

Amazon Sales Analysis

This project, *Amazon Sales Analysis*, is an independent project that I chose to work on during my internship at **Brainwave Matrix Solution**. The objective of this analysis is to explore Amazon's sales data, identify key trends, and generate actionable insights using data visualization techniques.

Through this project, I aimed to enhance my skills in data processing, exploratory data analysis (EDA), and visualization using tools like **Python (Pandas, Matplotlib, Seaborn) and Power BI**.

Data Overview for Amazon Sales Analysis

- Total Rows: 37,514 | Total Columns: 19
- Key Columns: Order ID, Date, Status, Category, Quantity (Qty), Amount (INR), Ship City, Ship State, Fulfilled By
- Data Types:
 - Numerical: Qty, Amount, Ship Postal Code
 - Categorical: Status, Category, Sales Channel, Courier Status, B2B
- Missing Values: None detected in any column.

Statistical Insights:

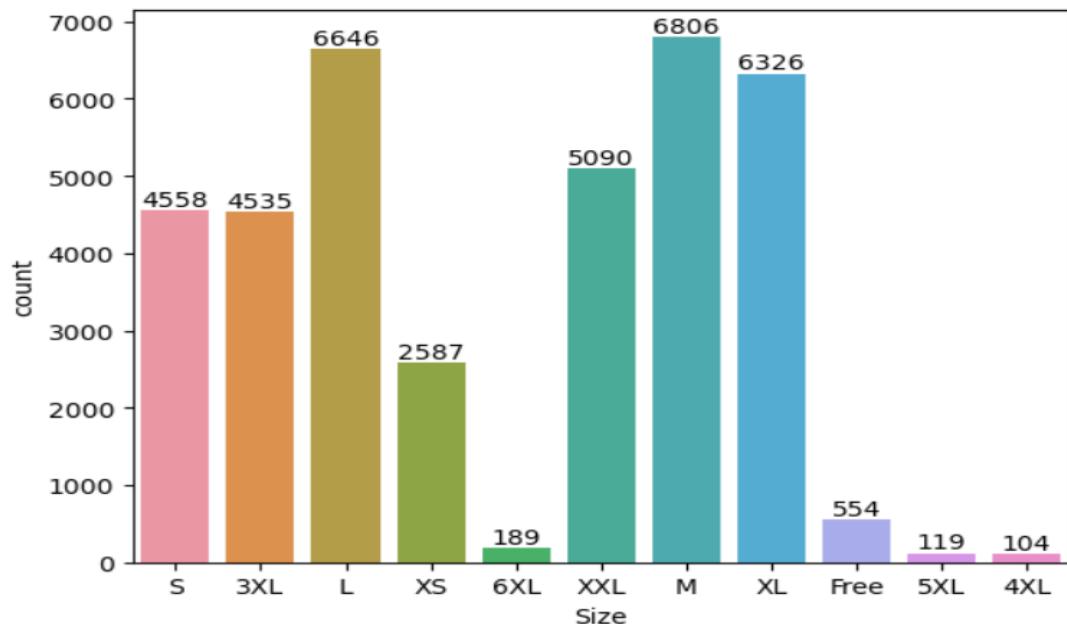
- Quantity Sold (Qty): Min: 0, Max: 5, Avg: 0.87
- Order Amount (INR): Min: ₹0, Max: ₹5,495, Avg: ₹646.55
- Top Shipping States: Maharashtra, Karnataka, Telangana

Conclusion

This project involved cleaning, transforming, and analyzing Amazon's sales data to extract key insights. Through EDA and visualizations, I identified popular products (e.g., M-size T-shirts) and regional demand trends, particularly in Maharashtra. The analysis provided valuable business insights for data-driven decision-making.

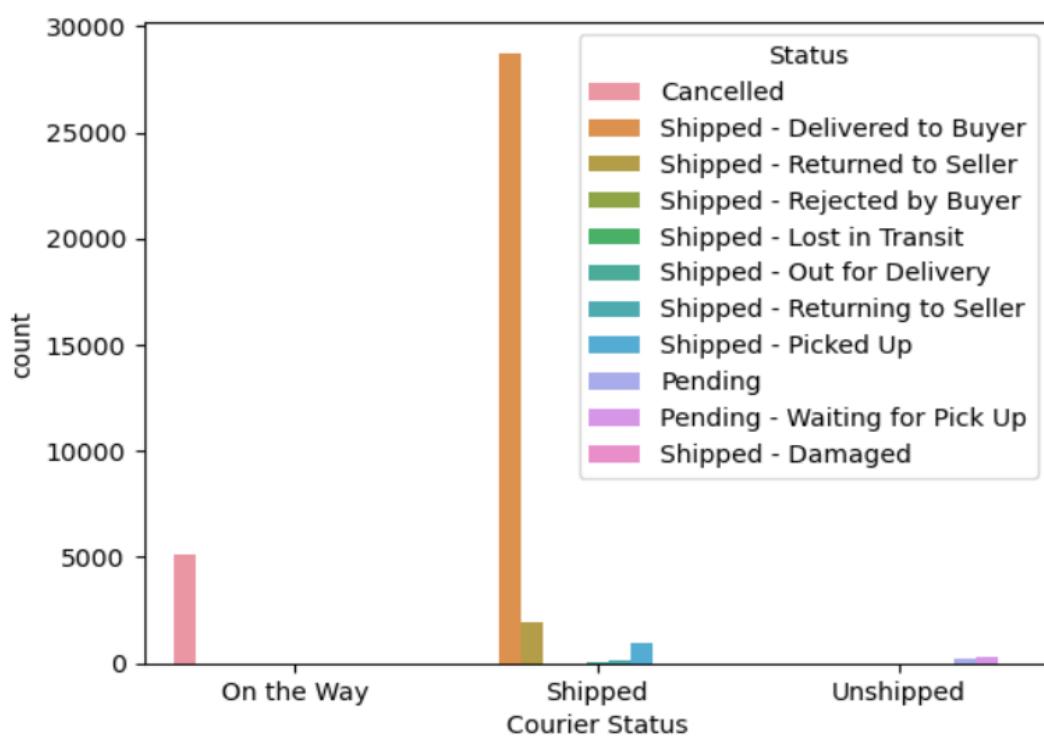
I utilized pandas for data manipulation, Matplotlib for basic plots, and Seaborn for advanced visualizations, strengthening my skills in Python for practical data analysis

Accomplishment



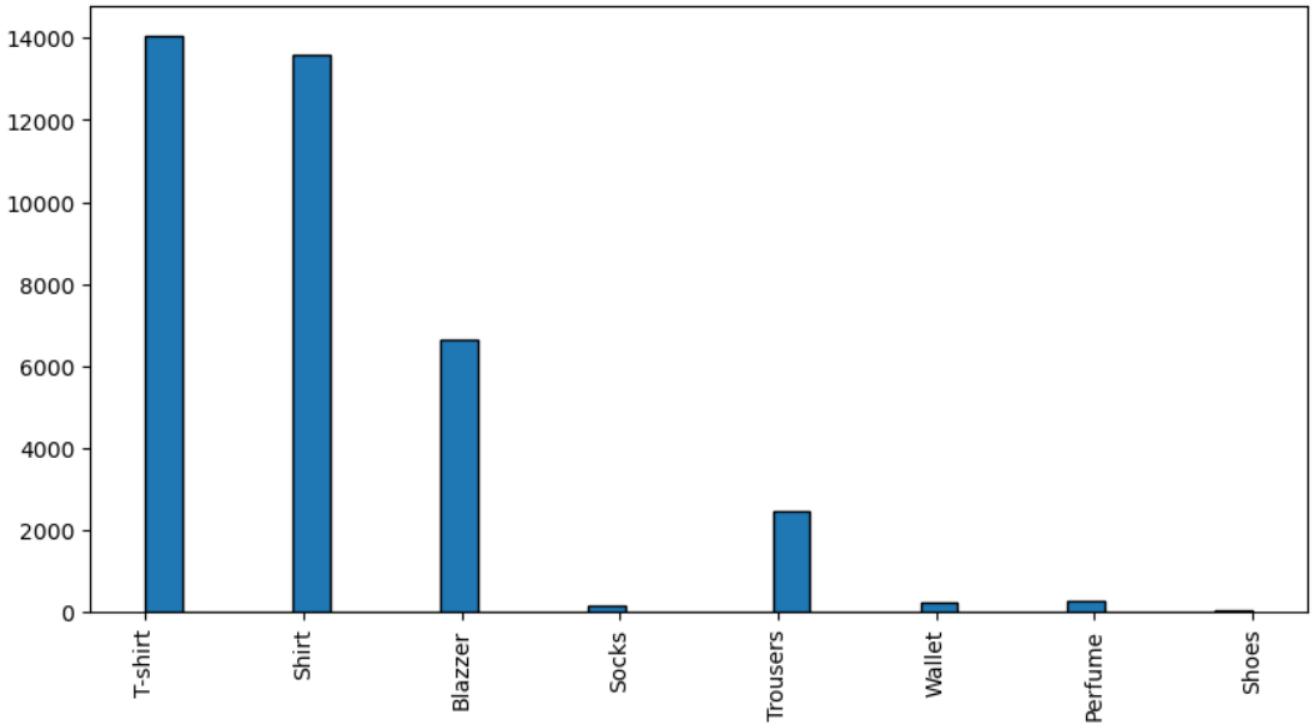
Conclusion from the Count Plot:

- From the count plot above, it is evident that the majority of customers prefer **M-Size** products. This suggests that M-Size is the most popular size category in terms of sales, and it could be beneficial for the business to ensure that M-Size inventory is sufficiently stocked to meet customer demand.
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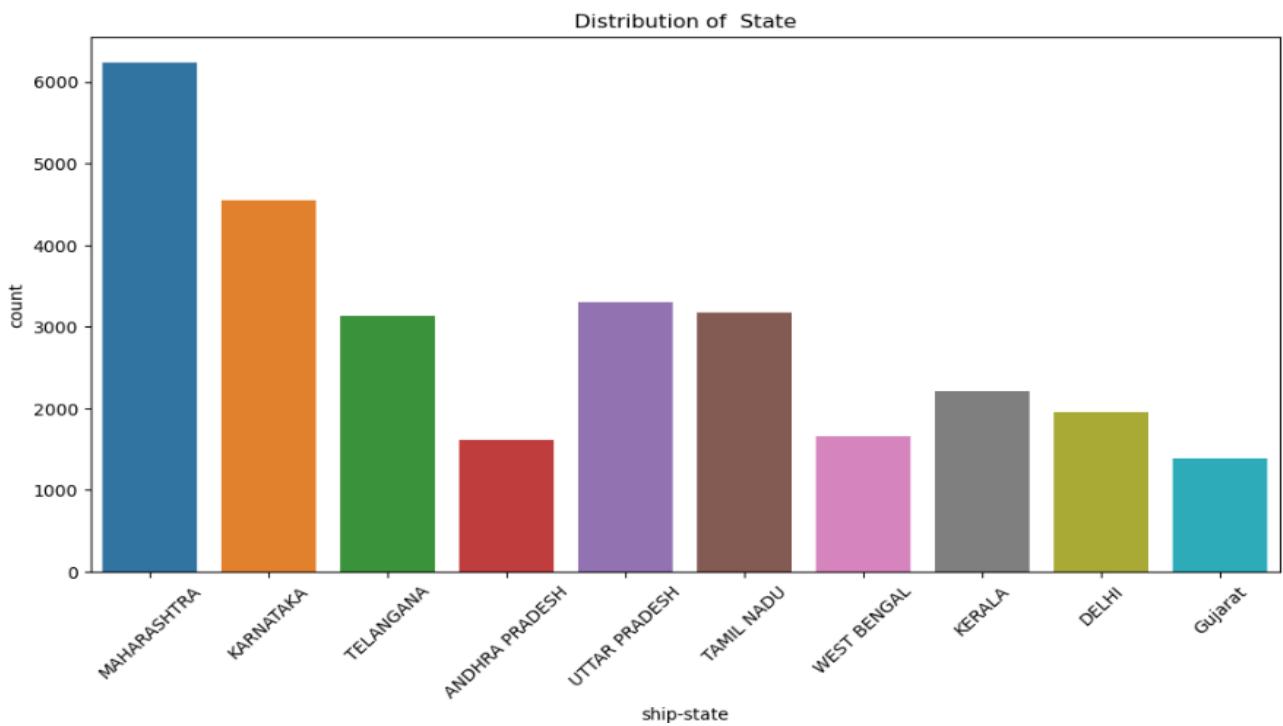
Conclusion from the Count Plot:

- From the graph above, it is clear that the majority of orders are shipped through the courier, as indicated by the higher count of courier-shipped orders compared to others. The visualization also shows the breakdown of order status (Delivered, Cancelled, etc.) based on the courier status.



Conclusion from the Histogram:

- From the graph above, it is evident that **T-shirt** is the most popular category among buyers, as indicated by the highest frequency in the histogram. This suggests that T-shirts are the top-selling product category.



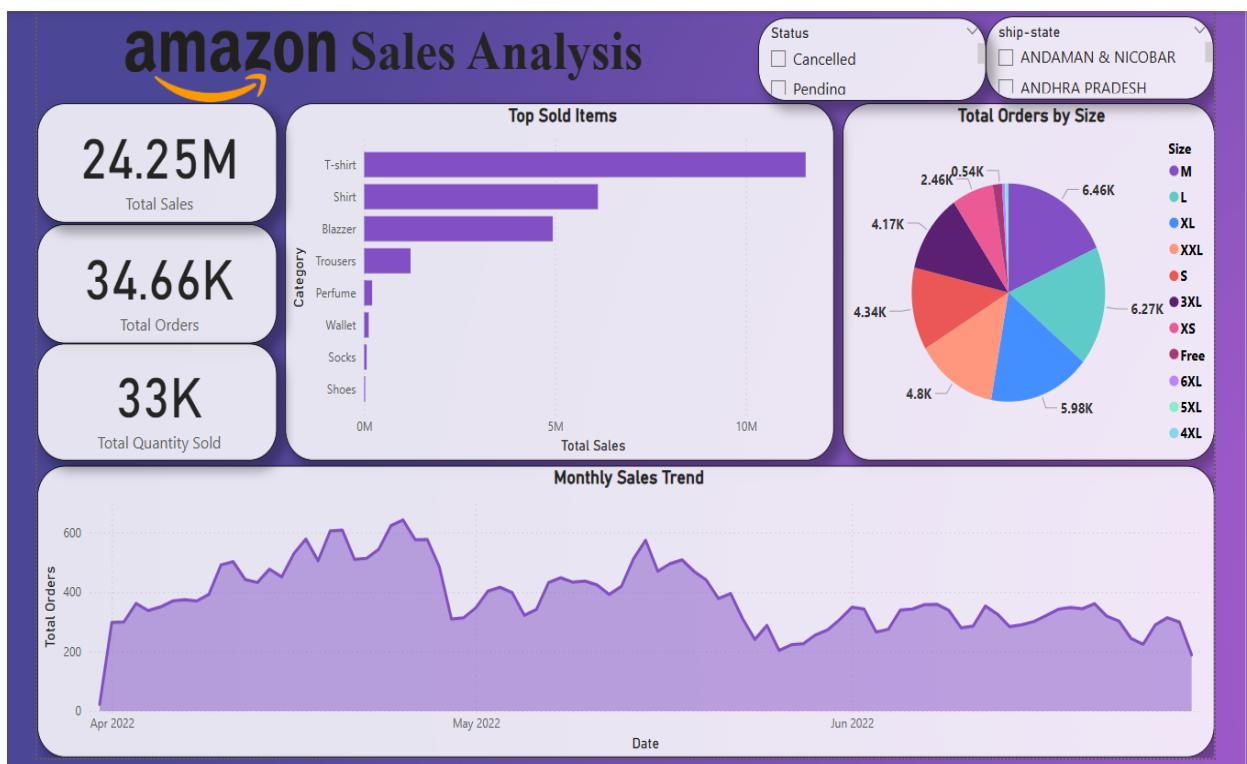
Conclusion from the Graph:

- From the graph above, it is clear that **Maharashtra** has the highest number of buyers, as indicated by the highest count in the distribution of states. This suggests that Maharashtra is the leading state in terms of sales, and targeted strategies can be employed for further growth in this region.

Power BI Dashboard

In addition to the data analysis and visualizations in Python, I created an interactive **Power BI dashboard** to present the key insights. The dashboard provides a user-friendly interface to explore sales data dynamically, including visualizations for product popularity, regional demand, and sales trends. It allows stakeholders to interact with the data, filter by different categories, and gain a deeper understanding of the business performance.

This dashboard enhances the data's accessibility and supports decision-making with clear, real-time insights.



[Github Repository Link](#)

https://github.com/mehul96080/Amazon_sales_analysis