

AMAZON SALE REPORT

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Problem Statement:

Amazon wants to know what works best for them in terms of sales and making profits. The objective is to conduct a comprehensive analysis of the data and extract actionable insights to support business decision making.

The Analysis identifies:

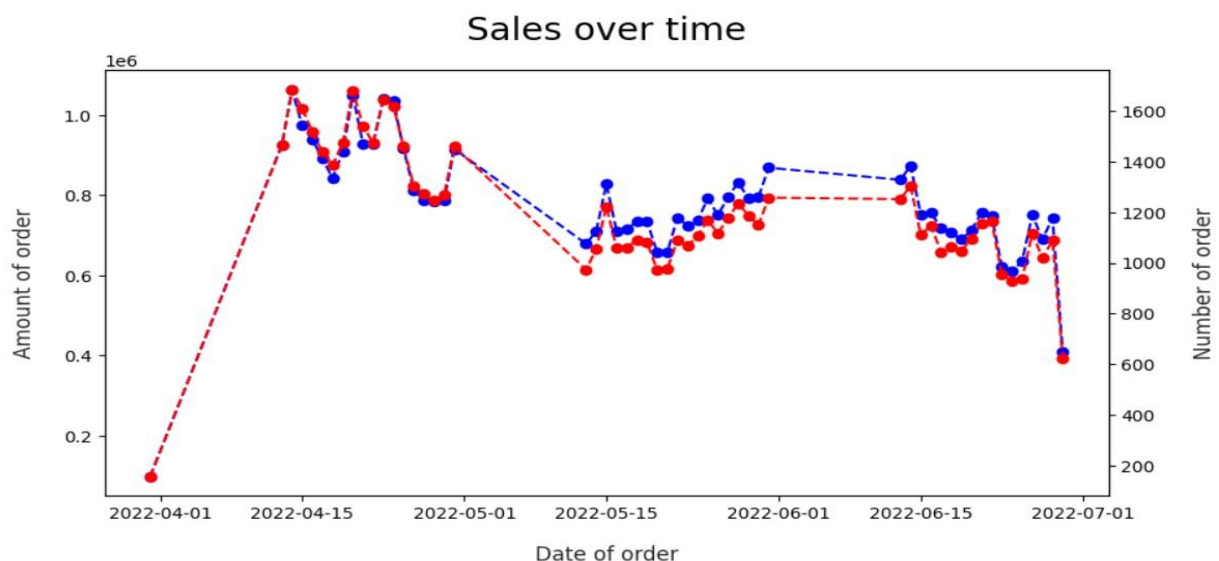
1. Most profitable product category.
2. Least profitable product category.
3. Sales over time.
4. Most and least sold product size.
5. Segment analysis based on location
6. Geographical analysis

Amazon can choose to remove the product are not making profit and can invest there where they can generate the more profit.

Library used: Pandas, Seaborn, Matplotlib, Warning, NumPy.

Sales Overview:

Analysing the total sales amount over time i.e. aggregating the sales data by month to identify trends and seasonality.



The monthly sales trend plot shows how sales are performing over time, indicating any seasonal peaks or drops.

Then calculate total sales, average sales per order which provide a quantitative overview of the sales performance.

Total sales are 74986842

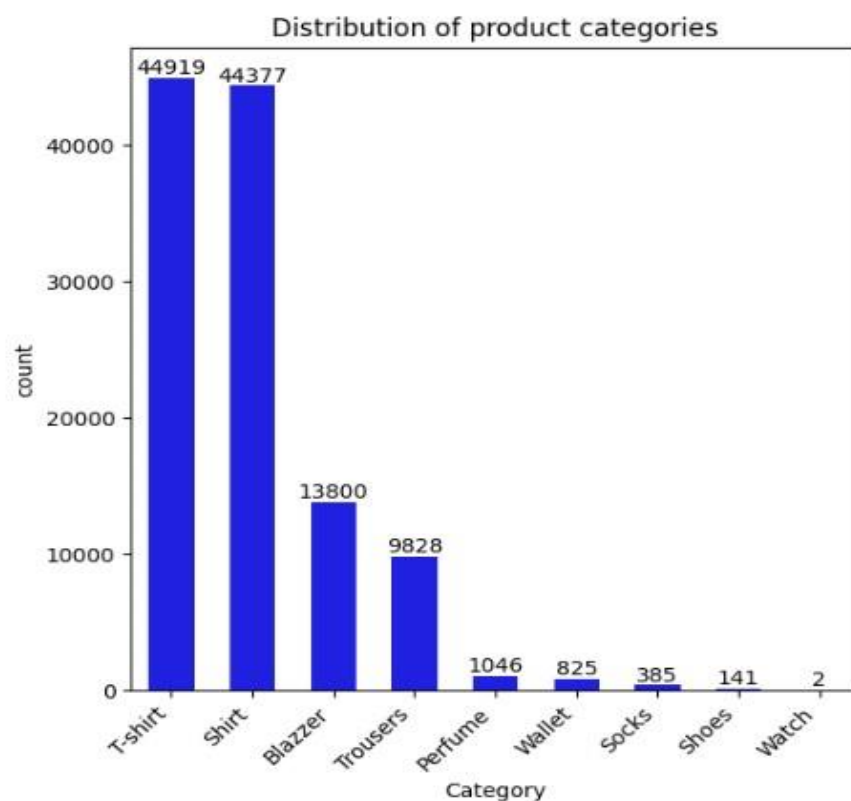
The average sales per order is 693.46

Product Analysis:

Analyze how sales are distributed across different product categories,, product sizes and identify which categories and sizes are most popular in terms of the quantity sold.

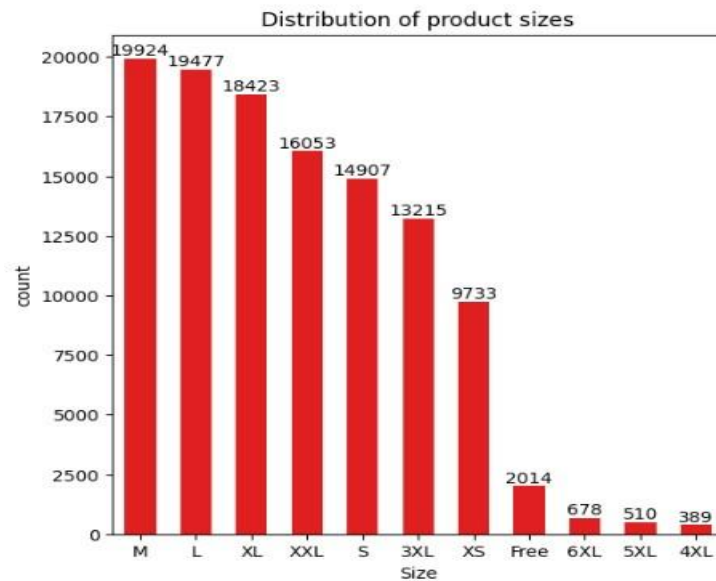
1. Product category analysis

The product in the amazon store is categorized into 9 categories: -

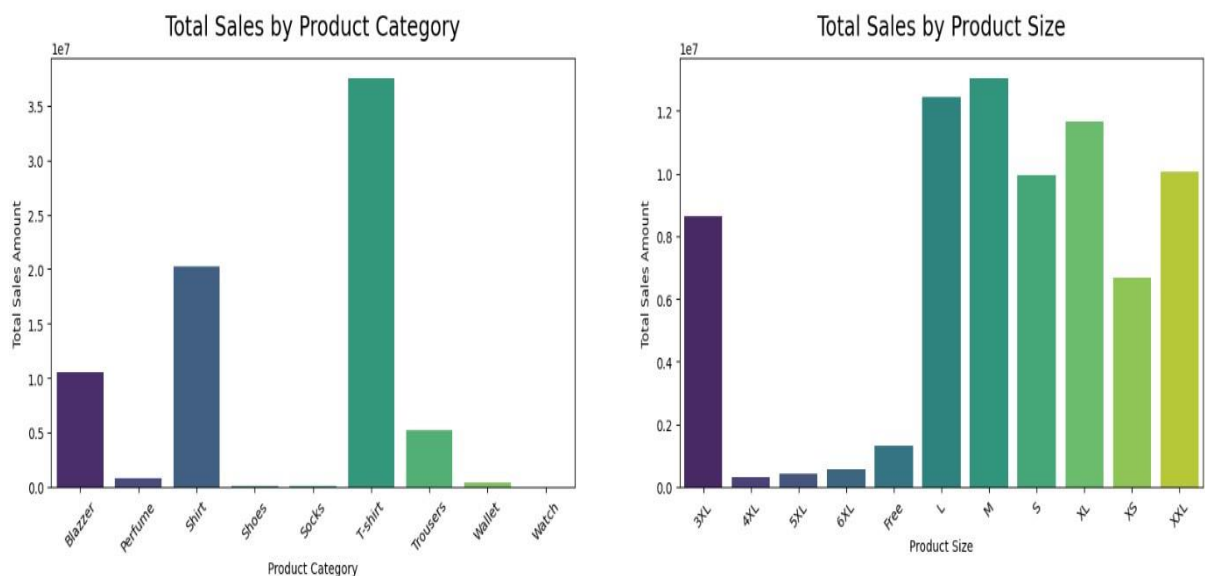


2. Product sizes analysis

The product size in the store is categorized into 11 types:



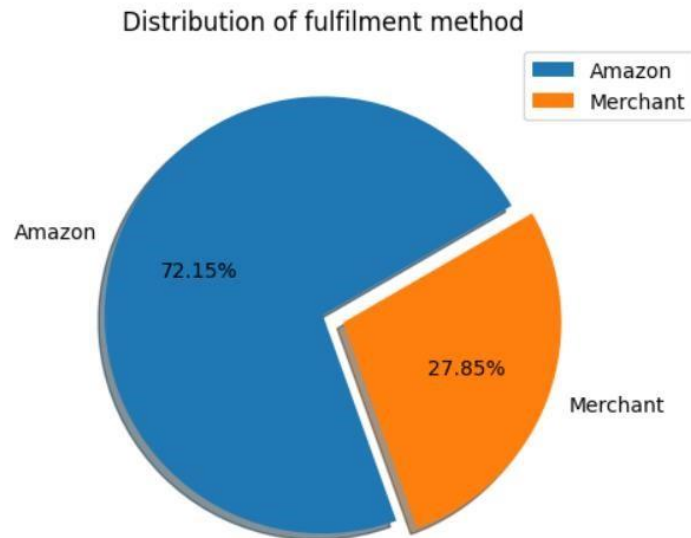
Analysed the distribution of sales based on product category and product sizes.



The distribution of sales across different product categories, helping you identify which categories are most popular and generate the most revenue. Sales distribution by product sizes, showing which sizes are in higher demand.

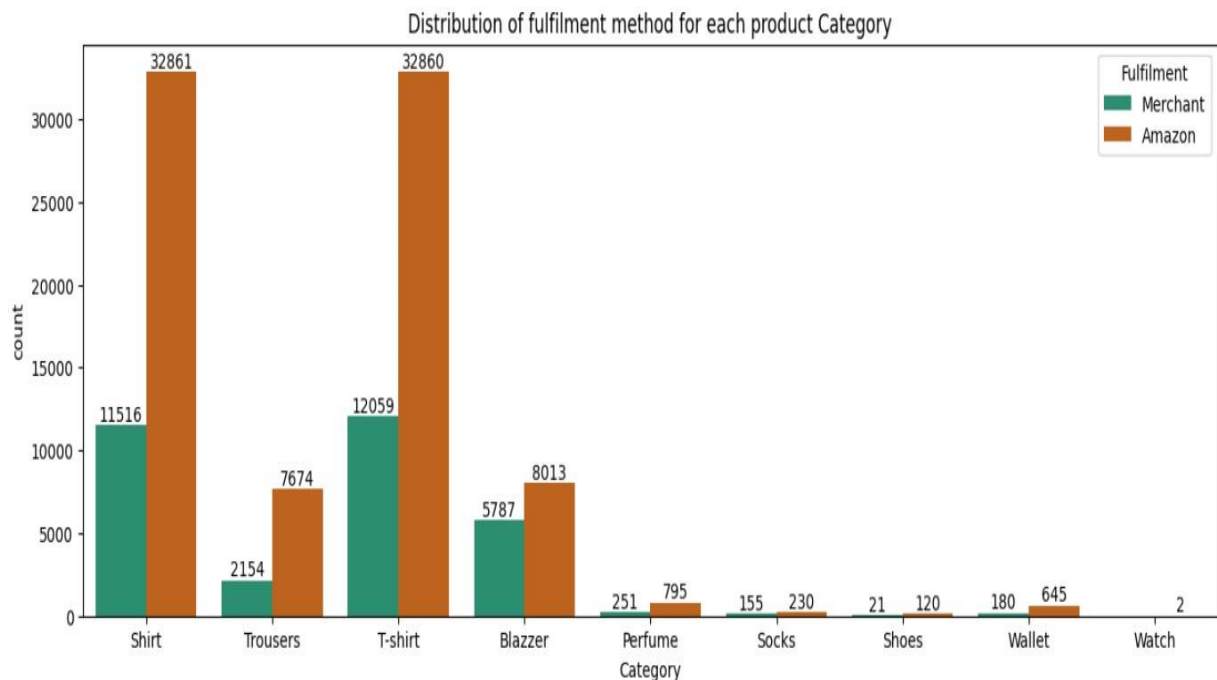
Fulfillment Analysis:

Analyse the distribution of different fulfilment methods used in the dataset.

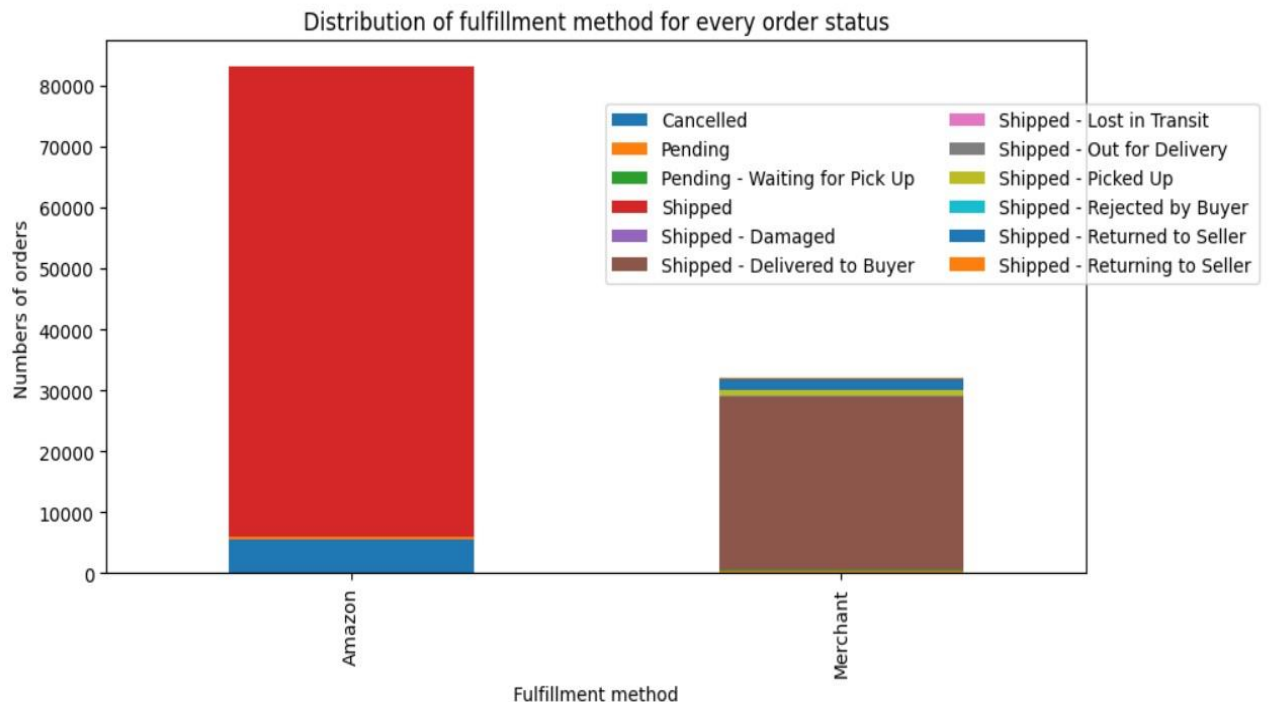


You can see how orders are distributed among different fulfilment methods.

Now analyze the distribution of different fulfilment for every product category.



Evaluating the effectiveness of each fulfillment method by analyzing the order status for each fulfillment method.



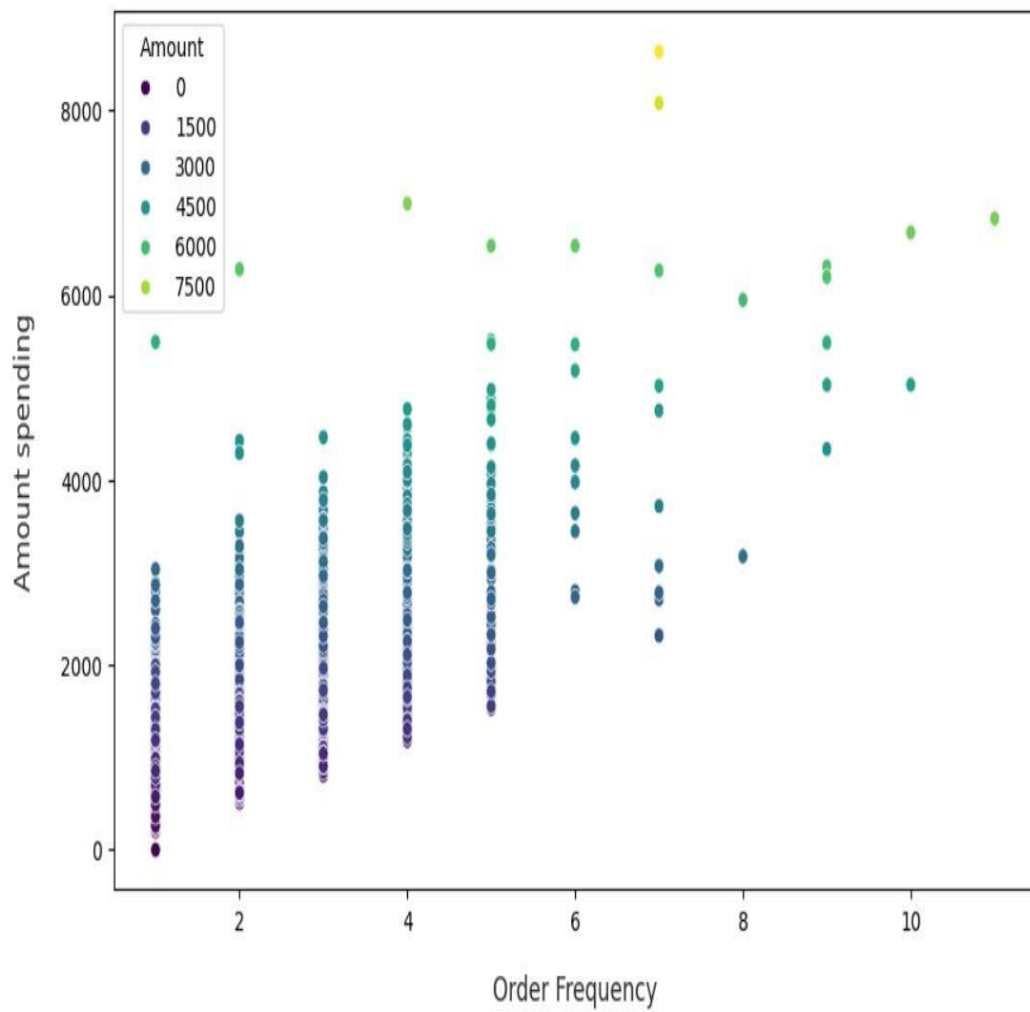
By comparing orders status across different fulfilment methods, you can assess which methods are more effective.

Customer Segmentation:

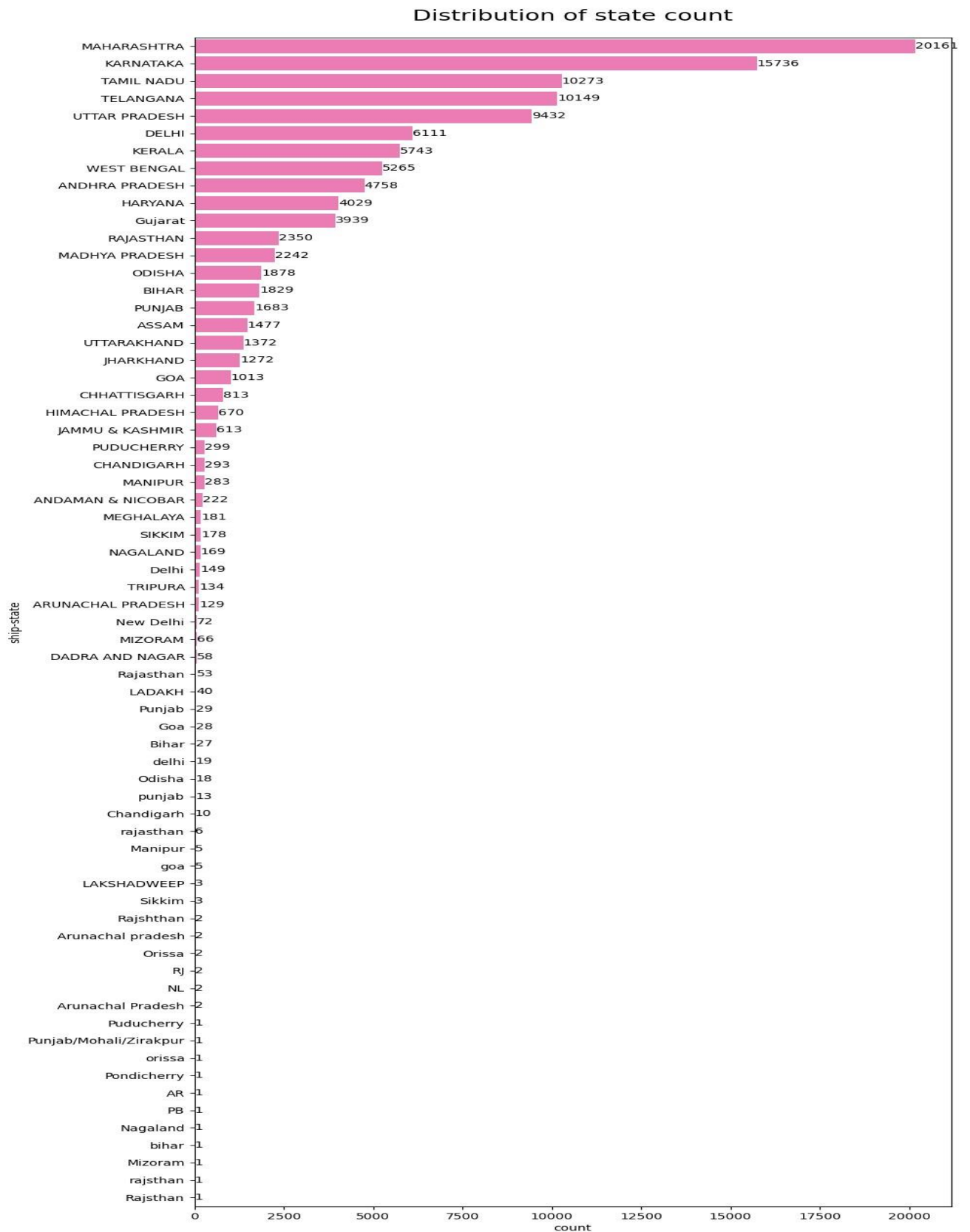
Customer segmentation is essential for understanding different groups of customers based on their buying behaviour, location.

1. Segmentation by Buying Behaviour: Identifying segments such as high frequency buyers, high spenders, or low-frequency, low-spending customers.

Customer Segmentation by Buying Behavior



2. Segmentation by Location: Recognizing states where sales are higher, enabling targeted marketing or logistical improvements.



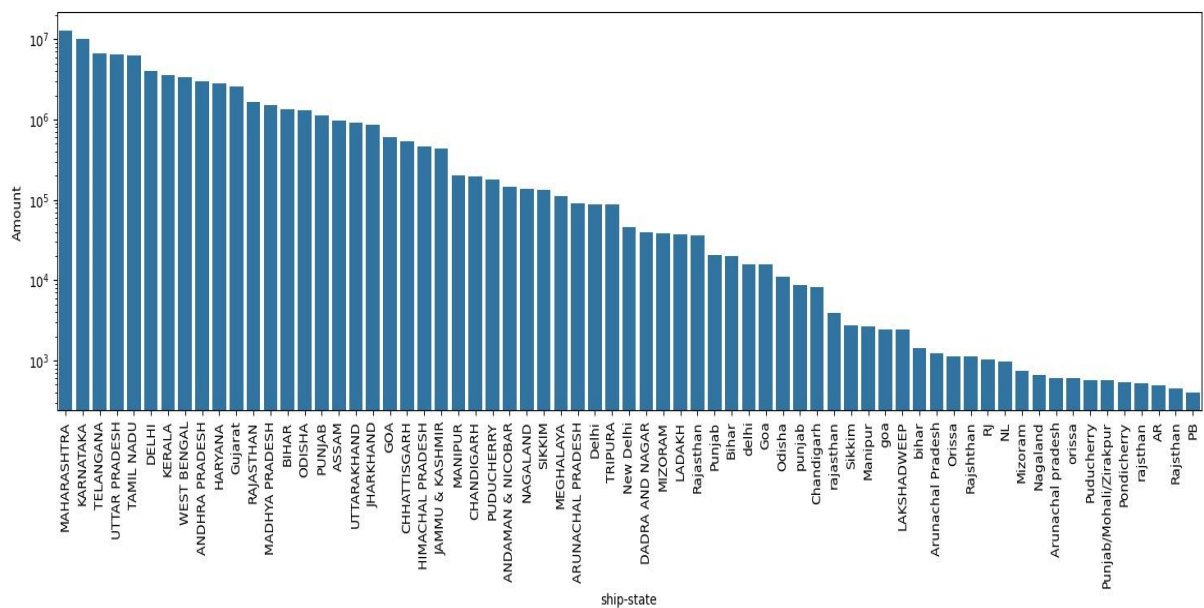
In this chart most of the customer are from the state of Maharashtra and the most revenue generated is also from Maharashtra.

Geographical Analysis:

Geographical analysis involves exploring the distribution of sales across different geographical regions, such as states and cities. This analysis helps identify key markets, regions with high sales volumes, and potential areas for expansion.

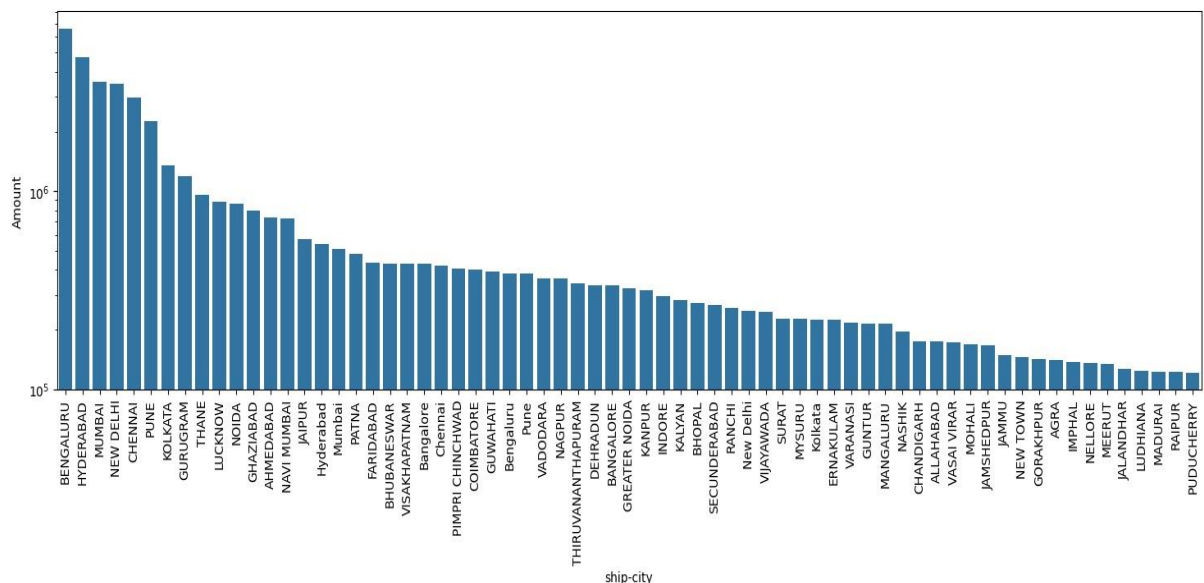
1. Analysing different states with their total

Distribution of total amount in various states

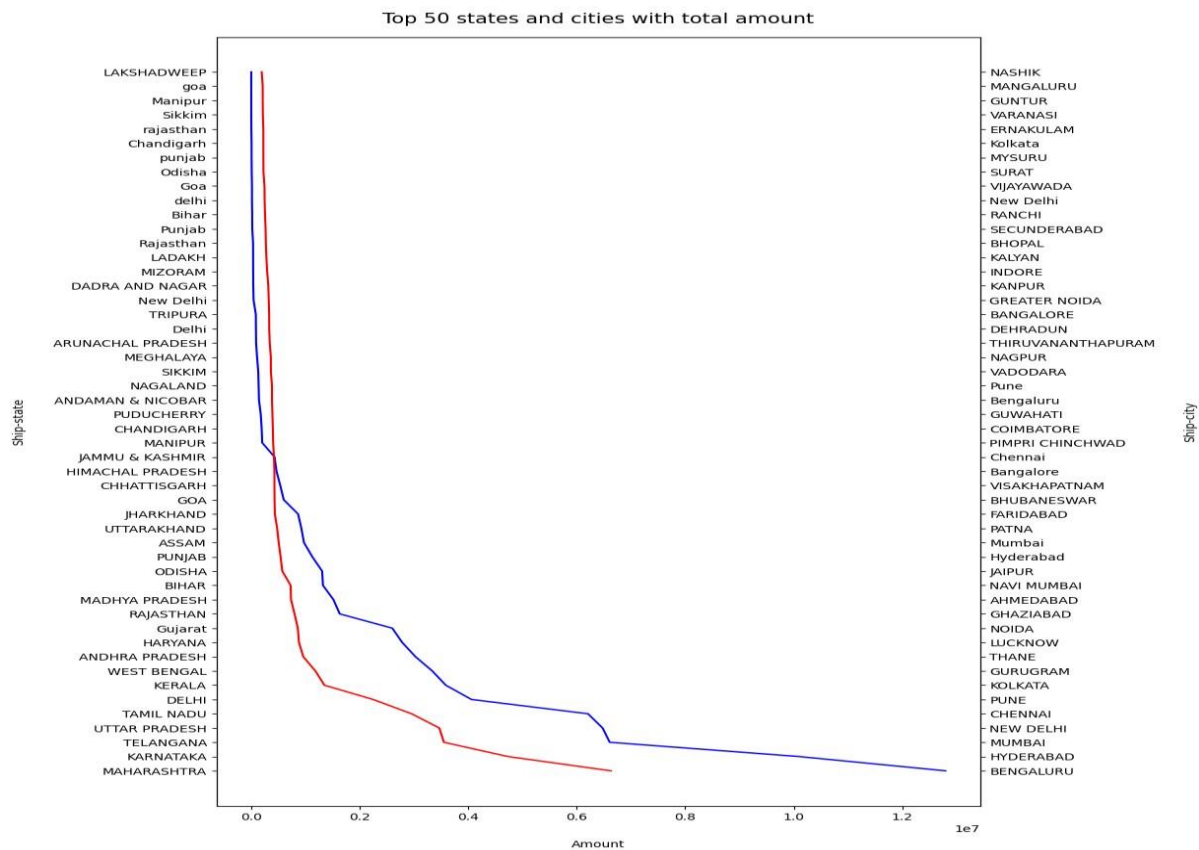
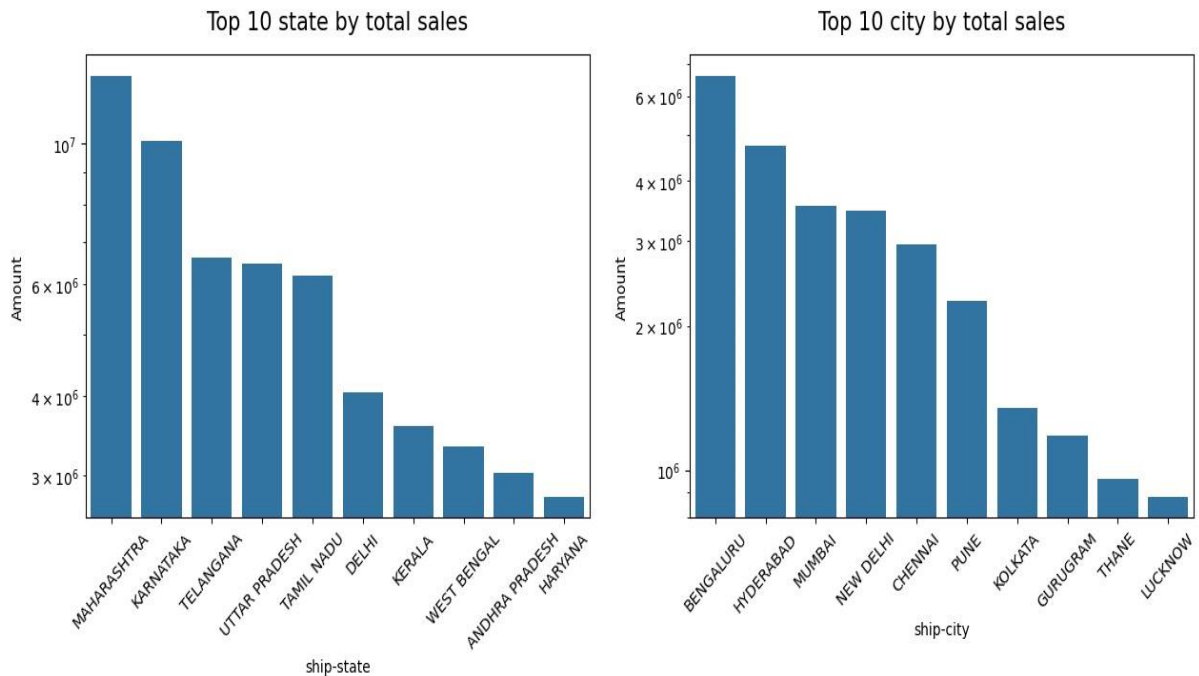


2. Analysing different cities with their total order amount

Distribution of total amount in various city



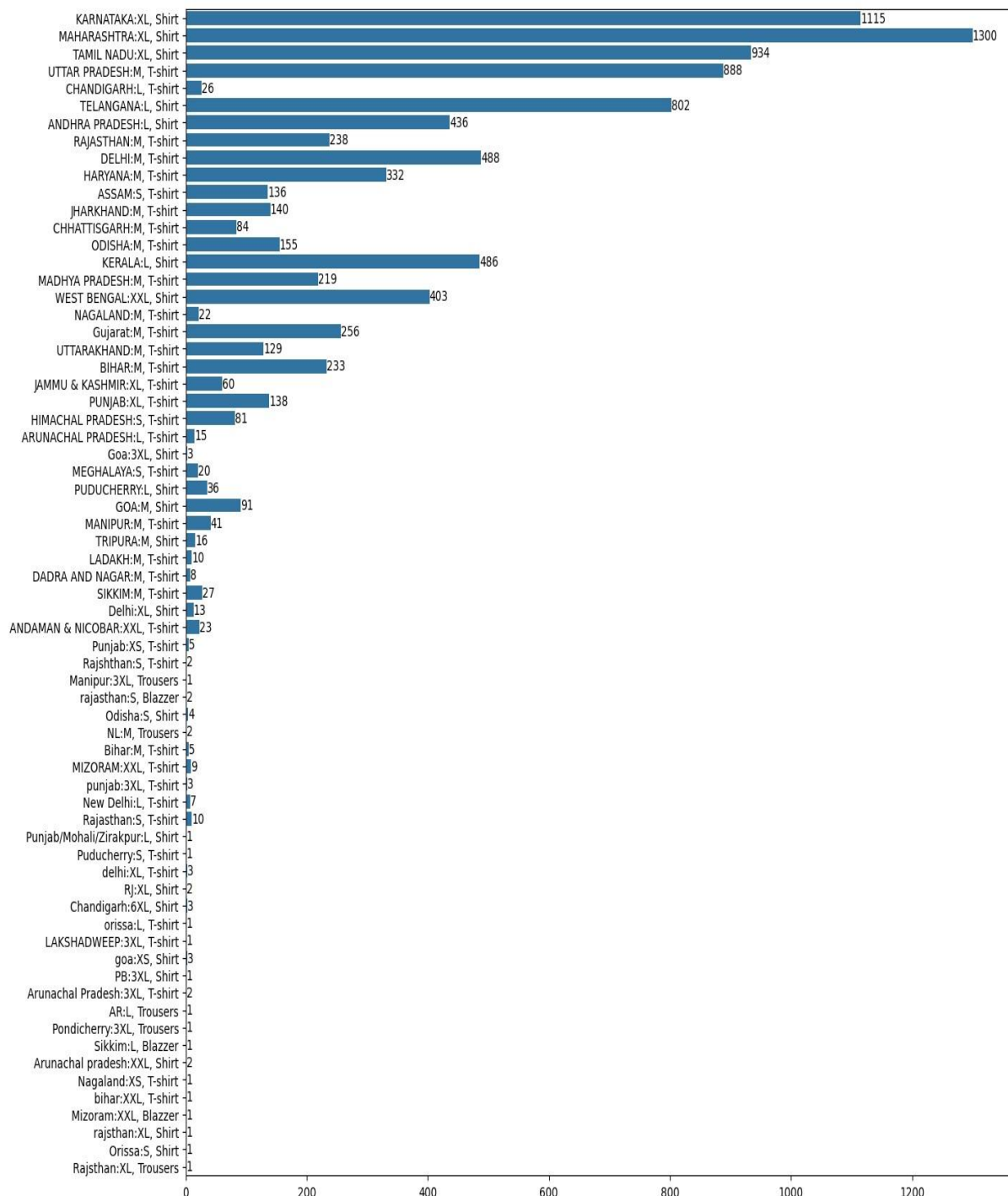
Identify states and cities that contribute the most to total sales. These states are likely key markets for the business and cities can be targeted for focused marketing efforts or logistical optimizations.



Business Insights:

As we have seen, that the state Maharashtra is the most bought product that is shirt of size 'XL'.

Hence to expand the business, the popular product should be manufactured more and sold only in that state where there sale is high.



Hence, here is the list of products that are popular in each state which can be manufactured and sold more often in that state to generate more revenue.

Hence in this way we can increase the business.

Conclusion:

In conclusion we can say that the business can optimize its sales strategies, better meet customer needs, and enhance overall performance. The key is to leverage data-driven insights to make informed decisions that align with both short-term goals (e.g., increasing sales) and long-term objectives (e.g., customer loyalty and market expansion).

And manufacturing the business is not as easy as we analyse the sales report of each product in details so that we can generate more revenue by selling the correct product to the correct target customers and hence growing our business.