Domain	DataSet Link
ECommerce	▤ ECOMMERCE DATASET(AMAZON)

Introduction to Amazon Sales Data Analysis :

This report provides an in-depth analysis of sales data sourced from Amazon's transactional records. The dataset comprises detailed information on individual orders, encompassing various aspects such as order fulfilment, sales channels, product details, shipping logistics, financials, and promotional activities. By examining these elements, we aim to uncover insights into the efficiency of the order fulfilment process, the performance of different product categories, the impact of promotional activities, and customer behaviour across different regions.

# The analysis focuses on several key dimensions:

1. **Order Fulfilment**: Evaluating the effectiveness and efficiency of order processing, including a comparison between orders fulfilled by Amazon and those handled by third-party merchants.
2. **Sales Performance**: Identifying top-performing product categories, analysing sales trends, and understanding the revenue contributions of different product lines.
3. **Promotional Impact**: Assessing the effectiveness of various promotional offers and their influence on sales volume and average order value.
4. **Geographical Distribution**: Analysing the shipping data to determine the geographical spread of

customers and the potential logistical challenges that arise from these patterns.

5. **Customer Insights**: Understanding customer preferences and behaviour by examining purchase trends, product popularity, and the impact of shipping choices on customer satisfaction.

Through this analysis, the report seeks to provide actionable insights that can inform decision-making in areas such as inventory management, marketing strategies, logistics optimization, and customer service enhancements. The ultimate goal is to leverage data-driven insights to optimise operations, improve customer satisfaction, and drive revenue growth on the Amazon platform.

MAP QUALITY BY STATE
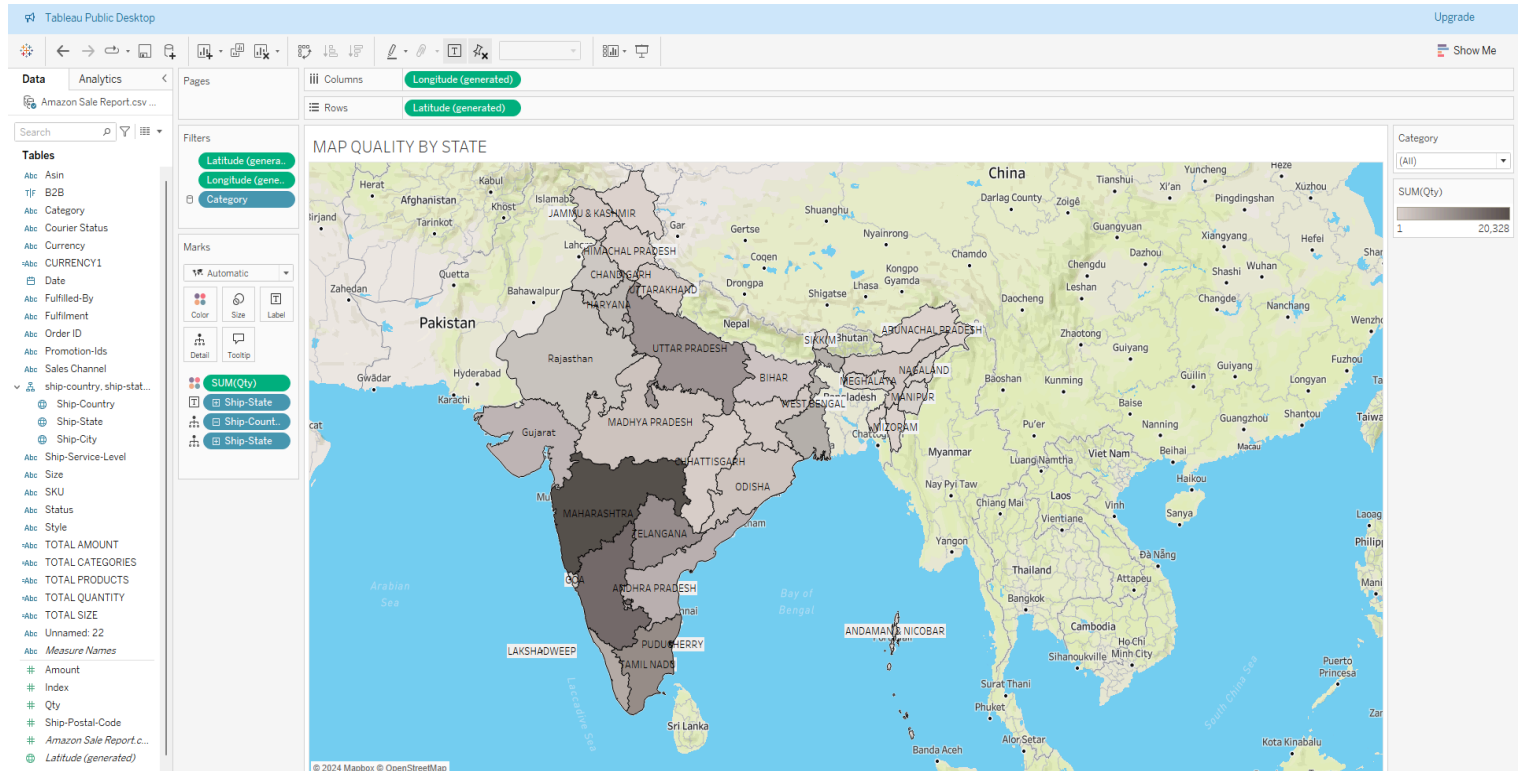
A data visualisation tool, displaying a map visualisation of data related to sales quantities by state within India. Here's an insight into the data and the visualisation:

Map Type: The map is showing "Map Quality by State," which seems to represent the quantity of a product category (Blouse) sold across different states in India.

Data Insights:

1. **Regional Concentration**:
   ○ **High Sales**: States like Maharashtra, Andhra Pradesh, and possibly Karnataka appear to have the highest sales quantities, as indicated by the darker shades.
   ○ **Low Sales**: States in the northern part of India, like Jammu & Kashmir and Himachal Pradesh, seem to have lower sales quantities.

2. **Product Category**:
   - The analysis is focused on a specific product category, "Blouse," as selected in the filter. This suggests the insights pertain specifically to the sales performance of blouses across various states in India.

3. **Sales Distribution**:
   - There is a noticeable regional variation in sales distribution, with the southern and central states showing higher sales volumes compared to the northern and northeastern states.

QUANTITY BY WEEK AND CATEGORY
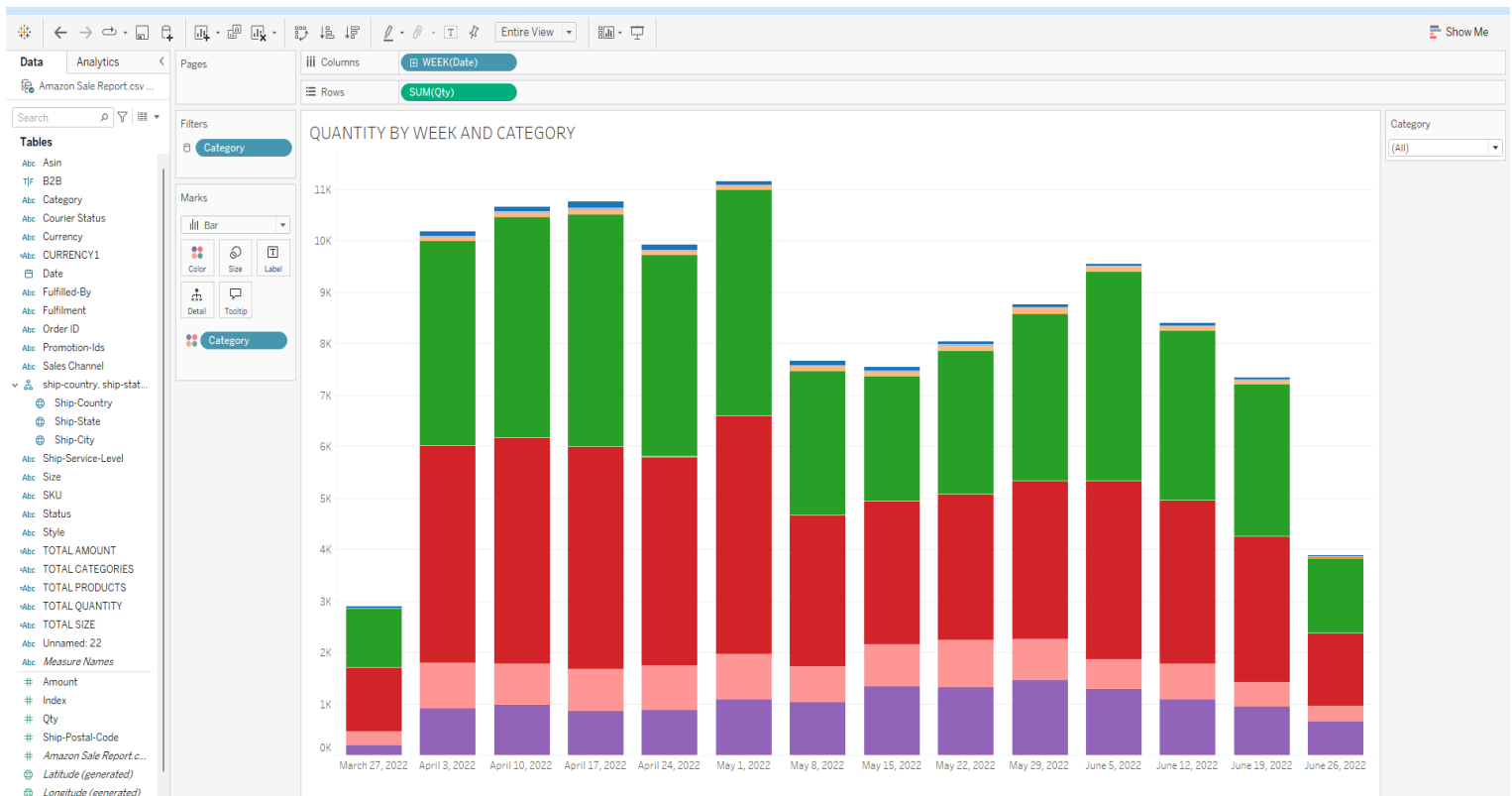
Visualisation:

- **X-Axis (Horizontal)**: The x-axis represents the weeks, spanning from March 27, 2022, to June 26, 2022. Each bar corresponds to a specific week.
- **Y-Axis (Vertical)**: The y-axis represents the quantity (likely the number of units sold), with the scale ranging up to around 11,000.

Data Insights:

1. **Weekly Sales Trends**:
   - **High Volume Weeks**: There are noticeable peaks in sales, particularly around May 29, 2022, and June 5, 2022, where the total quantities are among the highest.
   - **Low Volume Weeks**: The week of June 26, 2022, shows a significant drop in sales compared to the other weeks.
2. **Category Contribution**:
   - **Dominant Category**: The green segment, which likely represents a specific product category, dominates most of the weeks, indicating it is the best-selling category across the timeframe.
   - **Other Categories**: The red and pink segments also contribute significantly, although to a lesser extent compared to the green category. The purple category has a relatively consistent but lower contribution.
3. **Sales Fluctuations**:
   - There is variability in sales across the weeks, with some weeks showing a substantial increase in certain categories (e.g., the green and red categories).
   - The stacking of the bars suggests that the combined effect of all categories contributes to the total quantity sold each week, with certain weeks showing a more balanced distribution across categories.

AMOUNT BY WEEK AND CATEGORY
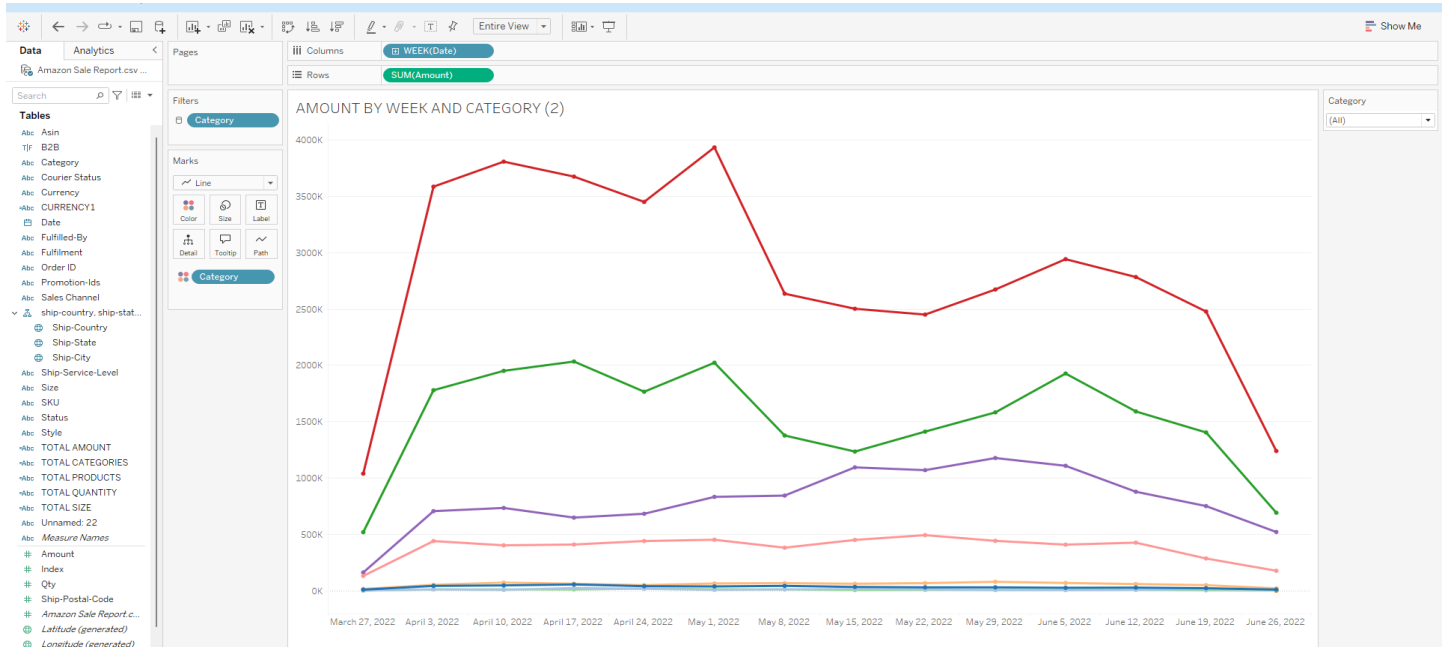
Visualisation:

- **X-Axis (Horizontal)**: Represents the weeks, similar to the previous charts.
- **Y-Axis (Vertical)**: Represents the total amount in a monetary value, with the scale reaching up to 400K.
- **Lines**: Each line represents a different product category. The categories are color-coded, with each color corresponding to a different category.

Data Insights:

1. **Dominant Category**:
   - **Red Line**: The red line stands out as the most dominant category in terms of revenue. It peaks around April 10, 2022, and again around June 5, 2022. Despite some fluctuations, this category consistently generates the highest revenue compared to others.
   - The fluctuations in the red line suggest a significant impact of specific weeks, possibly due to promotions, sales, or seasonality affecting this category.
2. **Secondary Category**:
   - **Green Line**: The green line, while not as dominant as the red line, represents the second most significant category. It peaks around April 10, 2022, and maintains a steady range between 150K and 250K, with some dips and rises.

- ○ This category also shows fluctuations, but the pattern suggests a more stable performance compared to the red category.
3. **Minor Categories**:
   - ○ **Purple and Pink Lines**: These lines represent categories with lower revenue contributions. Their performance is relatively flat compared to the top categories, with the purple line showing a slight increase around mid-May and early June.
   - ○ **Blue Line and Others**: These lines at the bottom of the chart represent categories with minimal revenue, indicating they contribute very little to overall sales.
4. **Revenue Trends**:
   - ○ **Peaks and Troughs**: The chart highlights specific weeks where revenue spikes, particularly for the red and green categories. These peaks could correlate with special events, product launches, or targeted marketing campaigns.
   - ○ **Declines**: Noticeable declines are seen towards the end of the timeframe, particularly in the last two weeks of June 2022. This could indicate a seasonal decline or the conclusion of promotional activities.

QUANTITY BY SIZE AND CATEGORY
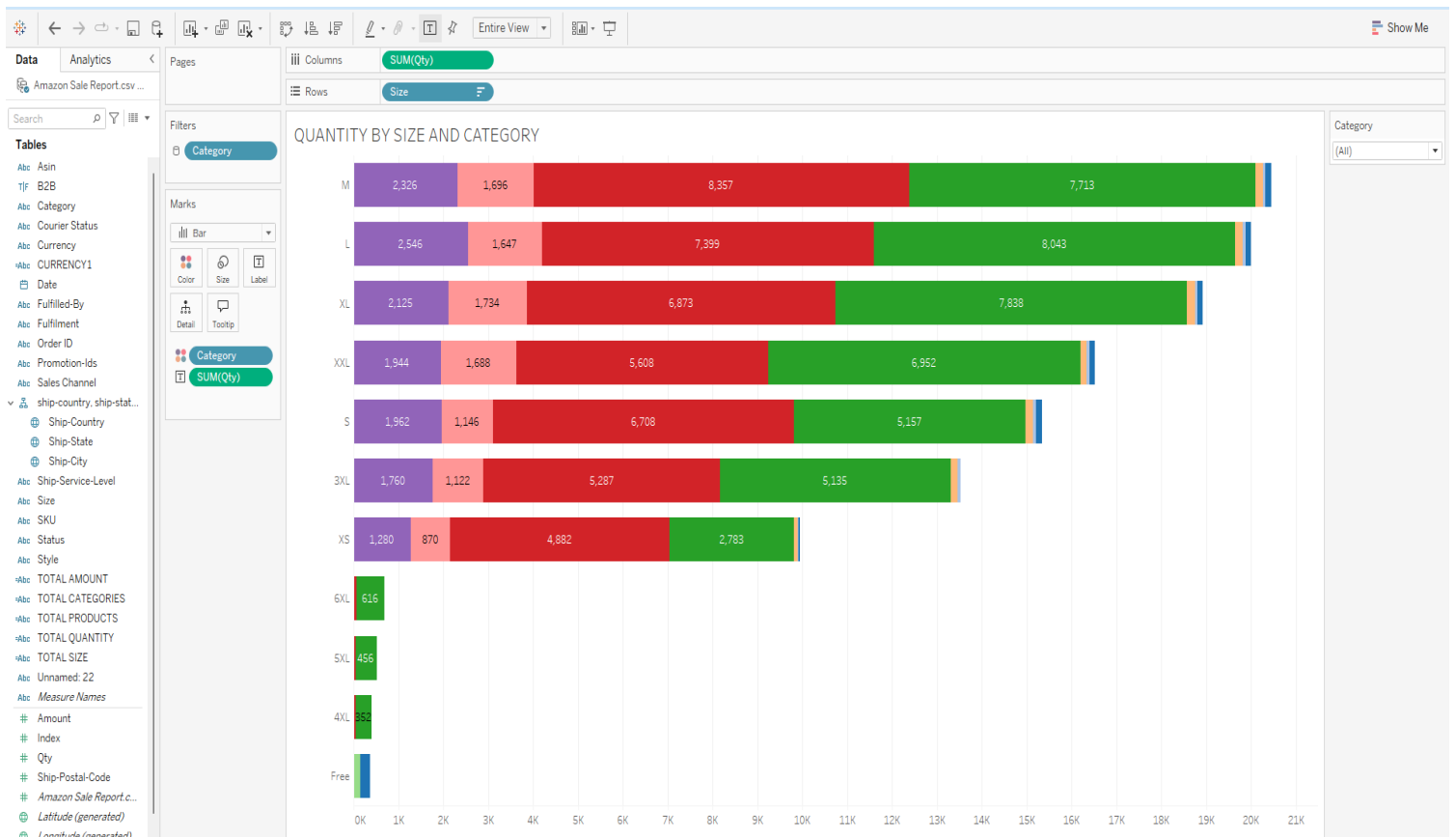
Key Observations:

- Product Sizes:

The chart categorises products into various sizes (e.g., XS, S, M, L, XL, XXL, 3XL, etc.).

Each size has associated quantities, indicating how many units were sold.

- Sales Performance:

The size M shows a total quantity of 8,357, which is the highest among the sizes listed.

Sizes L (7,399) and XL (6,873) also demonstrate strong sales, suggesting a preference for medium to large sizes among consumers.

- Underperforming Sizes:

The XS size has the lowest total quantity sold (4,882), indicating less demand for smaller sizes.

Sizes like 6XL and 4XL have minimal sales (616 and 352 respectively), which may suggest niche markets or limited stock.

- Category Segmentation:

The chart includes segmented bars that likely represent different categories within each size. This can help identify which categories are performing well within each size group.

Conclusion:

This data visualisation provides valuable insights into product performance by size and category. By leveraging these insights, businesses can make informed decisions regarding inventory, marketing, and customer engagement strategies to enhance sales and meet consumer demands effectively.

TOP 10 STATES BY QUALITY AND CATEGORY BY SHIP SERVICE LEVEL
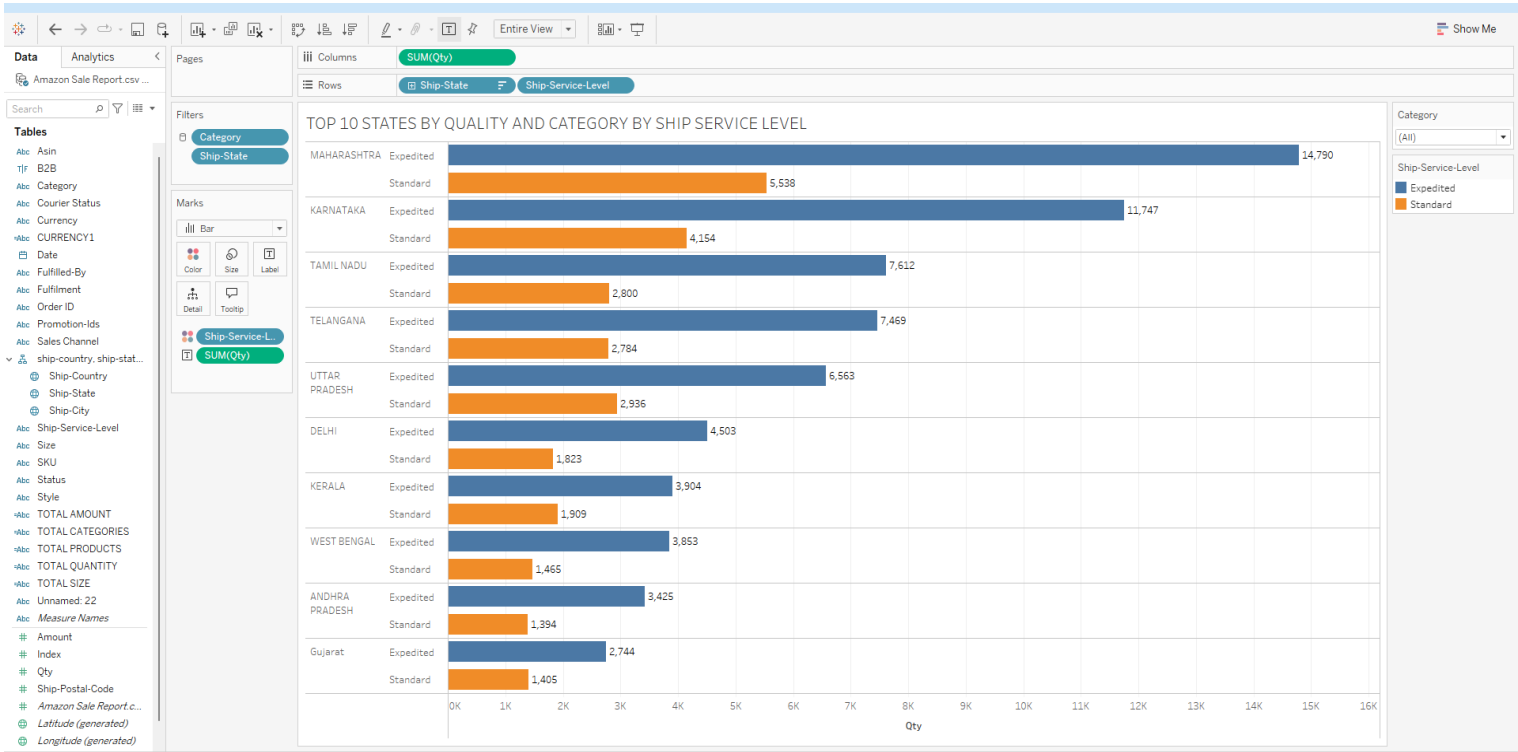
Top Performing State:

Maharashtra leads in total quantity sold with a significant amount of 14,790 units, indicating its strong market presence and consumer demand.

Comparison of Shipping Service Levels:

The chart differentiates between two shipping service levels: Expedited (shown in blue) and Standard (shown in orange).

For most states, the expedited shipping option has higher quantities sold compared to standard shipping, suggesting a preference for faster delivery among consumers.

State Performance:

Karnataka and Tamil Nadu also show strong sales, with Karnataka achieving 11,747 units and Tamil Nadu at 7,612 units.

Other states like Telangana (7,469 units) and Uttar Pradesh (6,563 units) also perform well, indicating a diverse market across various regions.

Underperforming States:

Andhra Pradesh and Gujarat have the lowest sales figures among the top 10 states, with quantities of 3,425 and 2,744, respectively. This may indicate less demand or potential market opportunities for growth.

Shipping Preferences:

The majority of states show a clear preference for expedited shipping, which may suggest that consumers are willing to pay a premium for faster delivery.

In some states, the quantity of expedited orders far exceeds standard orders, highlighting a trend towards prioritising speed in delivery.

Conclusion:

This data visualisation provides valuable insights into regional sales performance and consumer preferences regarding shipping options. By leveraging these insights, businesses can make informed decisions to optimise their strategies, enhance customer satisfaction, and drive sales growth in various states.

QUALITY BY STATUS AND CATEGORY
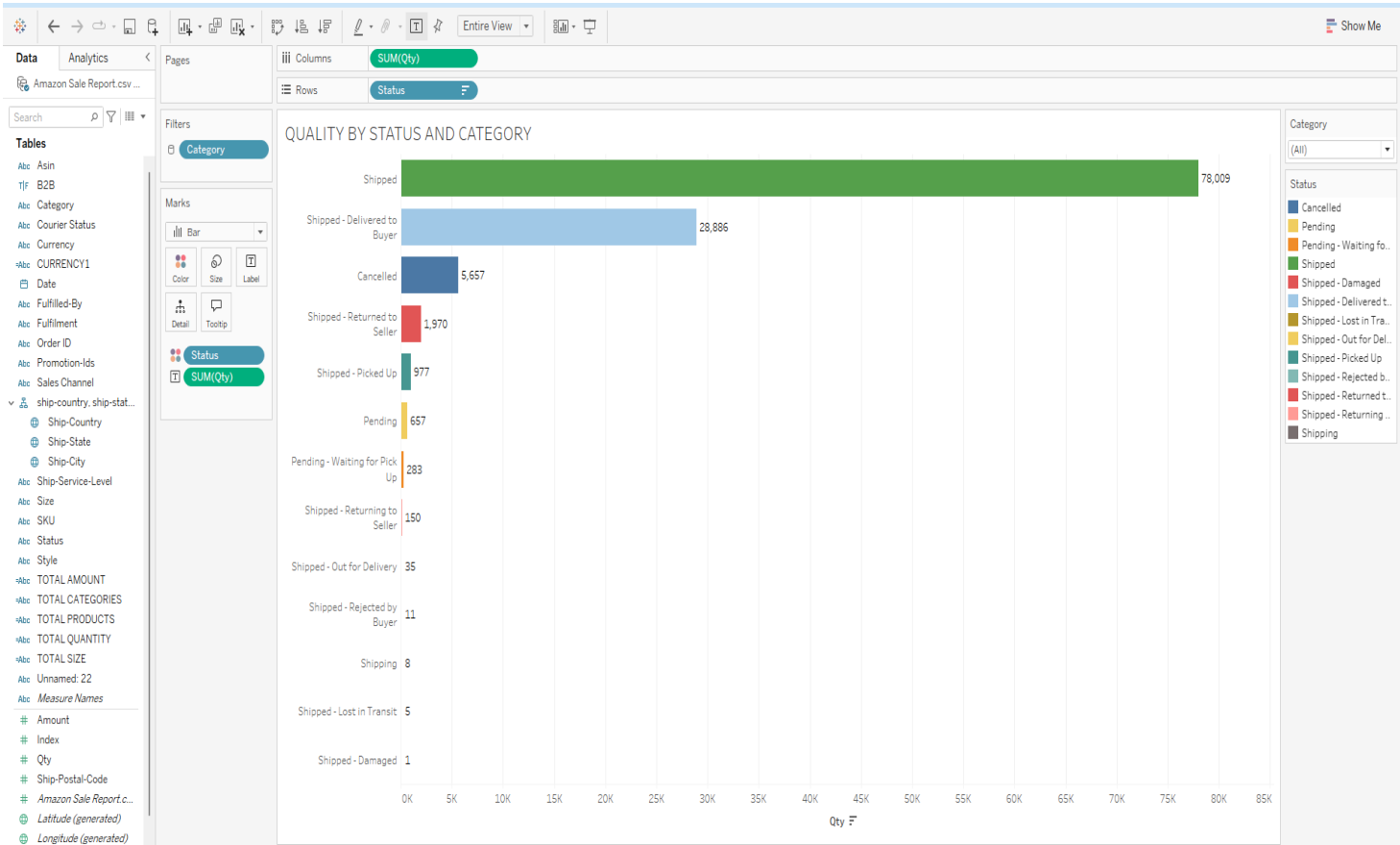
Key Observations:

Total Quantity Shipped:

The total quantity shipped is substantial, with 78,009 units shipped in total, indicating a strong sales volume.

Shipped - Delivered to Buyer:

The largest segment is "Shipped - Delivered to Buyer," with 28,886 units, highlighting successful deliveries and customer satisfaction.

Cancelled Orders:

The 5,657 cancelled orders indicate a significant number of transactions that did not complete. This could point to potential issues in the purchasing process or customer decision-making.

Returns and Issues:

There are notable quantities for "Shipped - Returned to Seller" (1,970) and "Shipped - Damaged" (1), suggesting some products were returned, which may warrant further investigation into return reasons.

The low quantity of damaged items (1) indicates effective handling and shipping processes.

Pending Orders:

There are 657 pending orders, with 283 specifically waiting for pickup. This may indicate potential delays in fulfillment that could affect customer satisfaction.

Out for Delivery:

The 35 orders marked as "Out for Delivery" suggest a small number of transactions currently in the final delivery stage.

Rejected Deliveries:

Only 11 orders were "Rejected by Buyer," which is relatively low and indicates that most deliveries are accepted.

Conclusion:

This data visualization provides a comprehensive overview of the shipping status of products sold on Amazon. By leveraging these insights, businesses can enhance operational efficiency, improve customer satisfaction, and drive sales growth through informed decision-making and strategic adjustments.

QUANTITY BY COURIER STATUS AND CATEGORY
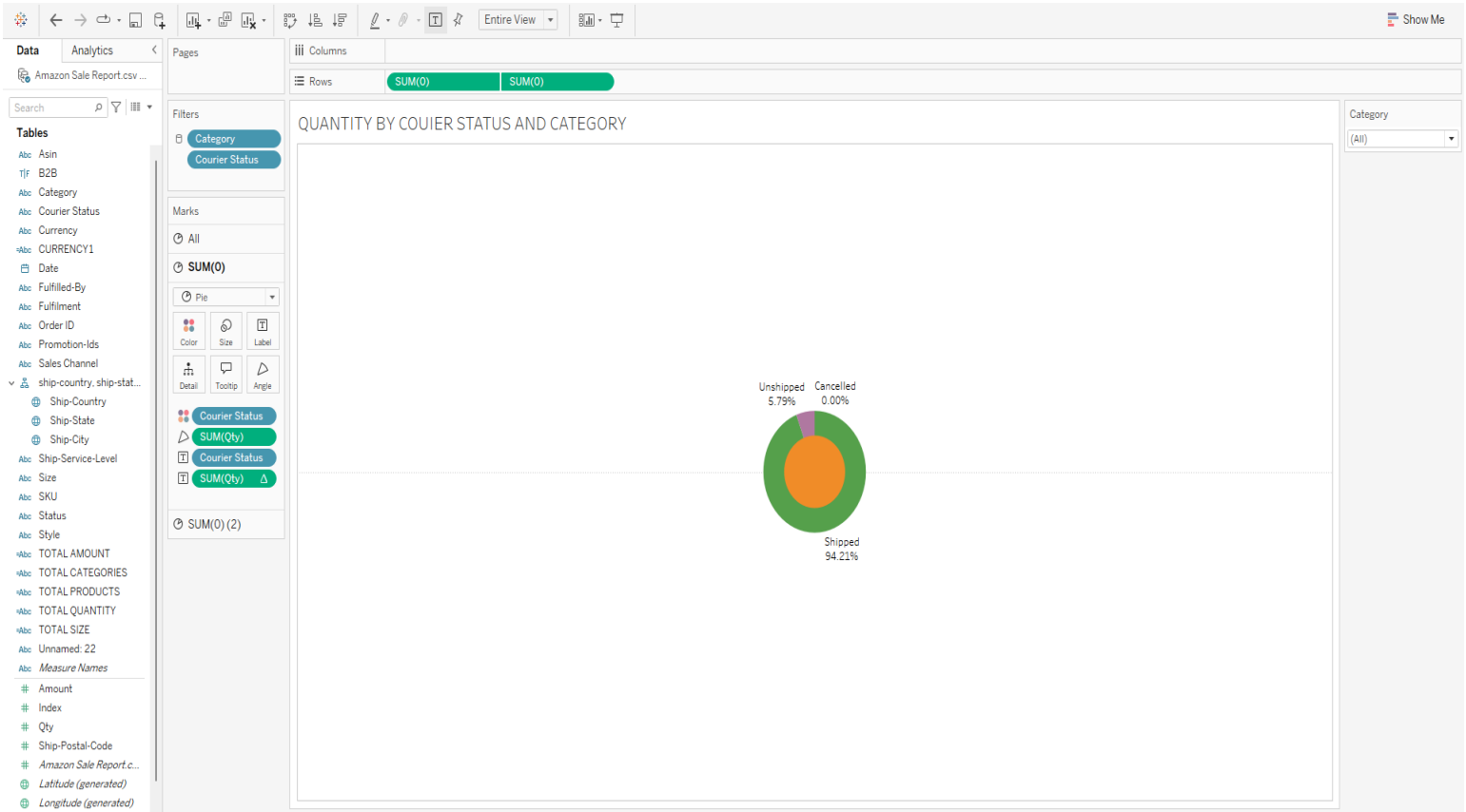
Key Observations:

Overall Shipping Performance:

A significant 94.21% of the total quantity has been successfully shipped, indicating a strong fulfillment rate and effective logistics management.

Unshipped Orders:

5.79% of the orders are categorized as unshipped, which is a notable portion. This could indicate issues in inventory management, order processing, or logistics that need to be addressed to improve overall efficiency.

Cancelled Orders:

There are 0.00% of orders marked as cancelled, suggesting that once orders are placed, they are processed and shipped without cancellations. This is a positive indicator of customer satisfaction and operational effectiveness.

Conclusion:

This data visualization provides a clear overview of the courier status related to product shipments. The high shipping percentage is commendable, but attention should be given to the unshipped orders to ensure operational efficiency and customer satisfaction. By addressing these areas, businesses can enhance overall performance and maintain a competitive edge in the market.

Amazon Sales Data Analysis
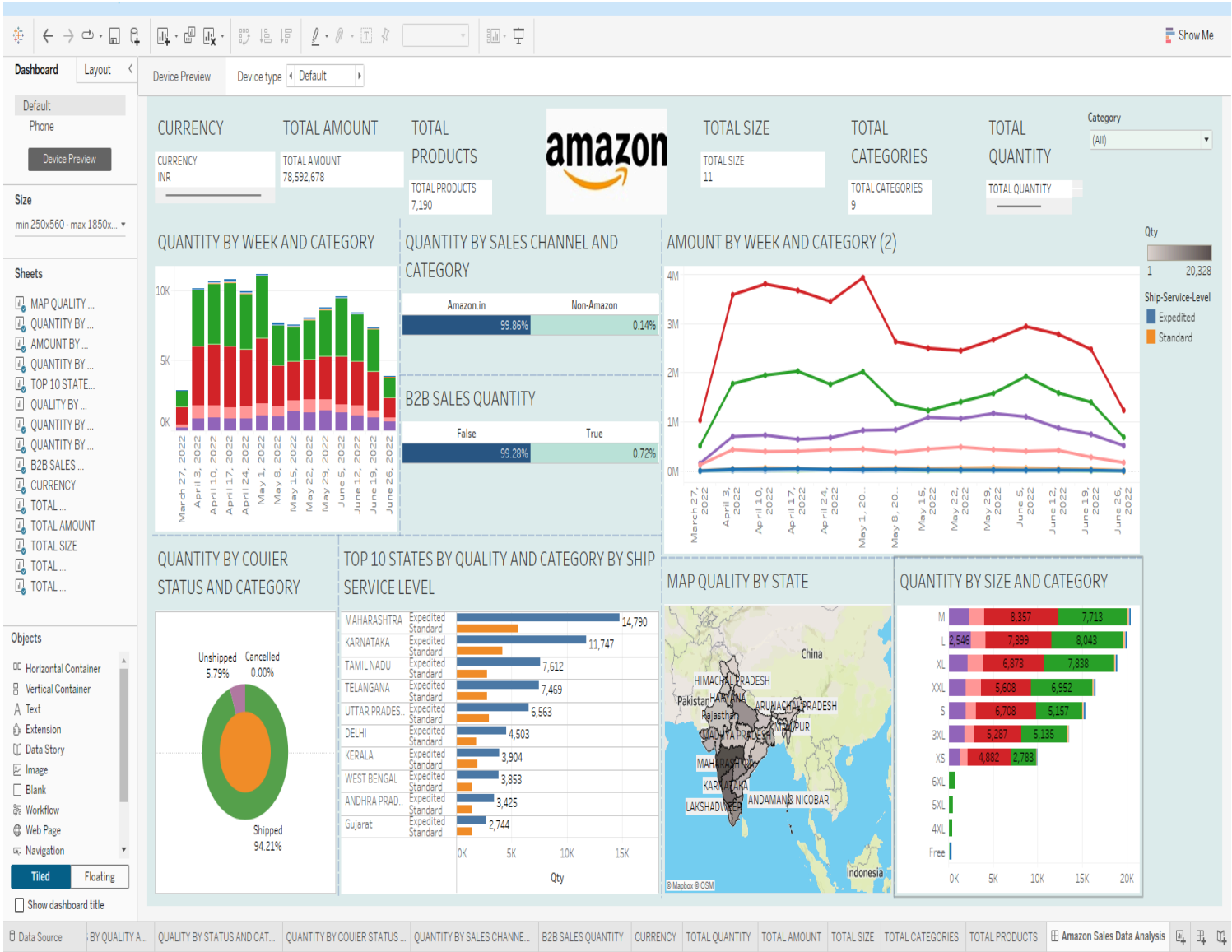
The dashboard provides a comprehensive overview of Amazon sales data, highlighting various metrics such as total sales amount, product categories, sales channels, and geographical performance. Here's an analysis of the insights derived from the dashboard, along with recommendations for marketing strategies and business improvements.

Key Insights:

Total Sales Overview:

The total sales amount is ₹78,592,678, with 7,190 total products sold. This establishes a solid sales foundation, indicating a robust inventory and market presence.

Sales Channels:

The sales are overwhelmingly dominated by Amazon.in, accounting for 99.86% of sales, while non-Amazon sales contribute a mere 0.14%. This indicates a strong reliance on the Amazon platform, which may pose risks if market dynamics change.

B2B Sales Performance:

B2B sales are minimal, with 99.28% classified as non-B2B (False). This presents a significant growth opportunity in the B2B market, which is currently underutilized.

Shipping Status:

The shipping status shows that 94.21% of orders are shipped, while 5.79% are unshipped. There are no canceled orders, indicating effective order fulfillment processes.

Geographical Performance:

The Top 10 States by sales quantity (e.g., Maharashtra, Karnataka) reveal where the highest demand is located. This geographic insight can guide targeted marketing efforts.

Sales Trends Over Time:

The quantity by week and category chart shows fluctuations in sales over time, indicating seasonal trends or the impact of marketing campaigns. Identifying peak sales periods can help optimize inventory and marketing strategies.

Product Size Distribution:

The quantity by size and category highlights the distribution of sizes sold, with specific sizes (e.g., M, L) performing better than others. This can inform production and stocking decisions.

Recommendations:

Diversify Sales Channels:

To mitigate risks associated with over-reliance on Amazon, consider expanding to other platforms (e.g., eBay, Walmart) and exploring direct-to-consumer sales through a proprietary website.

Target B2B Opportunities:

Develop targeted marketing campaigns aimed at businesses. Consider offering bulk purchase discounts, tailored products for businesses, or partnerships with B2B platforms.

Enhance Fulfillment Processes:

With a high shipping rate, continue to optimize fulfillment processes to maintain efficiency. Investigate the reasons for unshipped orders to improve logistics and customer satisfaction.

Geographic Targeting:

Utilize geographic data to tailor marketing strategies in high-performing states. Localized promotions or partnerships with local businesses can help increase market penetration.

Seasonal Marketing Strategies:

Analyze the sales trends to identify peak seasons and develop marketing campaigns that align with these periods. Consider promotional events or discounts during high-demand weeks.

Optimize Product Offerings:

Based on size distribution data, focus on stocking and marketing sizes that are in higher demand. This can help reduce excess inventory and improve sales efficiency.

Customer Feedback and Engagement:

Implement a system for gathering customer feedback to understand their needs better. Engaging with customers can lead to product improvements and increased loyalty.

Conclusion:

The dashboard provides valuable insights into sales performance across various metrics. By implementing the recommendations, the business can enhance its marketing strategies, improve operational efficiencies, and explore new growth opportunities, particularly in the B2B segment and through diversified sales channels. This strategic approach will help in sustaining growth and adapting to changing market conditions.