Northeastern University
College of Professional Studies

Module 4

Signature Assignment Dashboard

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ALY6070 (CRN 20507): Communication and Visualization for Data Analytics

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March 24th, 2025

Context

Introduction

In today's competitive e-commerce landscape, data-driven insights play a crucial role in optimizing business operations, enhancing customer satisfaction, and driving revenue. This analysis delves into the sales performance, shipment trends, and regional demand across various states, product categories, and time periods. By leveraging data visualization, we aim to uncover patterns, identify areas for improvement, and provide strategic recommendations to enhance operational efficiency and customer experience.

Understanding the Dataset and Key Variables and Data Cleaning Process

We have used Amazon's Online Sales data for 4 months – from March 2022 to June 2022.
Before diving into the key metrics, we performed data cleaning and preprocessing to ensure accuracy and reliability. The steps included:

1. **Handling Missing Data –** We checked for null or missing values in key fields such as order quantity, sales amount, order status, and shipping category.
2. **Removing Duplicates –** Any duplicate transactions were identified and removed to prevent data distortion.
3. **Standardizing Data Formats –** Dates, categories, and numerical values were formatted correctly to ensure consistency in analysis.
4. **Filtering Outliers –** Unusual values (e.g., negative sales amounts or excessively high order quantities) were examined.

Once the dataset was cleaned, we focused on analyzing the following **key variables**-

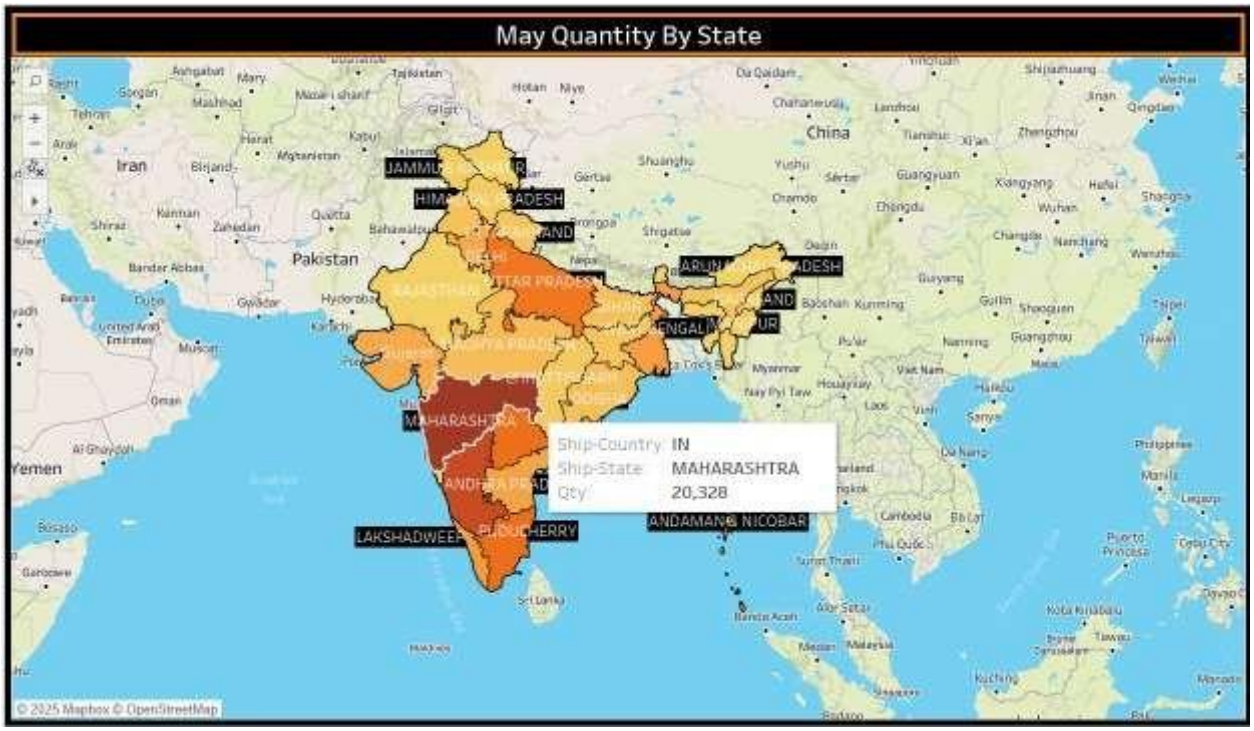
1. **State-wise Sales –** Represents the geographical distribution of sales, helping us understand regional demand patterns.
2. **Weekly Quantity Sold –** Tracks the sales volume across different weeks to identify trends and seasonality.
3. **Revenue by Week and Category –** Highlights revenue trends across different product categories.
4. **Size-Wise Sales Distribution –** Analyzes the most and least popular product sizes.
5. **Top 10 States by Order Quantity –** Provides insights into demand distribution and preferred shipping methods.
6. **Order Status Analysis –** Examines the proportion of shipped, pending, and canceled orders.
7. **Courier Status Distribution –** Reveals the efficiency of logistics and fulfillment processes.

Analysis & Interpretation

1. Where are most of the sales occurring?

Visual Used: Map Chart - "Map by State"

In this visual, our aim was to understand the geographical distribution of sales across different states in India, helping us identify regions with the highest demand for products.



Interpretation: The map visualization highlights key states with the highest sales volume. Maharashtra, Karnataka, and Tamil Nadu emerge as top performers in terms of sales, followed by Delhi, Uttar Pradesh, and Telangana. The intensity of color indicates the relative sales volume in each region.

Business Implication: This insight can help Amazon allocate resources more effectively by -

- Prioritizing localized marketing campaigns in high-performing states
- Optimizing inventory stocking and warehousing strategies
- Enhancing delivery speed and logistics through region-specific courier planning

Understanding these patterns supports data-driven regional strategy, ensuring that business efforts align with where customer demand is strongest.

Why did we choose the types of visualizations that we did? A map visualization is ideal for showcasing geographic trends as it -

- Instantly highlights spatial relationships
- Makes it easy to spot regional clusters of high performance
- Offers faster cognitive recognition compared to tables or bar charts

It visually simplifies complex data and makes regional performance comparisons intuitive and immediate.

How does this visual align with Gestalt and Design Principles?

This map chart effectively incorporates key Gestalt principles and data visualization best practices -

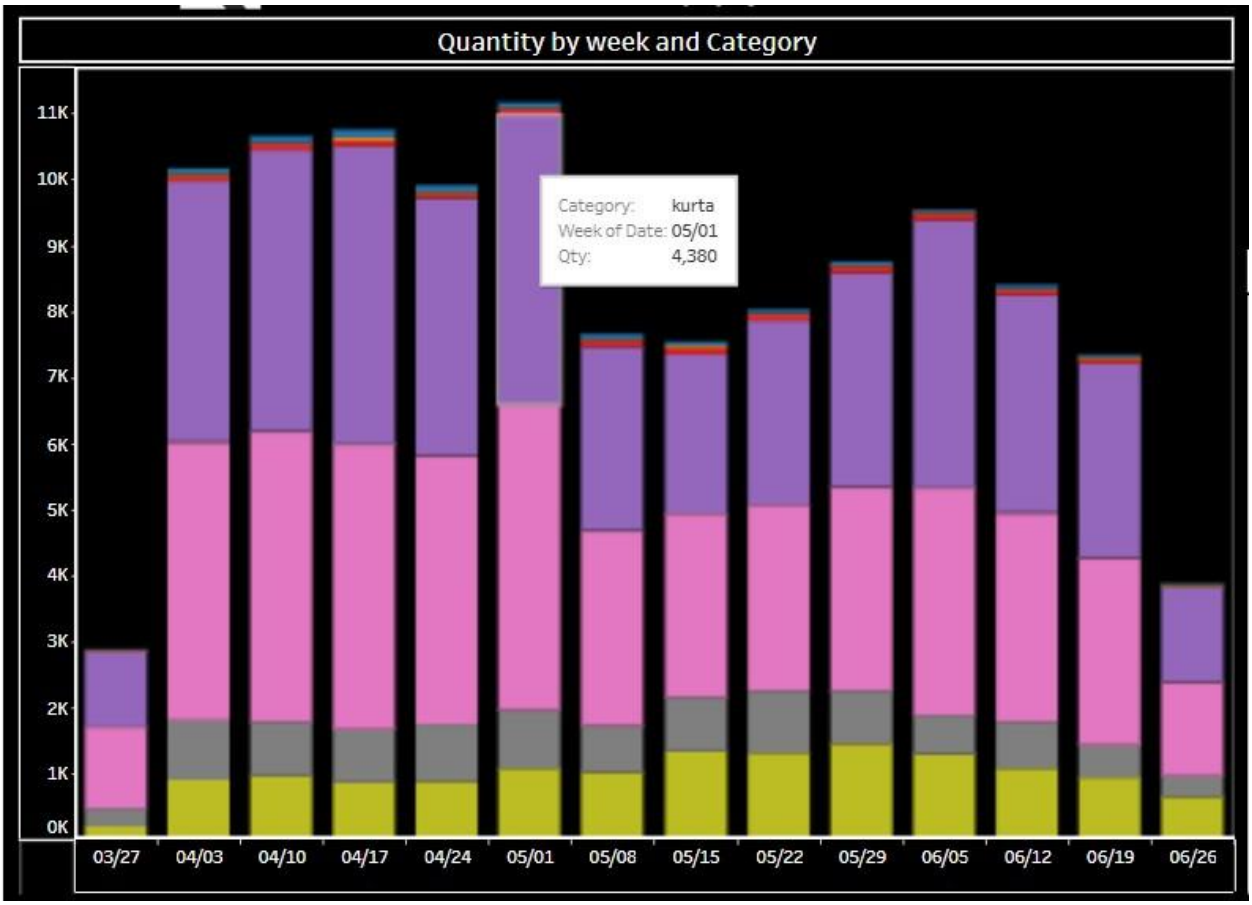
- **Similarity:** A consistent color scale allows viewers to quickly compare state performances based on shade intensity.
- **Figure & Ground:** The darkened states (figure) clearly stand out from the light background (ground), allowing viewers to focus attention on relevant data.
- **Proximity:** States are naturally grouped by their geographic location, helping users process and relate regional clusters.
- **Continuity:** The color gradient flows smoothly across the map, guiding the viewer's eyes from lower-performing to higher-performing regions.
- **Minimalism and Focus:** The map avoids clutter, uses clean design, and removes unnecessary distractions, allowing users to focus purely on the data story.

From a design perspective, the map applies a clean layout with strong contrast. Readable labeling and proper sizing. Meaningful use of color to convey magnitude without overwhelming the viewer.

2. How do sales quantities fluctuate over time?

Visual Used: Stacked Bar Chart - "Quantity by Week and Category"

The goal of this visualization was to track how sales quantities fluctuate over time and identify any patterns or seasonal trends. The stacked bar chart allows us to break down sales by category each week.



Interpretation: The chart shows significant fluctuations in sales quantities over time, with the highest sales volumes occurring in early May 2022. Categories such as standard sales and expedited orders experienced sharp peaks in the same period, but sales declined steadily after that peak. A noticeable dip in quantities is visible during late June, suggesting a possible off-season or a dip in consumer demand.

Business Implication: Understanding these sales trends enables the business to:

- Forecast inventory needs in advance of high-demand periods
- Plan targeted promotions or discount events during peak weeks (e.g., early May)
- Analyze periods of lower demand to explore marketing re-engagement strategies
- Improve resource allocation, ensuring optimal staffing and stock during surges

Being proactive in responding to these patterns helps reduce stockouts or overstocking, ultimately improving customer satisfaction and profitability.

Why did we choose the types of visualizations that we did? A stacked bar chart was chosen because it:

- Shows both total weekly sales volume and the contribution of each category

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- Makes it easy to compare week-over-week fluctuations
  Helps stakeholders spot which categories are rising or falling in popularity over time

Unlike a line chart (which may show trends but lose categorical breakdown), the stacked bar chart combines both magnitude and composition, providing richer context in a single visual.

How does this visual align with Gestalt and Design Principles?

This chart effectively applies Gestalt principles to guide the viewer's interpretation -

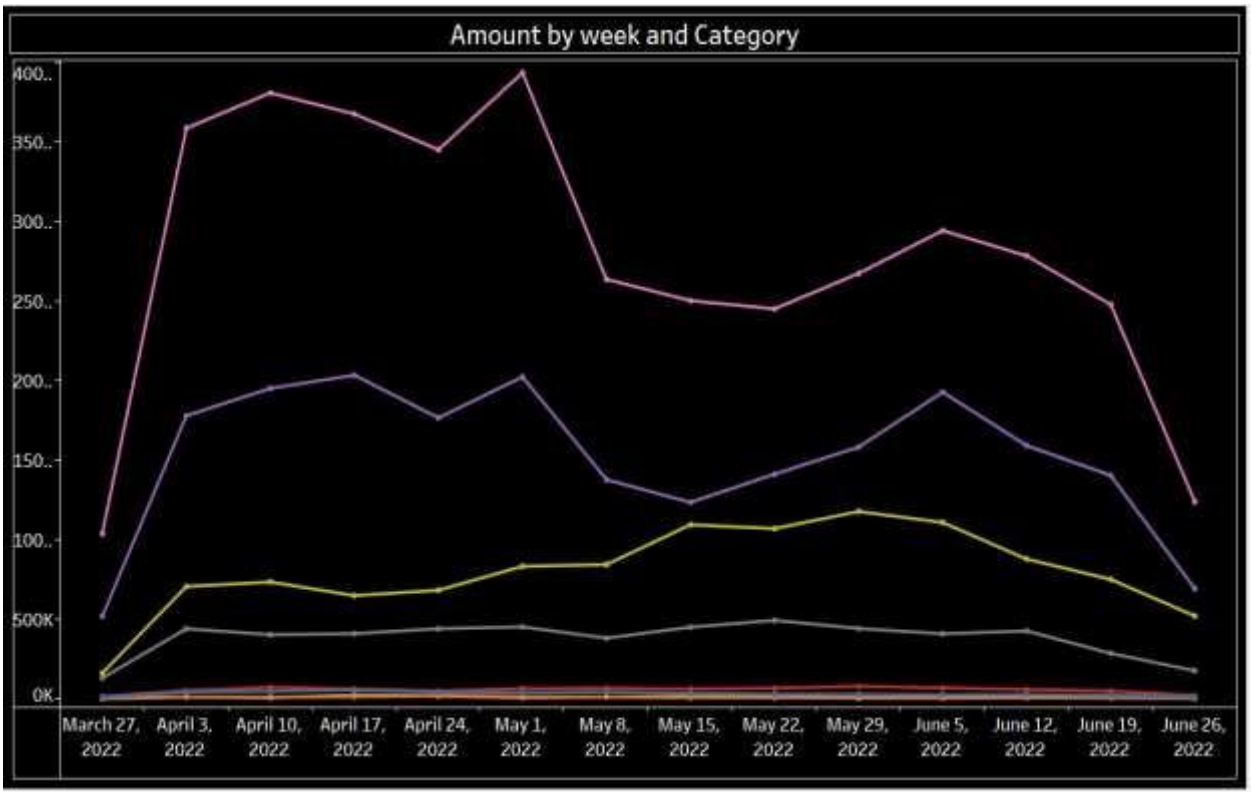
- **Similarity:** Each category is represented by a consistent color across all weeks, helping users quickly recognize and compare category trends.
- **Proximity:** Weekly bars are placed closely, creating a natural timeline and reinforcing the idea of continuous time-based analysis.
- **Continuity:** The stacked segments guide the eye across weeks smoothly, making it easy to follow individual category changes over time.
- **Figure & Ground:** The bars (figure) stand out clearly against a neutral background (ground), ensuring visibility of each data point.

From a design standpoint, the visualization - Uses an intuitive X-axis (time) and Y-axis (quantity), improving interpretability. Applies color meaningfully, differentiating categories without creating visual clutter. Ensures legibility and alignment, making the chart easy to read at a glance

3. How does revenue change over time, and which categories contribute the most?

Visual Used: Line Chart - "Amount by Week and Category"

The purpose of this line chart was to examine revenue trends over time and understand how different product categories contribute to the overall revenue.



Interpretation: Revenue shows significant fluctuations with the highest peaks observed during the first weeks of May, similar to the trend in sales quantities. Categories such as Set has consistently generate higher revenues compared to others. The line chart also reveals that Bottoms (Pants, Jeans, etc.) categories experience steadier and slower growth.

Business Implication: These insights enable Amazon to:

- Focus marketing campaigns on high-revenue categories like “Set” to maximize ROI
- Strategically manage inventory by prioritizing fast-moving and high-margin items
- Identify underperforming categories with steady but slow growth to refine pricing or promotional strategies
- Prepare for seasonal peaks by analyzing past spikes and planning accordingly

Understanding how and when revenue changes, and which categories drive it, empowers the business to make more informed decisions around assortment planning, pricing, and promotional timing.

Why did we choose the types of visualizations that we did? A line chart was chosen because

- It effectively captures week-over-week trends in revenue

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- It clearly visualizes temporal changes, allowing users to spot growth, dips, and plateaus across different categories
  Multiple lines representing product categories enable parallel comparison, which would be less intuitive in bar charts or tables

The line chart provides both high-level trends and granular insights, making it ideal for revenue trend analysis.

How does this visual align with Gestalt and Design Principles?

This visualization leverages multiple Gestalt principles to enhance understanding:

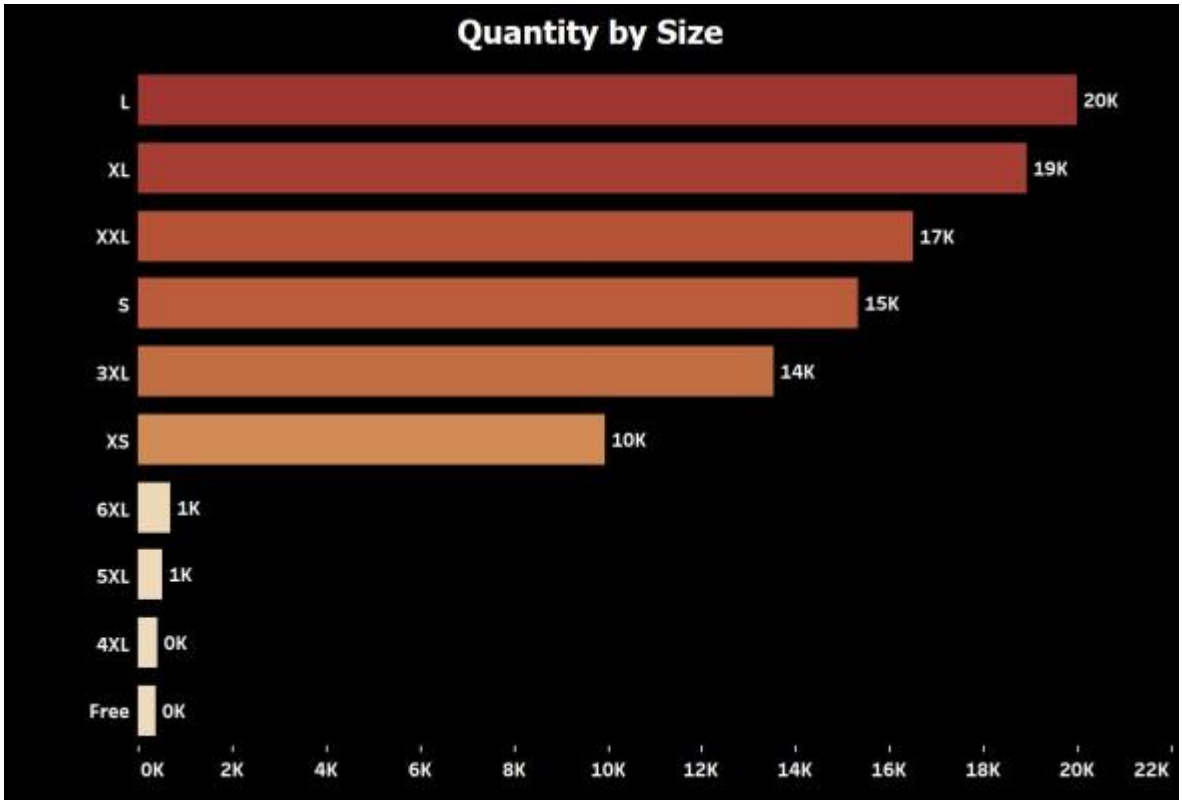
- **Continuity:** The lines naturally guide the viewer's eye across time, helping track the progression of each category's revenue over weeks.
- **Similarity:** Each line is uniquely colored and styled consistently across the time axis, enabling viewers to identify and differentiate between categories with ease.
- **Proximity:** Weekly data points along each line are closely spaced to reinforce the concept of a continuous timeline.
- **Figure & Ground:** The contrast between the colored lines and the neutral background ensures the revenue trends remain in visual focus.

From a design standpoint, this line chart is minimalistic yet informative, avoiding visual clutter while showing multiple data series. Clearly labeled, with axes and legends that support quick interpretation. Scalable and intuitive, making it accessible to both technical and non-technical stakeholders

4. What are the most and least popular product sizes?

Visual Used: Horizontal Bar Chart - "Quantity by Size"

This visual was created to understand the distribution of sales by product size, helping us identify which sizes are in high demand and which ones are underperforming so that Amazon can decide which sizes to stock more.



Interpretation: The bar chart clearly shows that large sizes L, XL, XXL dominate the sales, with L-size products leading the pack with 20K units sold. In contrast, sizes like 4XL, 5XL, and 6XL have minimal sales, indicating a very niche demand. This suggests that customers generally prefer standard sizes, while extra-large sizes have a limited customer base. The size S, 3XL also contributed to the demand.

Business Implication: Understanding size preferences allows Amazon to -

- Prioritize stocking of high-demand sizes (L, XL, XXL) to avoid stockouts and improve fulfillment rates
- Minimize overstocking of niche sizes, reducing storage and holding costs
- Design targeted marketing or discount campaigns for underperforming sizes to clear inventory
- Inform product development and sizing strategy, aligning with actual customer demand patterns

Such data-driven size optimization leads to better inventory turnover, lower returns, and enhanced customer satisfaction.

Why did we choose the types of visualizations that we did? A horizontal bar chart is the best choice for this analysis because -

- It effectively displays categorical comparisons (sizes) from highest to lowest
- It offers a clean, side-by-side view of demand for each size
- The horizontal layout accommodates longer size labels without clutter, improving readability

Other chart types like pie or line charts would be ineffective here, as they either distort categorical ranking or aren't suited for non-temporal categorical data.

How does this visual align with Gestalt and Design Principles?

This chart is highly effective due to its alignment with core Gestalt principles -

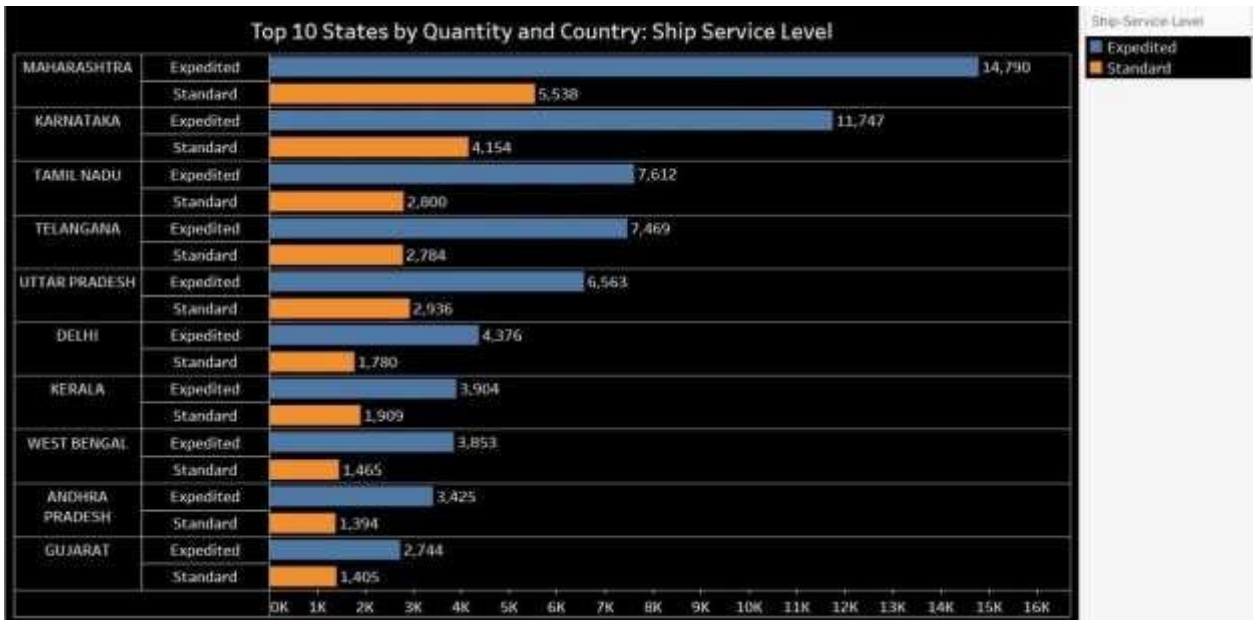
- **Similarity:** Uniform bar styles and colors across categories help the viewer recognize that all elements represent size-based sales.
- **Proximity:** Bars are closely aligned, making it easy to scan and compare different sizes within a single view.
- **Figure & Ground:** The bars (figures) stand out clearly against a light background (ground), allowing users to focus on sales quantity.
- **Common Region & Alignment:** Bars are aligned along the same baseline, reinforcing visual continuity and making differences easier to perceive.

From a design perspective, the visualization uses consistent color and spacing to enhance clarity. Avoids visual clutter, focusing attention on the size comparison. Supports immediate interpretation, which is critical for decision-making in inventory and product planning

5. Which states contribute the most to order volume, and how does shipping preference vary?

Visual Used: Grouped Bar Chart - "10 States by Quantity and Category"

In this visual, our goal was to analyze the order volume across different states while also comparing the usage of expedited vs. standard shipping methods.



Interpretation: Maharashtra stands out as the leading state with 15K units ordered, followed by Karnataka with 12K. The grouped bars show that expedited shipping is more popular in most states, with Maharashtra and Tamil Nadu showing the highest volumes of expedited orders. However, states like Kerala and Andhra Pradesh show a relatively balanced mix of standard and expedited shipping.

Business Implication: These insights allow Amazon to -

- Optimize expedited delivery operations in states where customers highly prefer fast shipping
- Allocate inventory and courier resources in alignment with regional shipping demands
- Design tailored logistics strategies for states with balanced shipping preferences to improve cost-efficiency without compromising delivery expectations
- Focus on customer satisfaction in high-demand areas, where delayed delivery may directly impact brand trust

Overall, this data can guide strategic decisions in regional fulfillment planning, courier partnerships, and delivery promise optimizations.

Why did we choose the types of visualizations that we did? A grouped bar chart was selected because it:

- Provides a side-by-side comparison of two shipping methods within each state
- Makes it easy to visually distinguish both the volume and preference between categories
- Supports state-wise ranking while preserving the shipping mode breakdown, which would be hard to interpret in line or stacked bar formats

It presents a clear, intuitive comparison that supports both operational planning and customer experience strategies.

How does this visual align with Gestalt and Design Principles?

This chart is visually effective due to its alignment with multiple Gestalt principles:

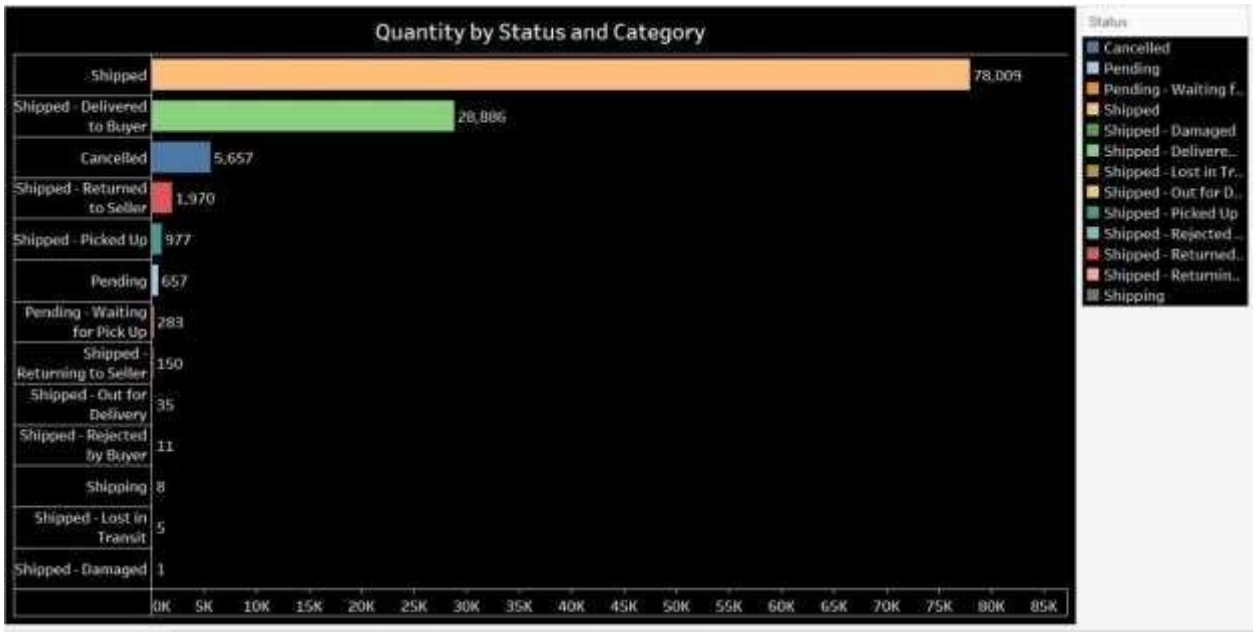
- **Similarity:** Expedited and standard shipping categories are consistently color-coded, allowing the viewer to easily distinguish between them.
- **Proximity:** The bars within each group are placed close together, reinforcing their connection as parts of a whole (state-wise shipping behavior).
- **Common Region:** Grouped bars share the same axis and layout, helping the audience perceive them as belonging to the same comparative context.
- **Figure & Ground:** The contrasting bar colors against a light background improve visibility and focus on the data points.

From a design perspective, this chart - uses a logical layout, arranging states in descending order of total orders to enhance readability. Maintains color clarity and spacing, which supports fast visual interpretation. And encourages accurate comparisons, which are crucial when planning operational and delivery models.

6. What is the breakdown of order status?

Visual Used: Horizontal Bar Chart - "Quantity by Status and Category"

This visual aimed to give a comprehensive view of order fulfillment efficiency by examining the proportions of orders that were shipped, canceled, or returned.



Interpretation: The chart reveals that a significant majority of orders (78,009) were successfully shipped, while a small percentage was canceled (5,657) or returned to sellers (1,970). The remaining orders are mostly in 'Pending' or 'Shipping' statuses, with only a few in 'Lost in Transit' or 'Damaged.'

Business Implication: These insights guide operational improvements by:

- Reinforcing confidence in the existing logistics and warehouse systems that support high shipping success
- Prompting a root-cause analysis of canceled and returned orders, which may stem from inventory errors, customer dissatisfaction, or delivery delays
- Allowing the business to set performance benchmarks and improve KPIs around fulfillment accuracy and issue resolution
- Reducing costs associated with returns and cancellations by identifying and correcting repeat pain points

By focusing on these aspects, Amazon can improve customer satisfaction, order accuracy, and retention, all of which drive long-term profitability.

Why did we choose the types of visualizations that we did? A horizontal bar chart was used because

- It's ideal for comparing categorical data, like order statuses
- It offers a clear, linear comparison between quantities for each status
- Horizontal orientation allows longer status names to be displayed without crowding, enhancing readability

Other visual formats such as pie or donut charts wouldn't allow for as precise volume comparisons or as much clarity for multiple categories.

How does this visual align with Gestalt and Design Principles?

This bar chart aligns strongly with Gestalt principles, ensuring clear communication and visual clarity:

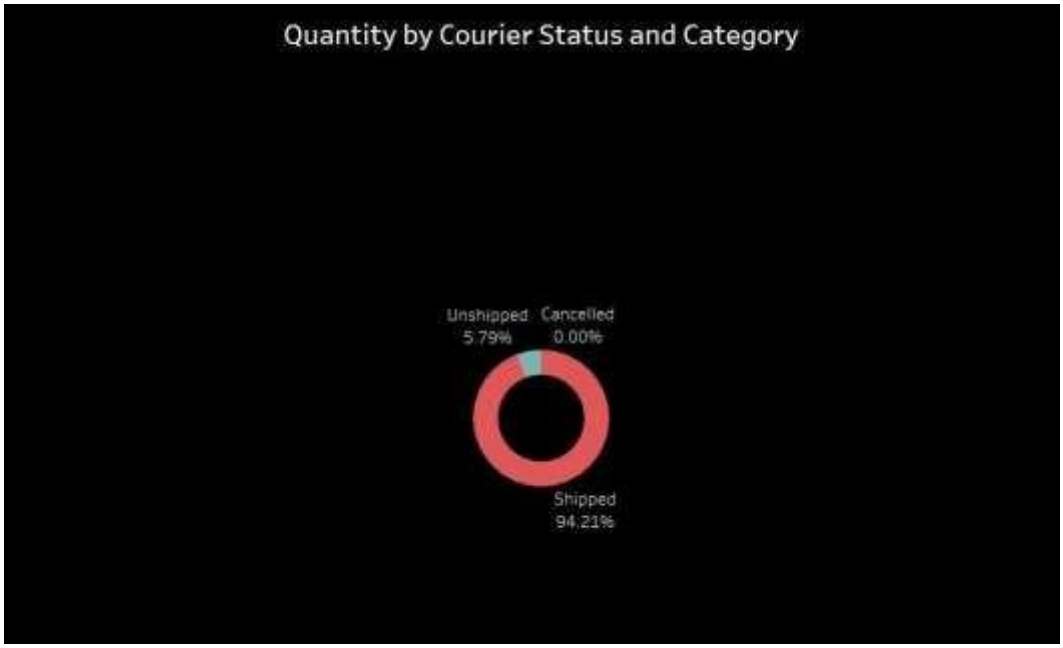
- **Similarity:** Each order status is assigned a unique yet consistent color across the bars, making it easy to differentiate them.
- **Proximity:** All bars are aligned and grouped together, reinforcing that they represent different parts of the same system (order lifecycle).
- **Figure & Ground:** The use of color against a light background creates a strong visual separation that brings the data (figure) into focus.
- **Common Fate:** All bars extend from the same baseline, reinforcing comparison through length—a perceptually accurate way to show quantity differences.

From a design perspective, the visualization - Applies a clean, minimalistic layout that reduces clutter. Prioritizes legibility of category names and values. Allows quick interpretation, which is essential for operations teams and managers tracking fulfillment performance.

7. What is the distribution of courier status?

Visual Used: Donut Chart - "Quantity by Courier Status and Category"

The aim here was to analyze the distribution of courier status to understand the efficiency of delivery processes and identify potential bottlenecks.



Interpretation: The donut chart shows that 94% of orders were shipped successfully, while only 5.79% were unshipped, with no cancellations in this sample. This suggests a wellmanaged shipping process, but the small percentage of unshipped orders may require further investigation to ensure no delays or backlogs.

Business Implication: From a logistics and operations perspective, this insight:

- Confirms that current courier partnerships and warehouse workflows are largely effective
- Emphasizes the need to monitor and follow up on the unshipped portion to prevent delivery delays or customer complaints
- Supports data-driven courier performance evaluations, helping Amazon make informed decisions about service-level agreements (SLAs) with delivery partners

- Encourages continuous improvement through early identification of fulfillment friction points, which can improve the overall customer experience

Monitoring courier status distribution is key to maintaining trust, reliability, and operational consistency.

Why did we choose the types of visualizations that we did? A donut chart was selected for this analysis because:

- It clearly presents proportional relationships between different courier status categories
- The circular format offers an intuitive and at-a-glance understanding of how well the shipping process is functioning
- The hollow center provides space for highlighting total orders or percentages, enhancing dashboard aesthetics and focus

Compared to a bar chart or table, a donut chart conveys distribution-based insights more naturally and quickly, especially when only a few categories are involved.

How does this visual align with Gestalt and Design Principles?

This donut chart effectively applies several Gestalt principles, making it visually intuitive and informative:

- **Similarity:** Each courier status is represented by a different color, ensuring quick identification of each category.
- **Closure:** The circular shape naturally leads the viewer's eye to complete the visual, aiding perception of the full distribution.
- **Figure & Ground:** The colored segments (figure) stand out clearly against the neutral background (ground), ensuring that each courier status is easily distinguished.
- **Proximity:** The segments are tightly connected, reinforcing their relationship as parts of a whole (courier performance snapshot).

From a design perspective, the chart - Balances visual appeal with simplicity, making it ideal for dashboards. Uses clean labeling and color separation to enhance interpretation. Helps communicate proportions immediately, which is essential when monitoring delivery KPIs in realtime.

Dashboard

Answering Key Questions

1. Why did you choose the types of visualizations that you did?

Each visualization in the dashboard was carefully selected to best communicate specific insights from the data in a visually intuitive and meaningful way:

- Map Chart (Map by State) - We used a map to represent state-wise sales because it provides an immediate spatial understanding of regional performance. The color gradient helps highlight high-demand states like Maharashtra and Karnataka at a glance, which wouldn't be as effective in a standard bar chart.
- Stacked Bar Chart (Quantity by Week and Category) - A stacked bar chart was ideal to show sales trends over time across multiple categories. This format allows users to compare weekly performance while also understanding the relative contribution of each category in a single view.
- Line Chart (Amount by Week and Category) - A line chart was chosen to analyze revenue trends over time, as it clearly shows rises and dips across weeks and helps track performance

of different categories simultaneously. It's especially effective for highlighting patterns and changes.

- Horizontal Bar Chart (Quantity by Size) - The horizontal bar chart helps rank sizes in order of sales quantity. It offers an easy comparison between sizes and makes it clear which sizes are in higher demand, supporting better inventory decisions.
- Grouped Bar Chart (Top 10 States by Shipping Type) - To analyze shipping preferences (Expedited vs. Standard) by state, a grouped bar chart was used. This type allows for a sideby-side comparison within each state, helping identify regions where fast delivery is more valued.
- Horizontal Bar Chart (Quantity by Order Status) - This chart effectively breaks down fulfillment outcomes such as shipped, delivered, canceled, and returned orders. It's the clearest way to view categorical comparisons and operational performance.
- Donut Chart (Courier Shipping Status) - The donut chart offers a simple, proportionate view of how many orders are shipped vs. unshipped. It helps present the overall courier performance in a visually appealing and digestible format.

Overall, each visualization was chosen not just for aesthetic value, but to maximize clarity, insight, and actionability for stakeholders reviewing the dashboard.

2. How are the visualizations effective and address Gestalt & Design Principles?

The visualizations in the dashboard were designed with key Gestalt principles and core design best practices in mind to ensure clarity, usability, and visual storytelling.

A. Use of Gestalt Principles

- **Proximity:**
  Related elements such as labels, bars, and legends are placed close to each other, helping the viewer naturally group information (e.g., shipping types grouped within states in the grouped bar chart).
- **Similarity:**
  Consistent color schemes are used to represent categories across different visuals (e.g., product categories or shipping types), allowing the viewer to quickly recognize and relate data points across charts.
- **Figure & Ground:**
  Dark backgrounds with high-contrast elements help the main data (bars, lines, labels) stand out clearly from the background, allowing viewers to focus easily on the most important elements.
- **Continuity:**
  In time-series visuals like the line chart, smooth continuous lines allow the user to easily follow trends over time, supporting intuitive pattern recognition.
- **Closure:**

Donut charts and bar charts guide the eye to "complete" the visual structure, making interpretation more instinctive without overwhelming the viewer with too many details.

B. Use of Design Principles

- **Hierarchy & Emphasis:**
  Key metrics, high-performing categories, and peak time periods are visually emphasized through size, color intensity, or position. For example, Maharashtra's dominance is immediately visible on the map due to its darker shade.
- **Color Usage:**
  Distinct yet consistent color palettes are applied to avoid confusion between categories. Colors are used meaningfully darker shades imply higher values, and contrasting shades help differentiate between statuses or sizes.
- **Alignment and Layout:**
  Visuals are cleanly aligned, with consistent spacing and margins. This uniform layout supports scalability and reduces cognitive load for the viewer.
- **Minimalism (Simplicity):**
  Each chart is free of unnecessary gridlines, labels, and clutter. Only essential information is presented, ensuring that the story is not lost in noise.

Effectiveness

These principles together ensure that -

- Viewers can quickly grasp key insights without needing lengthy explanations.
- The visual flow guides the audience through the story, from regional trends to product preferences and operational performance.
- The dashboard maintains a professional, clean, and user-friendly interface that enhances data-driven decision-making.

3. How do the visualizations answer the research/business question?

This dashboard was created to analyze Amazon sales data with the goal of uncovering trends in customer demand, regional performance, and order fulfillment. Through a series of targeted visualizations, our aim was to support data-driven decisions that enhance operational efficiency and customer satisfaction.

Visualization	Research/Business Question	Insight Provided
Map by State	Where are the most orders coming from?	Identifies high-performing regions like Maharashtra, Karnataka, and Tamil Nadu, helping optimize regional marketing and inventory.

Quantity by Week and Category (Stacked Bar Chart)	How does demand vary over time and across product categories?	Reveals weekly sales trends and category-wise distribution, showing peaks in early May and popularity of Kurta, Bottom, and Western wear.
Amount by Week and Category (Line Chart)	Which categories contribute the most to revenue and when?	Tracks revenue performance across weeks and categories, identifying top revenue-
		generating items and timeframes.
Quantity by Size (Bar Chart)	Which product sizes are most popular?	Highlights customer preferences for sizes (L, XL, XXL), supporting smarter inventory planning and size availability.
Top 10 States by Shipping Type (Grouped Bar Chart)	Which states prefer expedited vs. standard shipping?	Shows demand split by shipping method in top states, guiding logistics planning and courier allocation.
Quantity by Status and Category (Bar Chart)	What is the current fulfillment performance and where are issues occurring?	Shows most orders are shipped or delivered, while returns and cancellations are minimal but still actionable.
Courier Status (Donut Chart)	Are orders being successfully shipped?	Provides an at-a-glance view showing 94% shipped orders, indicating strong courier performance.

4. **What story do the visualizations tell?**

   The visualizations collectively tell the story of how sales are driven across regions, categories, and time—and how well the operations are supporting that demand.

   - The story begins with a geographical overview, where we learn that states like Maharashtra, Karnataka, and Tamil Nadu are the top contributors to sales.
   - As we explore weekly sales trends, we discover that early May shows a peak in demand, especially in categories like Kurta, Bottom, and Western Wear.
   - Diving deeper into revenue trends, we see which product types are not just selling the most but also generating the highest revenue, revealing category-level performance.
   - The story continues with customer preferences, where we find that sizes like L, XL, and XXL dominate, providing insights for inventory and stocking strategies.

- Then we shift to shipping insights, showing that expedited shipping is preferred in most high-demand states—indicating customer expectations around speed.
- The narrative also uncovers the strength of the fulfillment process, with a majority of orders shipped and delivered successfully, while highlighting small but important areas such as returns and cancellations that require attention.
- Finally, courier-level data confirms that logistics performance is strong, with over 94% of orders shipped, closing the loop on operational efficiency.

In essence, the story told by these visuals helps us understand - •
Where the demand is coming from,

- What customers are buying,
- When they are buying,
- How products are being delivered,
- And how well the business is performing in meeting expectations.

This story enables decision-makers to take informed actions across marketing, inventory, and logistics to drive growth and satisfaction.

Conclusion

The visualizations in this dashboard collectively provide a holistic understanding of Amazon's sales performance, customer behavior, and fulfillment efficiency. From identifying high-demand regions like Maharashtra and Karnataka to recognizing peak sales periods in early May, the dashboard uncovers valuable insights across multiple dimensions. It highlights customer preferences for larger sizes, category-wise revenue contributions, and the growing preference for expedited shipping—enabling smarter inventory and logistics planning. Operationally, the data showcases a strong fulfillment process, with high shipping success rates and manageable levels of cancellations and returns. Overall, the dashboard equips stakeholders with clear, data-driven evidence to support strategic decisions across marketing, supply chain, and customer service functions, ultimately driving business growth and customer satisfaction.

Data-Driven Strategy Derived from the Analysis & Dashboard (Recommendations)

Based on the insights uncovered through the dashboard visualizations, the following strategies are recommended to improve performance and align operations with customer expectations:

1. Optimize Inventory Based on Size Demand

- Focus on stocking high-demand sizes such as L, XL, and XXL, which collectively account for the majority of sales.
- Reduce inventory of underperforming sizes like 4XL, 5XL, and Free Size to minimize holding costs and avoid overstock.

2. Strengthen Regional Operations in High-Demand States

- Allocate more inventory and marketing budget to high-performing states such as Maharashtra, Karnataka, and Tamil Nadu.
- Consider setting up regional distribution centers or expanding courier partnerships in these zones to support faster delivery and reduce shipping costs.

3. Capitalize on Peak Demand Periods

- Leverage early May and similar high-traffic weeks for seasonal promotions, flash sales, or new launches.
- Prepare inventory and optimize staffing ahead of expected demand surges to prevent stockouts and order delays.

4. Prioritize Expedited Shipping in Logistics Strategy

- Since expedited shipping is preferred in top-performing states, ensure that this option remains reliable and competitively priced.
- Consider offering free or discounted expedited shipping during promotional periods to further boost conversions.

5. Monitor and Reduce Returns/Cancellations

- Investigate common causes behind returns and cancellations, whether it's sizing issues, delayed deliveries, or product quality concerns.
- Improve product listings with better images, size guides, and reviews to set accurate expectations.

6. Maintain High Courier Efficiency

- With over 94% of orders successfully shipped, continue investing in reliable courier services and technology-driven tracking systems.
- Regularly monitor unshipped or delayed orders and implement alert systems to resolve fulfillment issues proactively.

7. Align Product Mix with Revenue Contributors

- Double down on categories that drive the highest revenue—such as Kurta, Bottom Wear, and Western Wear—especially during high-demand weeks.
- Reevaluate marketing efforts for low-performing categories or consider bundling them with popular items.

These strategies, guided by the dashboard analysis, will help streamline operations, maximize profitability, and elevate the customer experience—ensuring the business remains agile, customerfocused, and performance-driven.

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