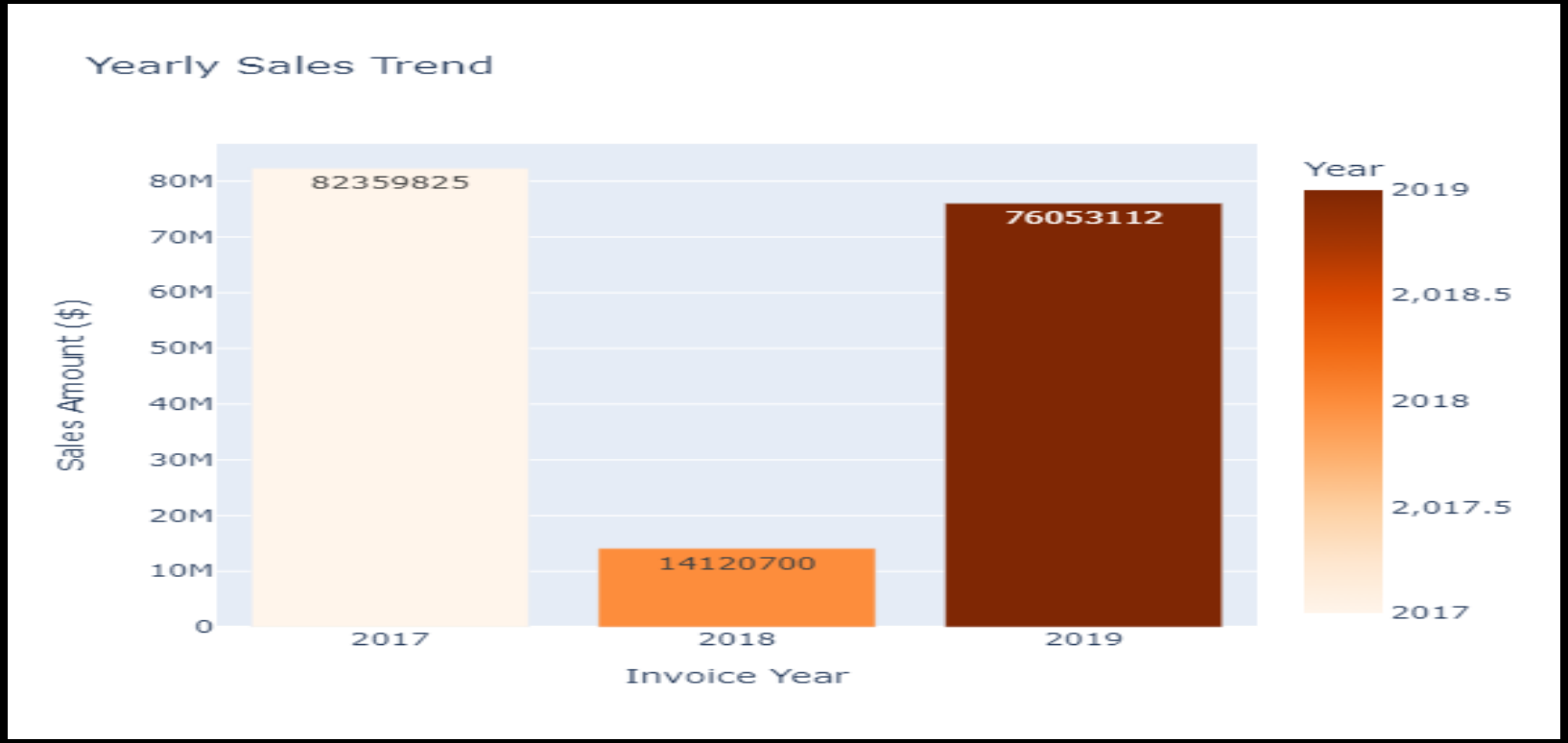

ANALYZING SALES DATA
Wireframe Document

Performed Exploratory Data Analysis and then created a Dashboard.

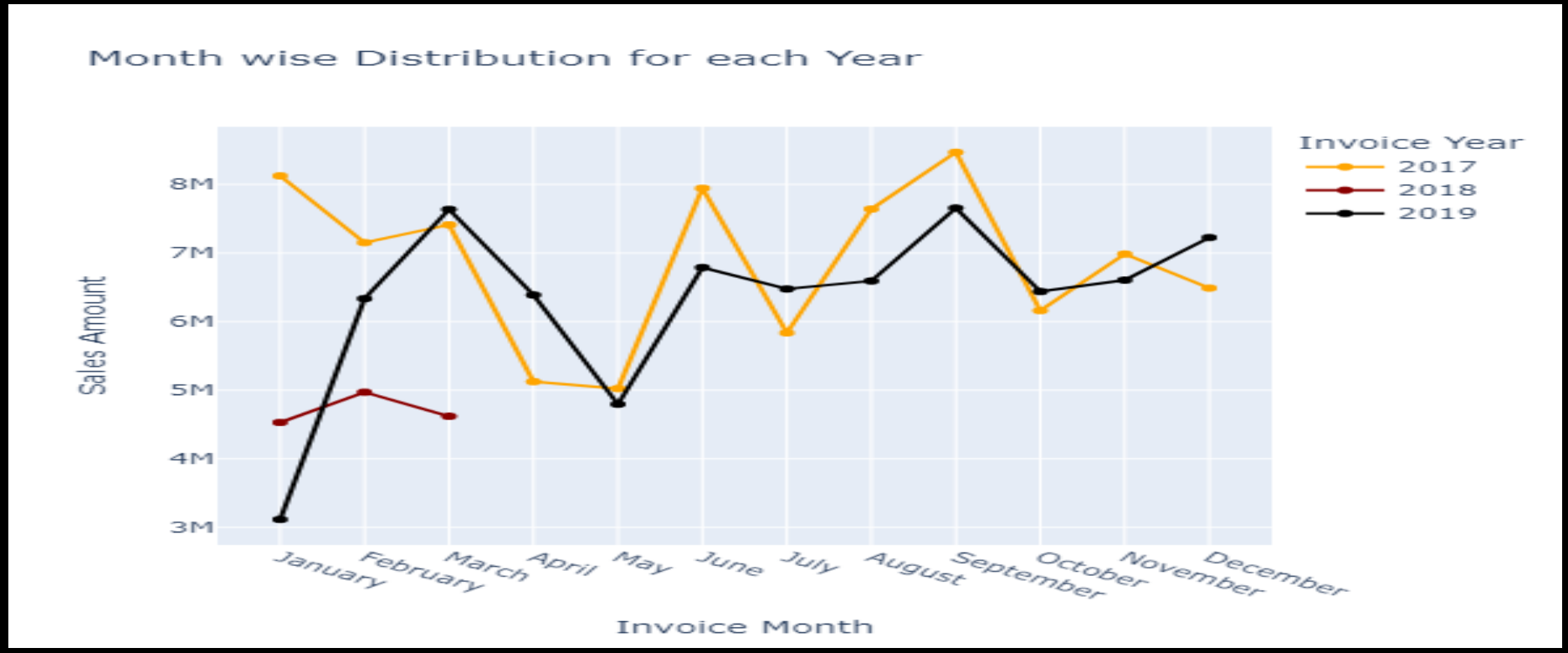
1. What is the Yearly Sales trend?



Based on the given data, it seems that the sales amount in 2018 is significantly lower compared to the sales amount in 2017 and 2019. However, it is important to note that we only have data for three months in 2018. Therefore, we cannot make a conclusive statement about the overall sales performance of 2018.

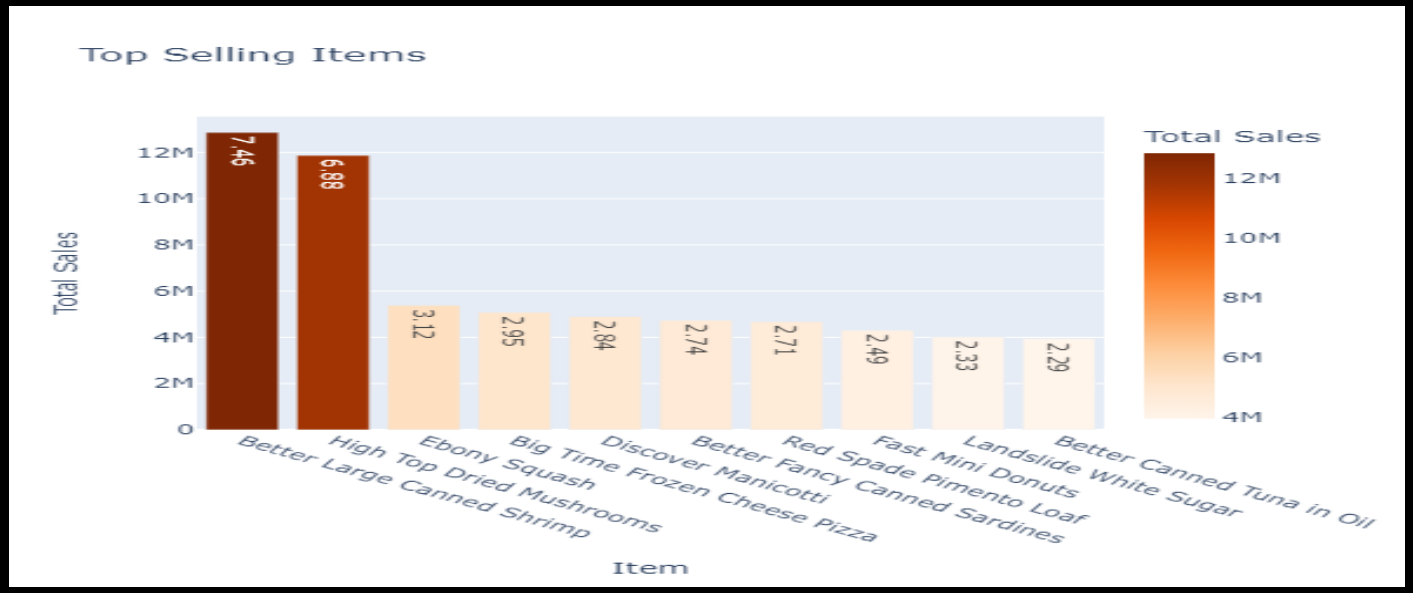
Now, coming on to the years 2017 and 2019, we can see that the sales amount for 2017 is much higher than the sales amount for 2019.This indicates that there was a decrease in sale between these two years.

2. **What is the overall trend in sales revenue over time?**



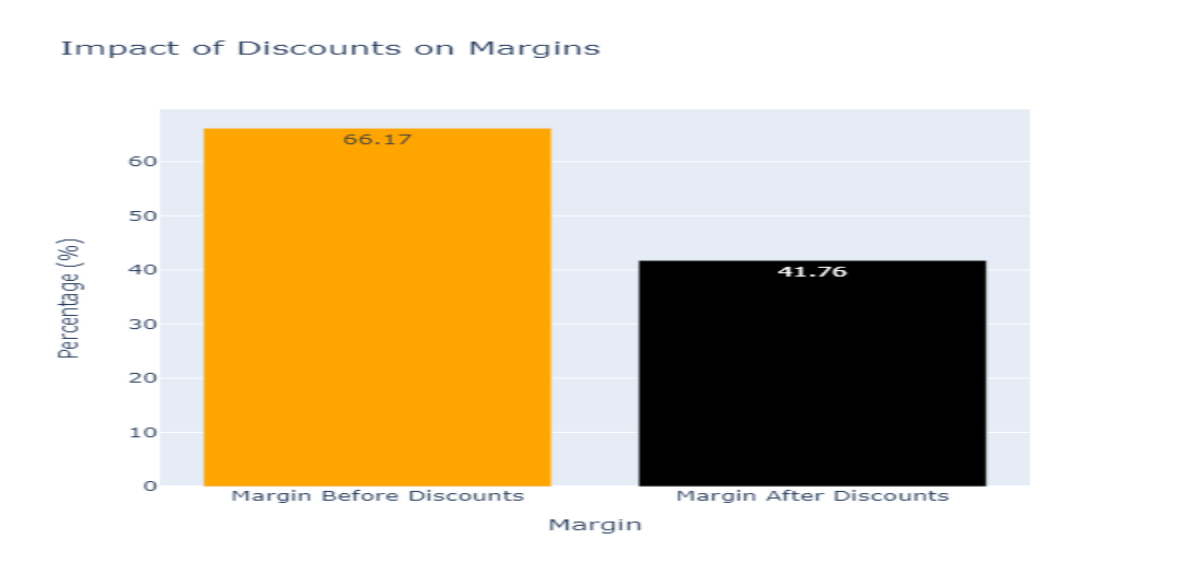
•The highest revenue was generated in September 2017, followed by January 2017 and June 2017.
•The lowest revenue was generated in January 2019, followed by January 2018 and March 2018.
•There is a clear pattern of higher revenue in the first quarter of the year 2017, with January, February, and March having the lowest revenue for year 2018 and for 2019 march is the exception but January and February record lower sales numbers.
•The revenue in the summer months (June, July, and August) is generally higher than in the other months, with the exception of March 2019.

3. What are the top-selling items and what percentage of total sales do they represent?



- The top-selling item is "Better Large Canned Shrimp" with total sales of 12.87 million and a percentage of total sales of 7.46%.
- The second top-selling item is "High Top Dried Mushrooms" with total sales of 11.86 million and a percentage of total sales of 6.88%.
- The rest of the items in the top 10 list have relatively lower sales and percentages of total sales compared to the top 2 items.
- The top 10 items in the list collectively account for 34.7% of the total sales, indicating that a significant portion of the revenue is generated from these items.
- The remaining items not in the top 10 contribute to the majority of the sales.
- This information can be useful for inventory management and marketing strategies to focus on the top-selling items and potentially increase sales for the other items.

4. **What is the impact of discounts on margins?**

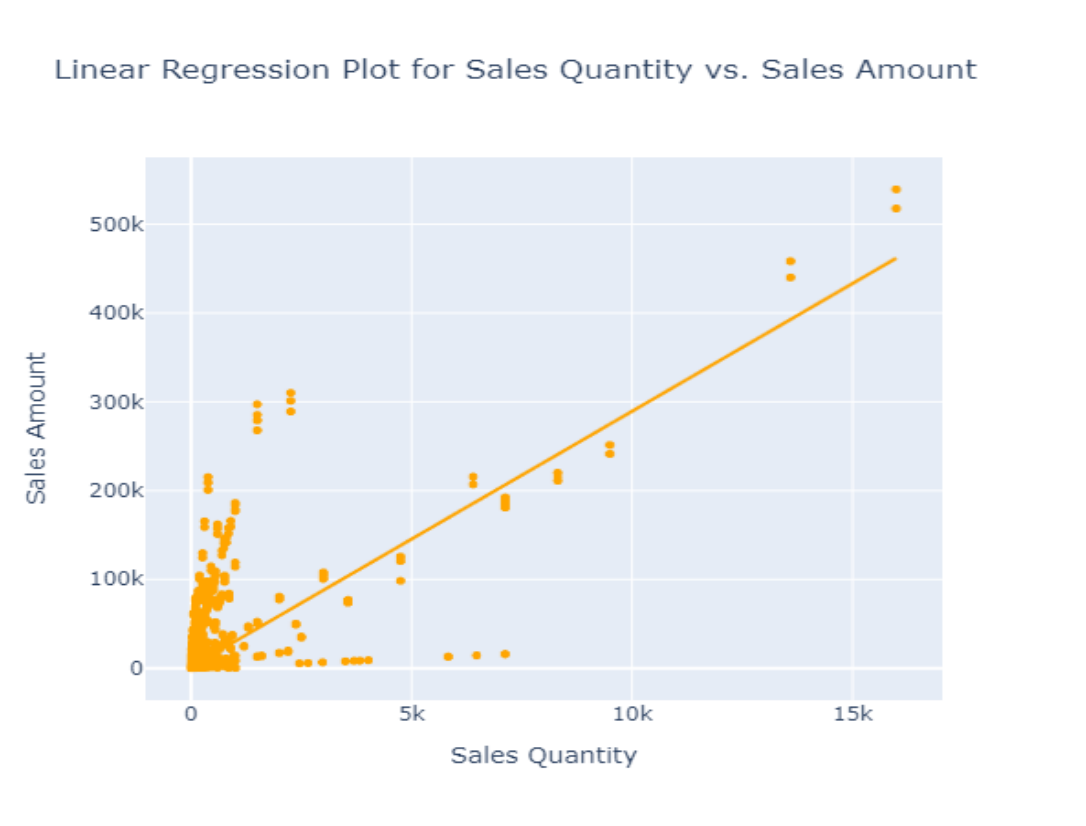


The data suggests that the total sales revenue before discounts was 297.03 million , The total discount amount was 124.49 million, which resulted in the total sales revenue after discounts being 172.53 million.

The margin before discounts was 66.17%, while the margin after discounts was 41.76%. This indicates that the discounts had a significant impact on the margins, reducing them by 24.41%.

The insights that can be gleaned from this data are that while discounts may help drive sales, they can also significantly impact profit margins. It's important for businesses to carefully consider the impact of discounts on their margins before offering them, to ensure that they are still able to operate profitably.

5. **Is there any relationship between the price of an item and its sales volume and margin?**



Insights of 5th question:

We know the rules of correlation which takes the correlation coefficient (r) in to account and helps us decide that if the parameters we chose are positively, negatively or not correlated at all.
Following are the rules to decide:

- If the r (correlation coefficient) is **close to 1 or 1** the two parameters are **positively** correlated.
- If the r (correlation coefficient) is **close to -1 or -1** the two parameters are **negatively** correlated.
- If the r (correlation coefficient) is **close to 0 or 0** the two parameters are **hardly correlated** or **not correlated** at all.

The high correlation coefficient of Sales Margin Amount with sales amount (0.973418) indicates that the two variables are strongly correlated and tend to move together in the same direction. This suggests that there is a strong linear relationship between the Sales Margin Amount and the sales amount, and as the sales amount increases, the Sales Margin Amount tends to increase as well.

On the other hand, the correlation coefficient of Sales Quantity with sales amount (0.812984) also indicates a moderate positive correlation between the two variables. This suggests that there is a positive linear relationship between the Sales Quantity and the sales amount, but the relationship is not as strong as the one between Sales Margin Amount and sales amount.

Overall, these insights suggest that Sales Margin Amount may have a stronger impact on the sales amount than Sales Quantity, as the former is highly correlated with sales amount. However, it is important to note that correlation does not imply causation.

Thank you