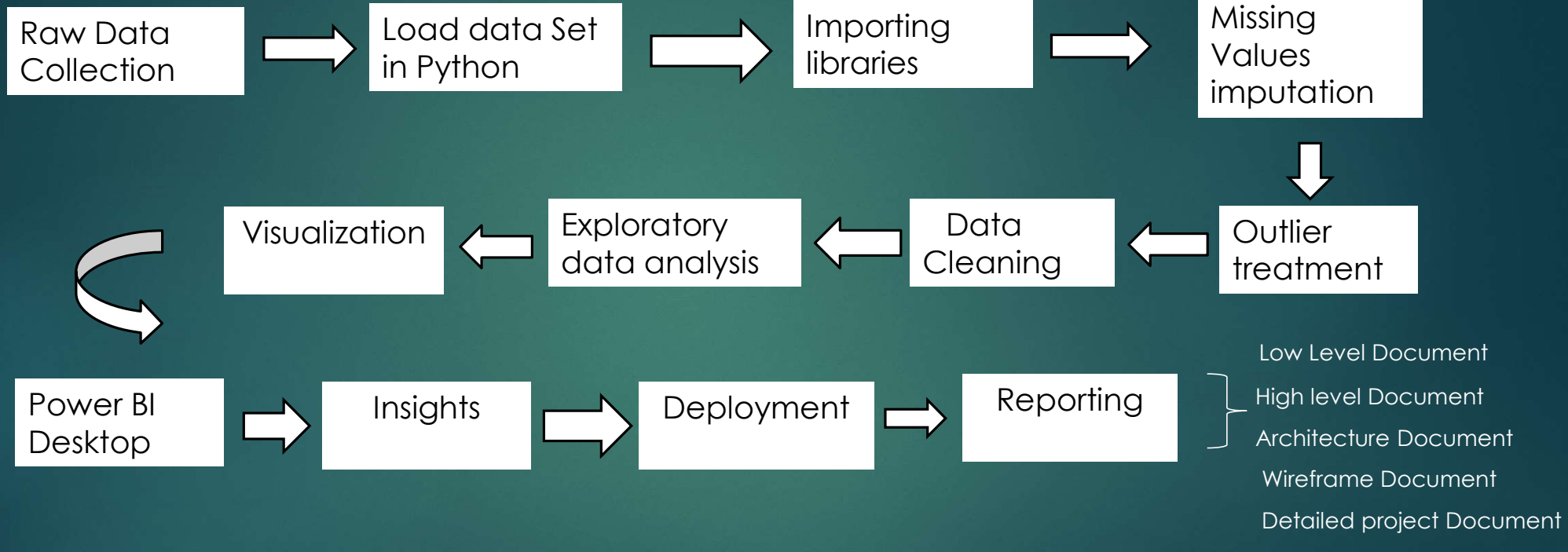
# Problem Statement:

- Sales management has gained importance to meet increasing competition and the need for improved methods of distribution to reduce cost and to increase profits. Sales management today is the most important function in a commercial and business enterprise.
- Do ETL : Extract-Transform-Load some Amazon dataset and find Sales-trend -> month wise , year wise , yearly_month wise
- Find key metrics and factors and show the meaningful relationships between attributes.

# Objective:

- Finding Sales-trend ,month wise , year wise, yearly_month wise.

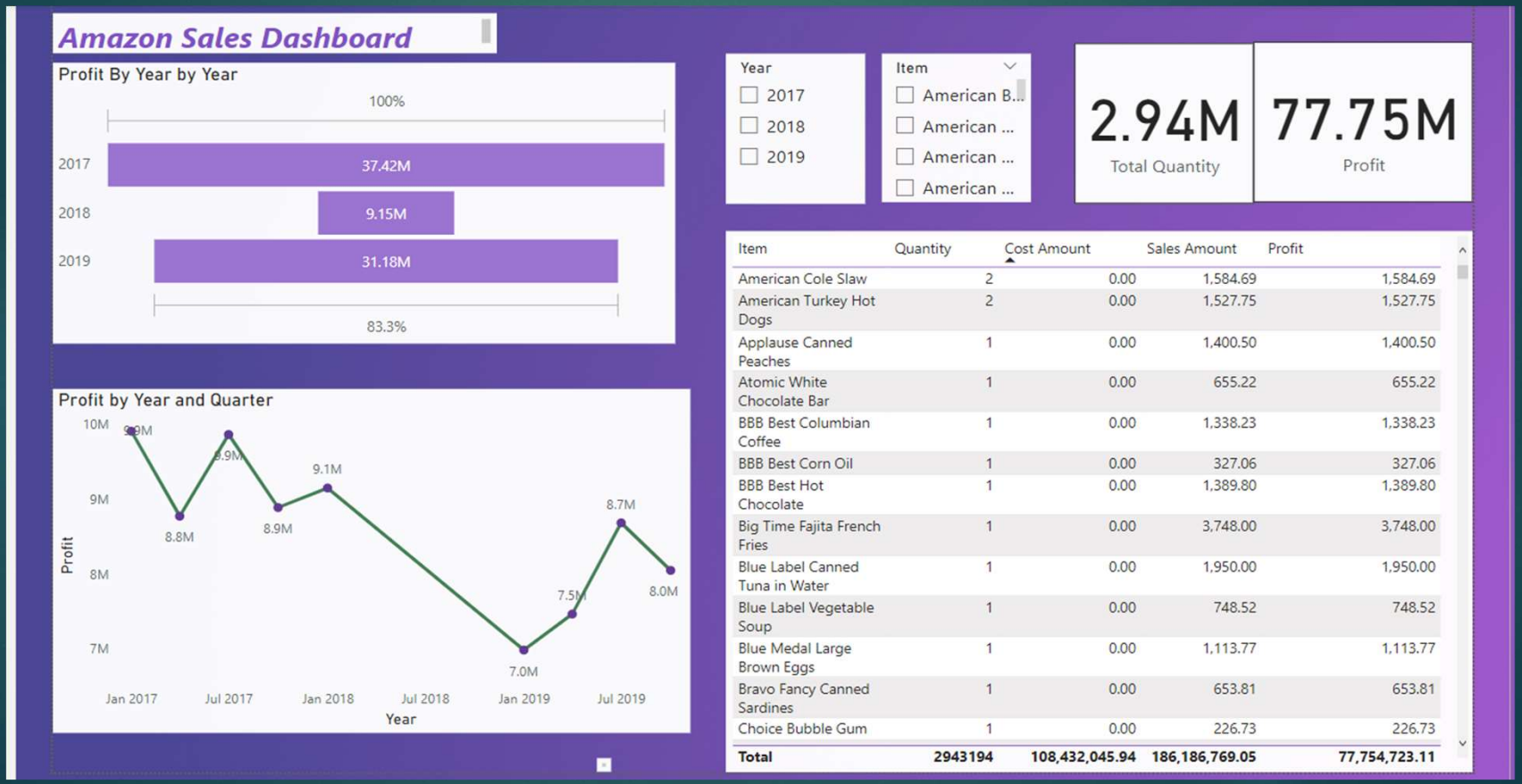
# Architecture



# DATASET INFORMATION :

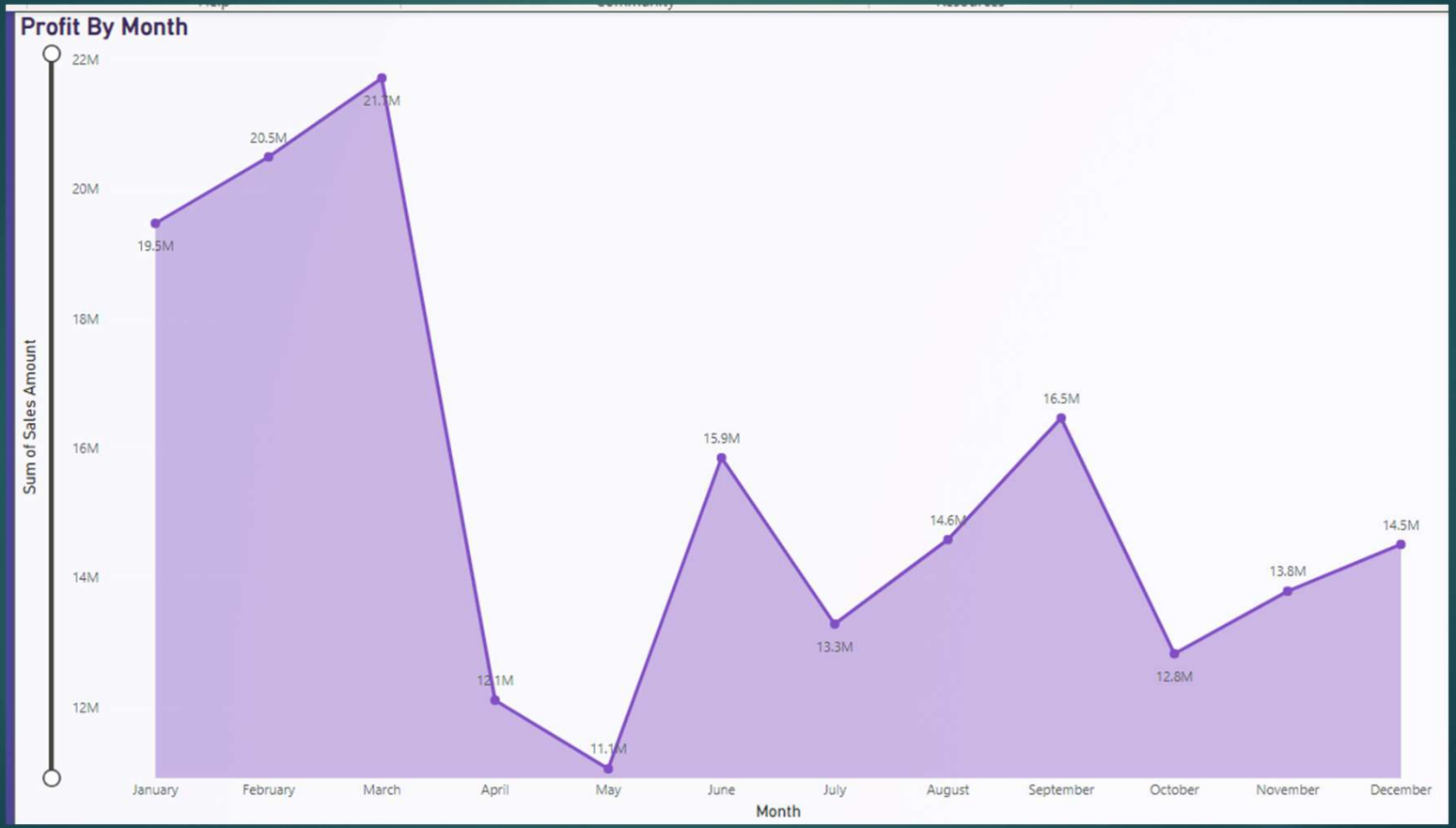
- Dataset that contains Information like Sales Amt., Cost Amt., Sales Prices, List Prices, Sales Margins, Sales Quantities, etc

Profit trended down, resulting in a 18.75% decrease between January 2017 and October 2019.
Profit started trending down on October 2017, falling by 9.43% (838,245.62) in 8 quarters.
Profit dropped from 8,886,681.31 to 8,048,435.69 during its steepest decline between October 2017 and October 2019.



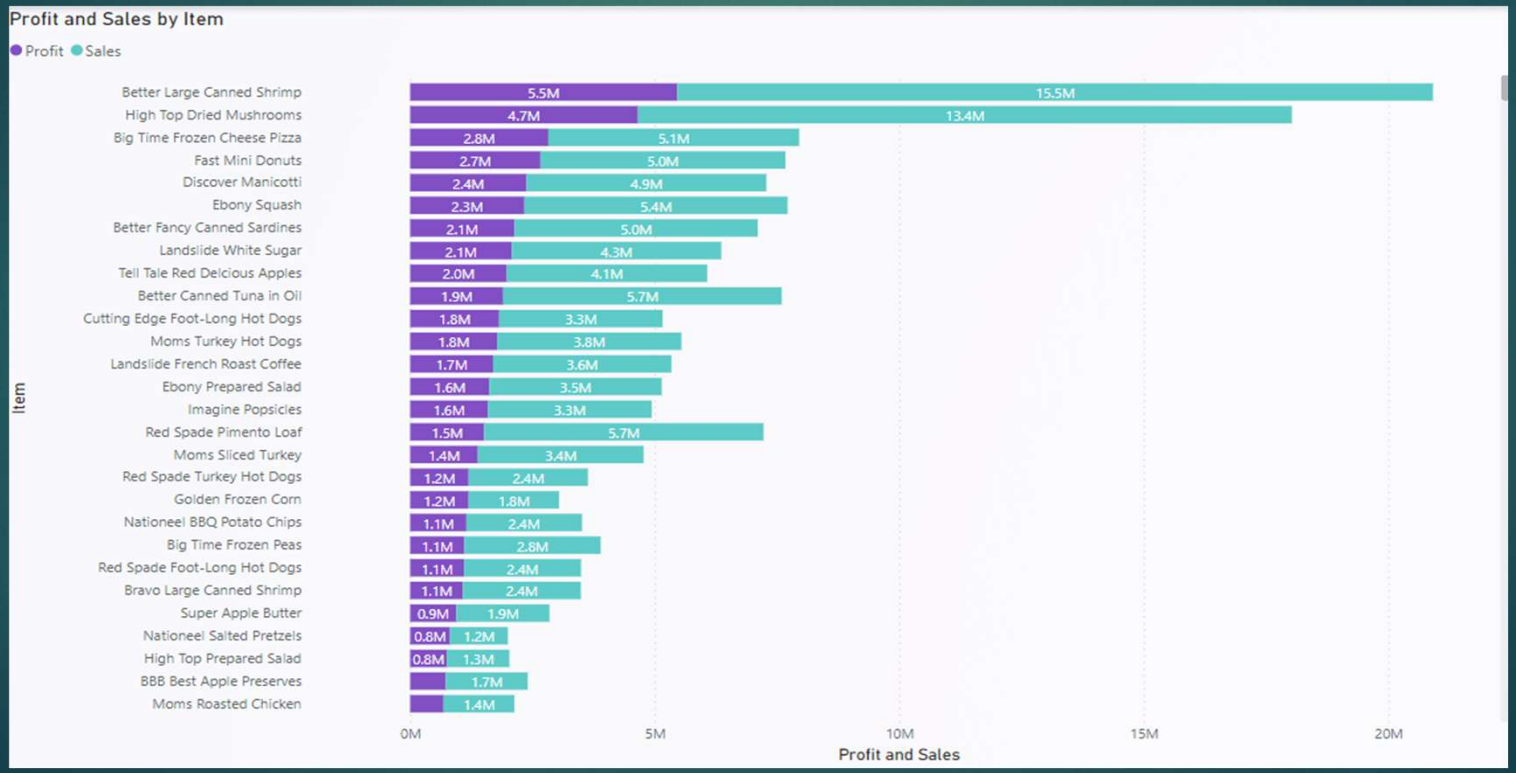

| Item | Quantity | Cost Amount | Sales Amount | Profit |
|---|---|---|---|---|
| American Cole Slaw | 2 | 0.00 | 1,584.69 | 1,584.69 |
| American Turkey Hot Dogs | 2 | 0.00 | 1,527.75 | 1,527.75 |
| Applause Canned Peaches | 1 | 0.00 | 1,400.50 | 1,400.50 |
| Atomic White Chocolate Bar | 1 | 0.00 | 655.22 | 655.22 |
| BBB Best Columbian Coffee | 1 | 0.00 | 1,338.23 | 1,338.23 |
| BBB Best Corn Oil | 1 | 0.00 | 327.06 | 327.06 |
| BBB Best Hot Chocolate | 1 | 0.00 | 1,389.80 | 1,389.80 |
| Big Time Fajita French Fries | 1 | 0.00 | 3,748.00 | 3,748.00 |
| Blue Label Canned Tuna in Water | 1 | 0.00 | 1,950.00 | 1,950.00 |
| Blue Label Vegetable Soup | 1 | 0.00 | 748.52 | 748.52 |
| Blue Medal Large Brown Eggs | 1 | 0.00 | 1,113.77 | 1,113.77 |
| Bravo Fancy Canned Sardines | 1 | 0.00 | 653.81 | 653.81 |
| Choice Bubble Gum | 1 | 0.00 | 226.73 | 226.73 |
| **Total** | **2943194** | **108,432,045.94** | **186,186,769.05** | **77,754,723.11** |

At 21,714,172.68, March had the highest Sum of Sales Amount and was 96.45% higher than May, which had the lowest Sum of Sales Amount at 11,053,298.15.



At 5,459,826.26, Better Large Canned Shrimp had the highest Profit and was 11,941.75% higher than Fast Lemon Cookies, which had the lowest Profit at -46,106.59.
Profit and total Sales are positively correlated with each other.

Better Large Canned Shrimp accounted for 7.00% of Profit.
Sales and Profit diverged the most when the Item was Better Large Canned Shrimp, when Sales were 9,994,346.21 higher than Profit.

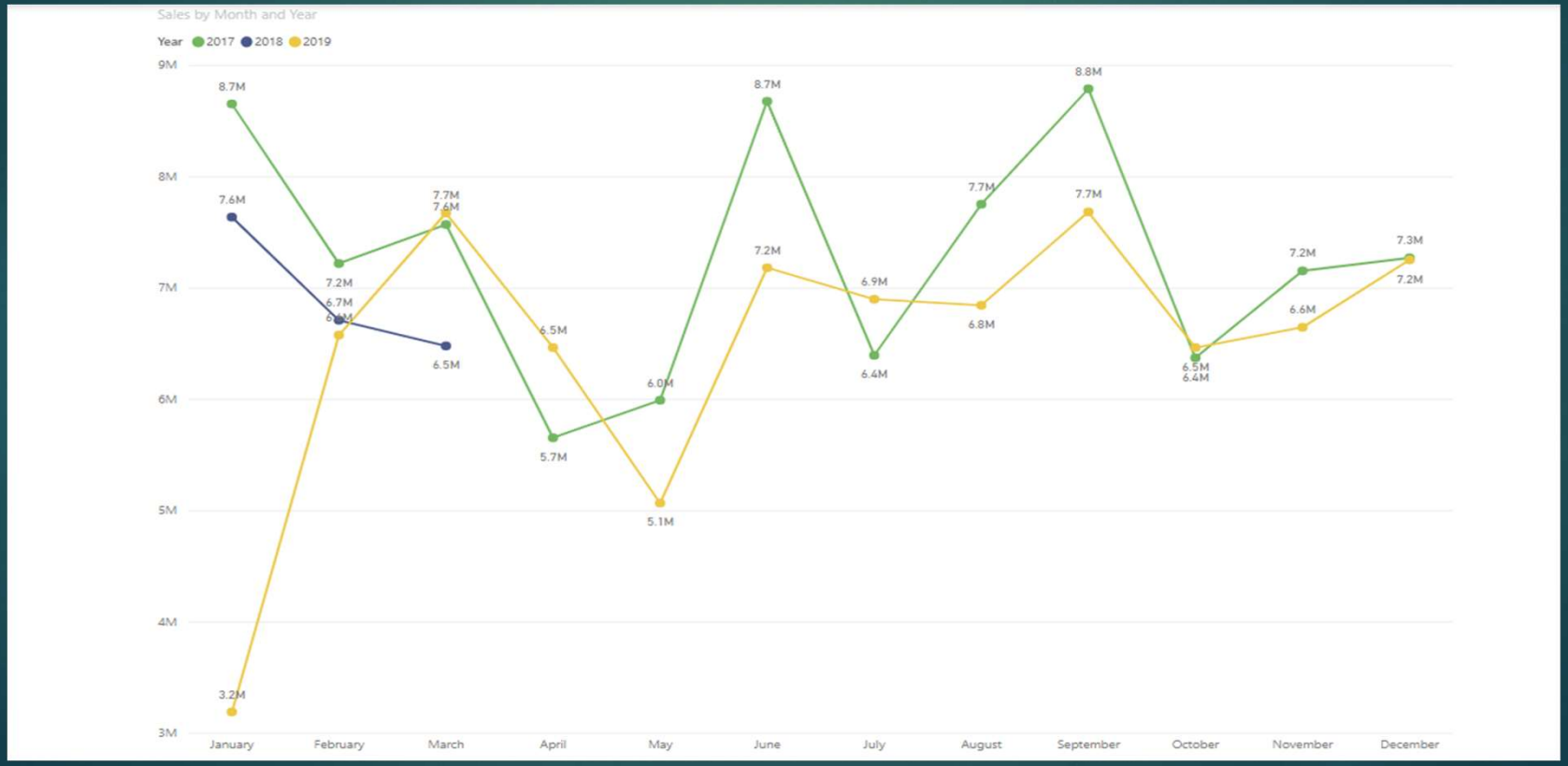


# Profit and sales by Year and Quarter

2017 had the highest total Sales at 87,462,706.40, followed by 2019 at 77,906,591.65 and 2018 at 20,817,471.00.

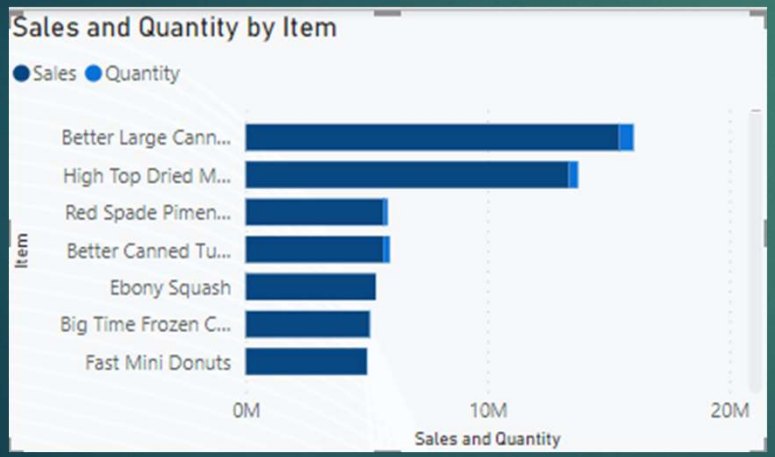
September in Year 2017 made up 4.72% of Sales.

2017 had the highest average Sales at 7,288,558.87, followed by 2018 at 6,939,157.00 and 2019 at 6,492,215.97.



- At 15,454,172.47, Better Large Canned Shrimp had the highest Sales and was 7,696,201.03% higher than Tell Tale Tomatos, which had the lowest Sales at 200.80.

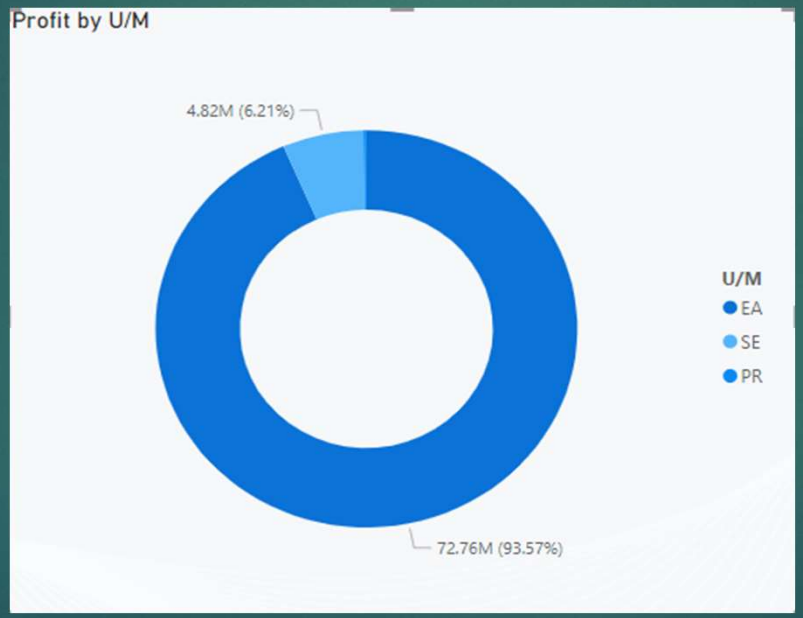
- Sales and total Quantity are positively correlated with each other.
- Better Large Canned Shrimp accounted for 8.30% of Sales.
- Sales and Quantity diverged the most when the Item was Better Large Canned Shrimp, when Sales were 14,863,829.47 higher than Quantity.
- Across all 657 Item, Profit ranged from -46,106.59 to 5,459,826.26 and Quantity ranged from 1 to 590343.



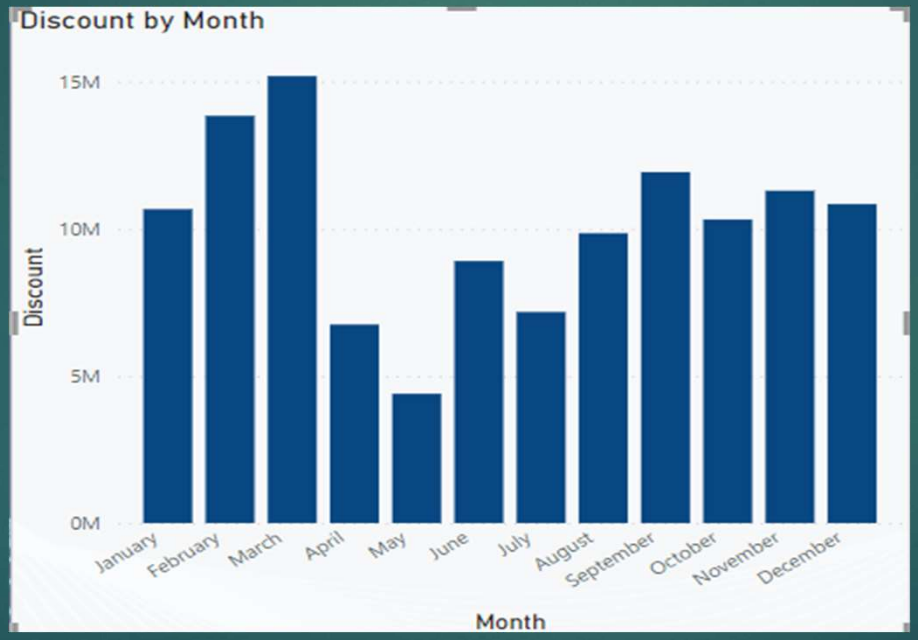

- ✓ Sales (10.93% decrease) and Profit (16.68% decrease) both trended down between 2017 and 2019.

- EA had the highest Profit at 72,756,116.85, followed by SE at 4,824,805.51 and PR at 173,800.75.

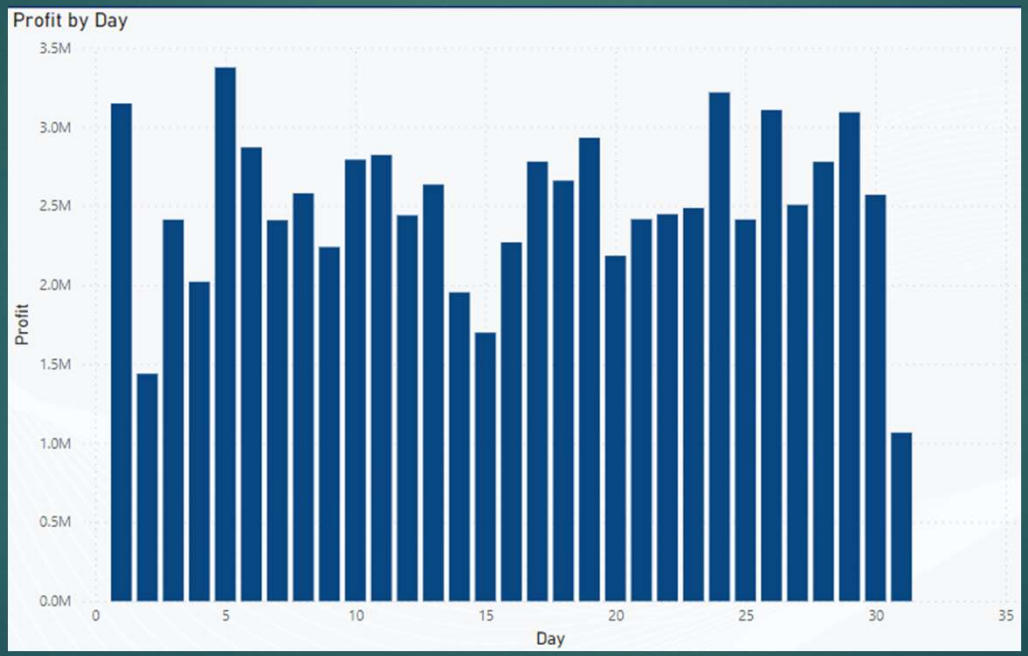
  EA accounted for 93.57% of Profit.



At 15,188,048.09, March had the highest Discount and was 245.73% higher than May, which had the lowest Discount at 4,393,056.43.
March accounted for 12.54% of Discount.
Across all 12 Month, Discount ranged from 4,393,056.43 to 15,188,048.09.



Profit trended down, resulting in a 66.13% decrease between Sunday, January 1, 2017 and Tuesday, January 31, 2017.
Profit started trending down on Friday, January 27, 2017, falling by 57.47% (1,440,456.40) in 4 days.
Profit dropped from 2,506,608.00 to 1,066,151.60 during its steepest decline between Friday, January 27, 2017 and Tuesday, January 31, 2017.



# QUESTIONS AND ANSWERS

1.What's the source of data?

- TheDataset was taken from iNeuron's Provided Project Description Document:

https://drive.google.com/drive/folders/1FkmFVL8wIJmQWP1z52TD8PlhOJhitTyI?usp=s

2.What was the type of data?

Thedata was a combination of numerical and Categorical values.

3.What techniques were you using for data?

- Removing unwanted attributes.
- Visualizing relation of independent variables with each other and output variables.
- Checking and changing distribution of continuous values.
- Removing outliers -Cleaning data and imputingifnullvaluesare present.
-Transforming data to yield the desired result

# Thank You