

Unveiling Automobile Sales Trends

Part1 & Part 2

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Introduction:

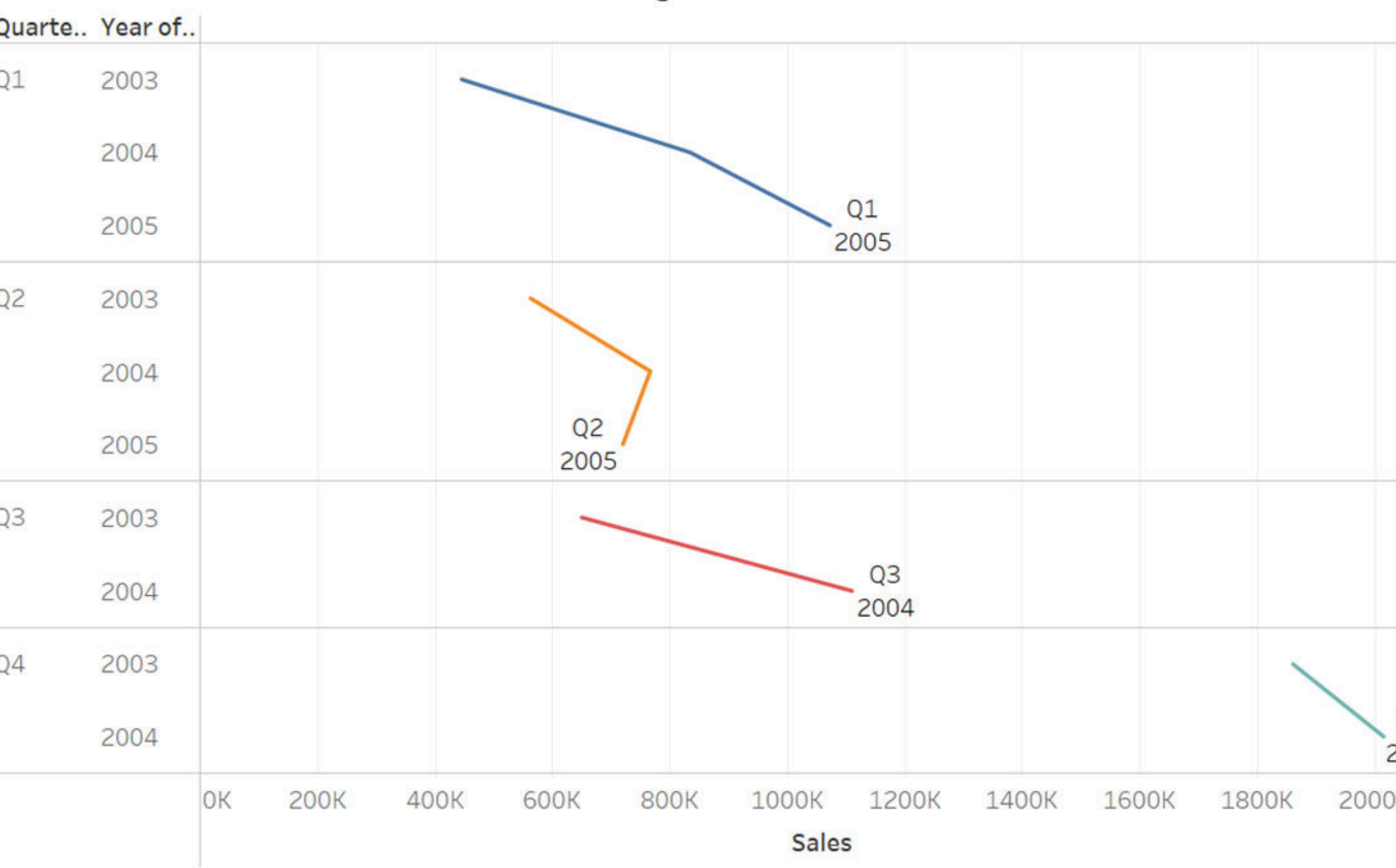
The Sales Data Analysis dataset provides detailed insights into miniature automobile sales, including order specifics, customer demographics, and product details. This data allows us to analyze patterns across sales, seasonal trends, customer segments, and product categories, helping to drive strategic decisions. With information on order timelines, customer locations, and deal sizes, this dataset offers a foundation for understanding key factors impacting sales performance and customer behavior.

Part1

Sales Analysis

1(a).What is the trend in total sales amount over different quarters and years?

Trend in Total Sales Amount over Quarters and Years



The trend of sum of Sales for Orderdate Year broken down by Orderdate Quarter. Color shows details about Orderdate Quart
The marks are labeled by Orderdate Quarter and Orderdate Year.

Interpretation:

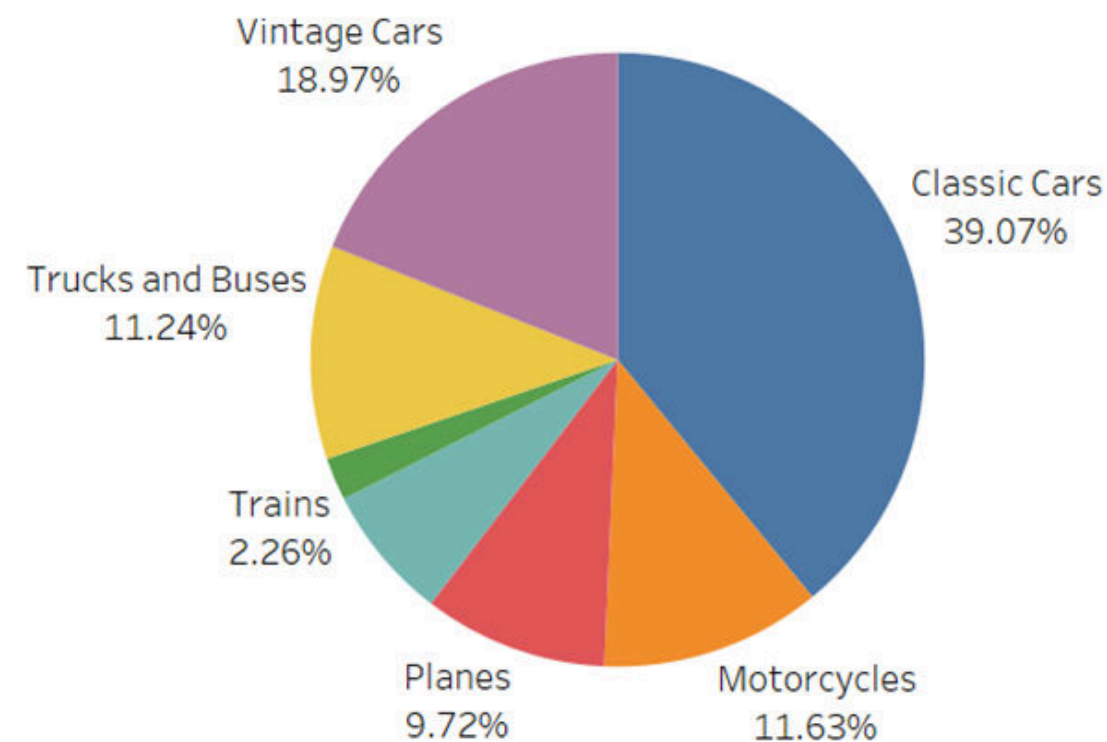
- Overall Trend:**
- There's a general upward trend in sales from 2003 to 2005.
 - Sales seem to be highest in Q1 and Q2 of each year.
- Specific Observations:**
- In 2004, there's a sharp increase in sales in Q2 compared to the previous quarters.
 - In 2005, there's a decrease in sales in Q2 compared to Q1 of the same year.
 - In 2004, there's a significant increase in sales in Q3 compared to Q2.
 - In 2005, there's a decrease in sales in Q4 compared to Q3.
- Possible Insights:**
- Q1 and Q2 might be peak sales seasons for the business.
 - The decrease in sales in Q2 of 2005 could be due to various factors like competition, economic conditions, or marketing strategies.
 - The increase in sales in Q3 of 2004 might be due to successful promotions or new product launches.
 - The decrease in sales in Q4 of 2005 could be due to seasonal factors or changes in consumer behavior.

Part1

Sales Analysis

1(b). How do different product lines contribute to total sales?

Contribution of Different Product Lines to Total Sales



Interpretation:

Key Takeaways:

- Classic cars are the top-selling product line, accounting for 39.07% of the total sales.
- Vintage cars follow closely, contributing 18.97% to the sales.
- Motorcycles and Trucks & Buses have a significant share, contributing 11.63% and 11.24%, respectively.
- Planes contribute 9.72%, while Trains have the smallest share at 2.26%.

Possible Insights:

- Classic cars are the most popular product line among customers.
- The company might want to focus on promoting Vintage cars and Trucks & Buses to increase their sales.
- Trains might be a niche product line that needs targeted marketing strategies.

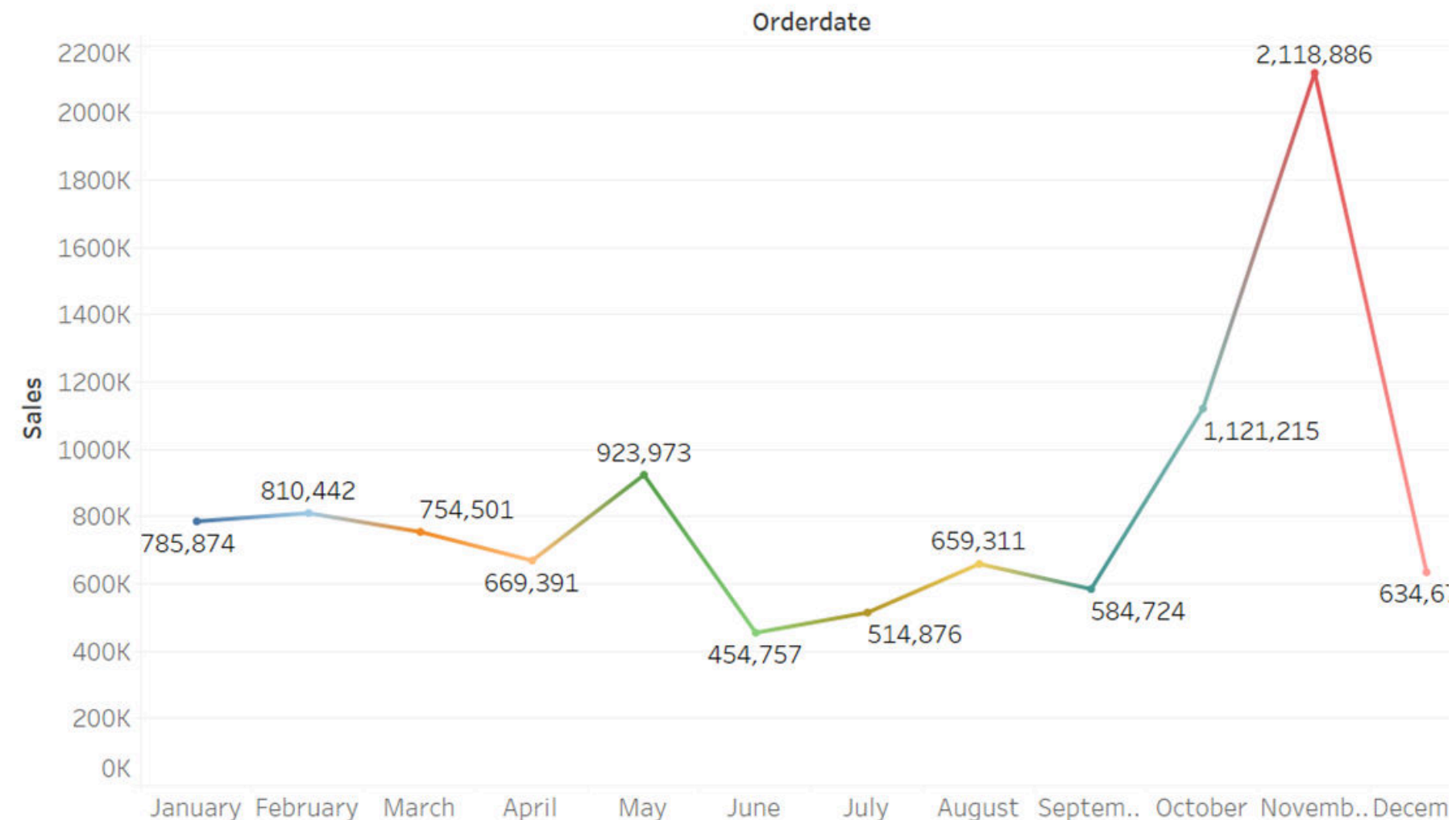
Part1

Sales Analysis

1(C). Can you identify any seasonal patterns in sales based on order dates?

Identifying Seasonal Patterns in Sales based on Order Dates.

Interpretation:



The trend of sum of Sales for Orderdate Month. Color shows details about Orderdate Month. The marks are labeled by sum of Sales. The data is filtered on Year Id, which keeps 2003, 2004 and 2005.

Interpretation:

This line chart illustrates the seasonal sales trends from 2003 to 2005.

Key Takeaways:

- Sales generally peak in November and December.
- Sales tend to be lowest in June and July.
- There's a consistent upward trend from January to November, followed by a drop in December.
- The peak in November and December is likely due to holiday shopping seasons.

Possible Insights:

- The company should focus on stocking up inventory and running promotions during the peak season.
- Off-season months like June and July could be used for clearance sales or inventory reduction.
- Analyzing the data for each year individually might reveal specific patterns or anomalies.

Part1

Customer Segmentation

2(a). How are sales distributed across different countries and territories?

Distribution of Sales across Different Countries and Territories.



Map based on Longitude (generated) and Latitude (generated). Color shows details about Territory. Size shows sum of Sales. The marks are labeled by Country and sum of Sales. Details are shown for Country.

Interpretation:

This map illustrates the distribution of sales across different countries and territories.

Key Takeaways:

- The USA is the top-selling market, accounting for \$3,627,983 in sales.
- EMEA (Europe, Middle East, and Africa) is the second-largest market, with \$1,215,687 in sales.
- Japan is the third-largest market, contributing \$630,623 in sales.
- APAC (Asia Pacific) contributes \$486,485 in sales.

Possible Insights:

- The USA is a key market for the company and should be a focus for future growth.
- EMEA and Japan also offer significant growth opportunities.
- APAC, while smaller, could be a potential market for expansion.
- The company might want to explore emerging markets in APAC for further growth.

Part1

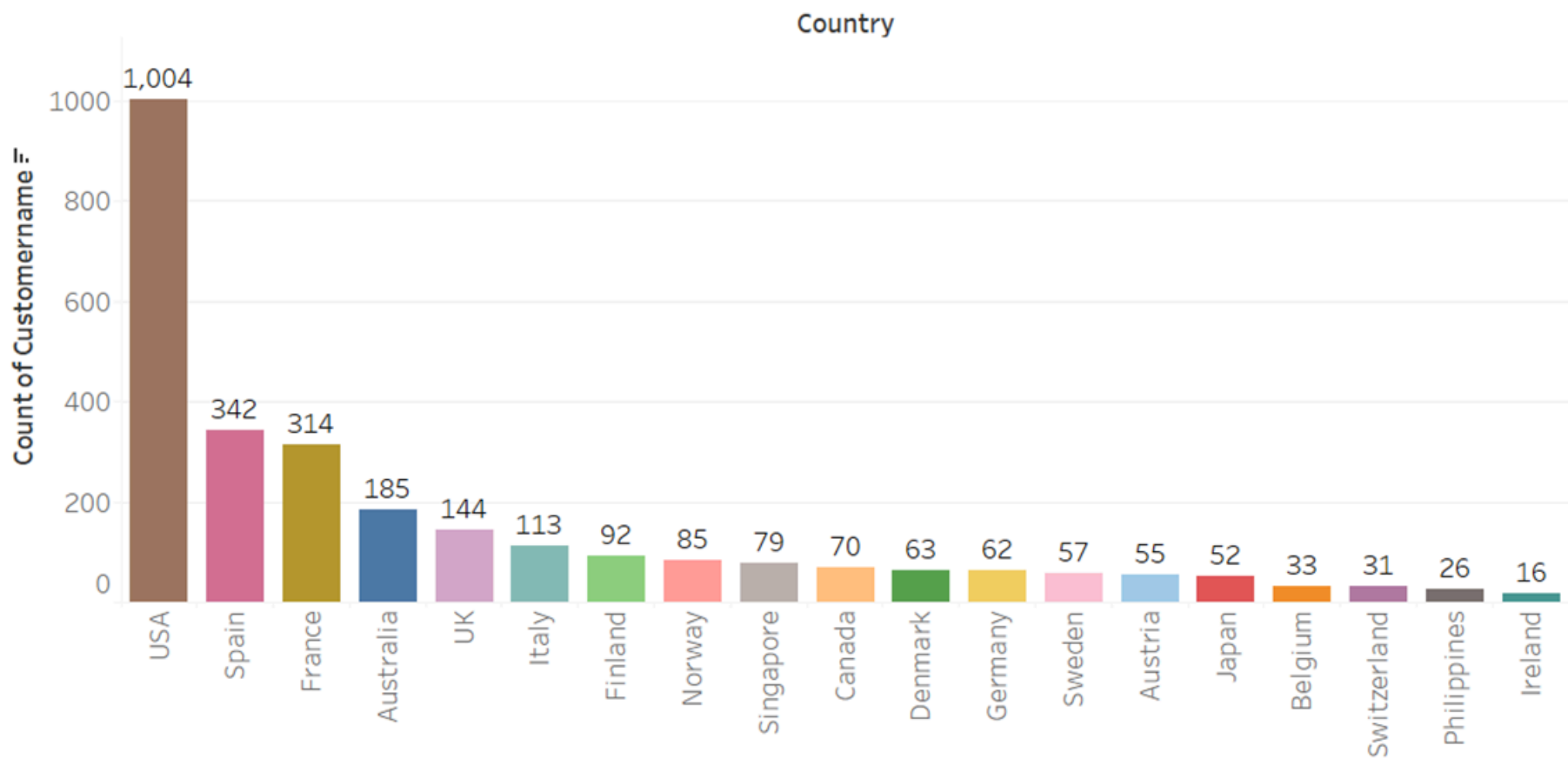
Customer Segmentation

2(C). What is the customer distribution in each country?

Customer Distribution in Each Country

Interpretation:

The Country USA have highest Customer Distribution with 1,004, followed by Spain.



Count of Customername for each Country. Color shows details about Country. The marks are labeled by count of Contactlastname.

Interpretation:

This bar chart illustrates the distribution of customers across different countries.

Key Takeaways:

- The USA has the highest number of customers with 1,004.
- Spain has the second-highest number of customers with 342.
- France and Australia have the third and fourth-highest number of customers, respectively.
- Most other countries have significantly fewer customers compared to the top four.

Possible Insights:

- The USA is a key market for the company and should be a focus for future growth.
- Spain, France, and Australia also offer significant growth opportunities.
- Other countries with fewer customers might require targeted marketing strategies to increase their customer base.

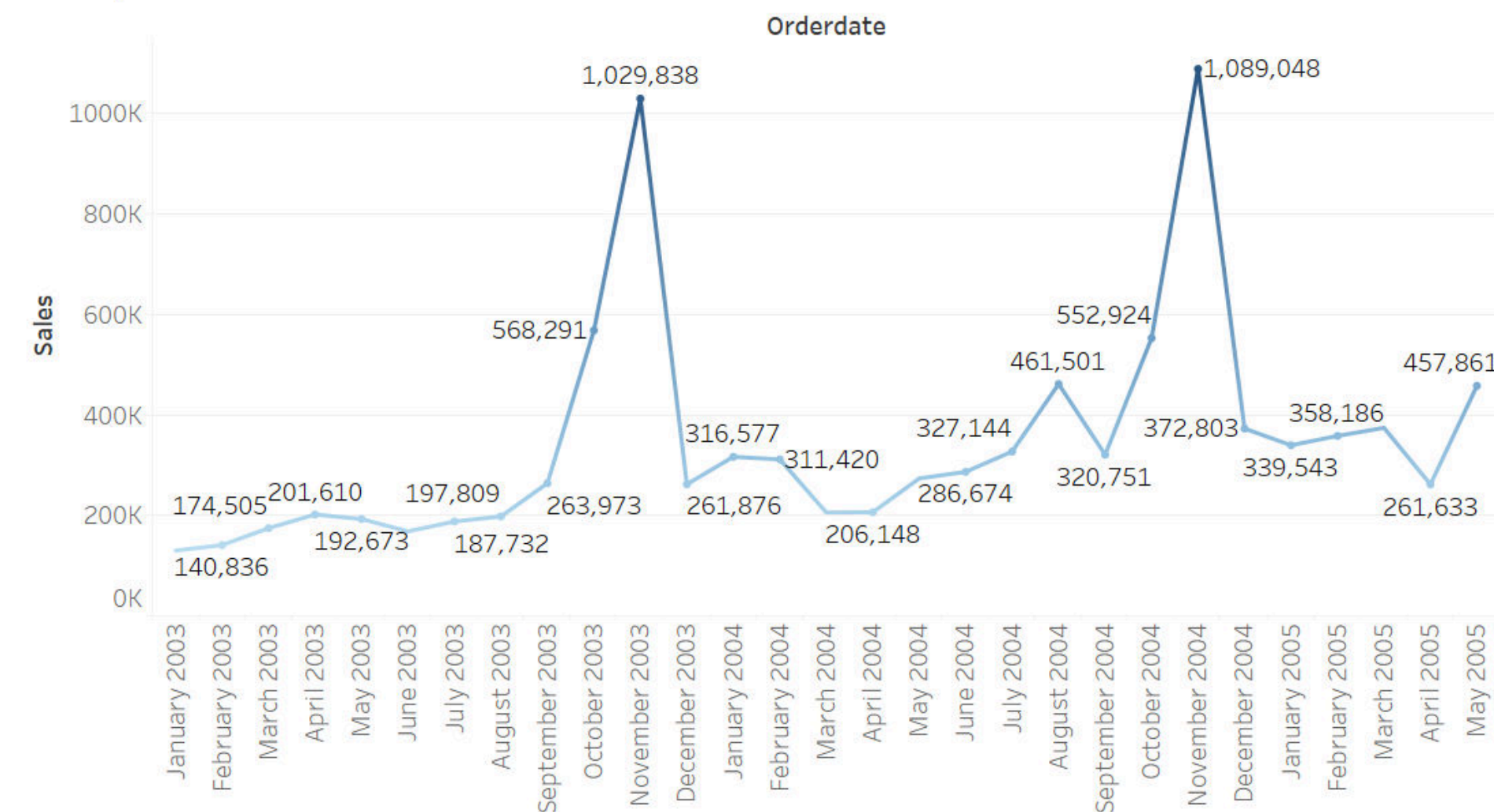
Part1

Sales Forecasting

3(a). How have sales evolved over different months and years?

Evolution of Sales over Different Months and Years

Interpretation:



The trend of sum of Sales for Orderdate (MY). Color shows sum of Sales. The marks are labeled by sum of Sales.

Interpretation:

Evolution of Sales Over Different Months and Years

Key Insights:

- November is the peak sales month: Sales in November 2004 reached a high of 1,089,048, followed closely by November 2003 at 1,029,838. This indicates a strong seasonal trend with November being the most lucrative month for sales.

Steady Increase in November Sales:

- There's a noticeable upward trend in November sales over the years, suggesting a growing customer base or successful marketing strategies during this period.

Seasonal Fluctuations:

- The chart reveals distinct seasonal patterns. Sales tend to increase from the beginning of the year, peaking in November, and then declining towards the end of the year.

Potential Factors Driving November Sales:

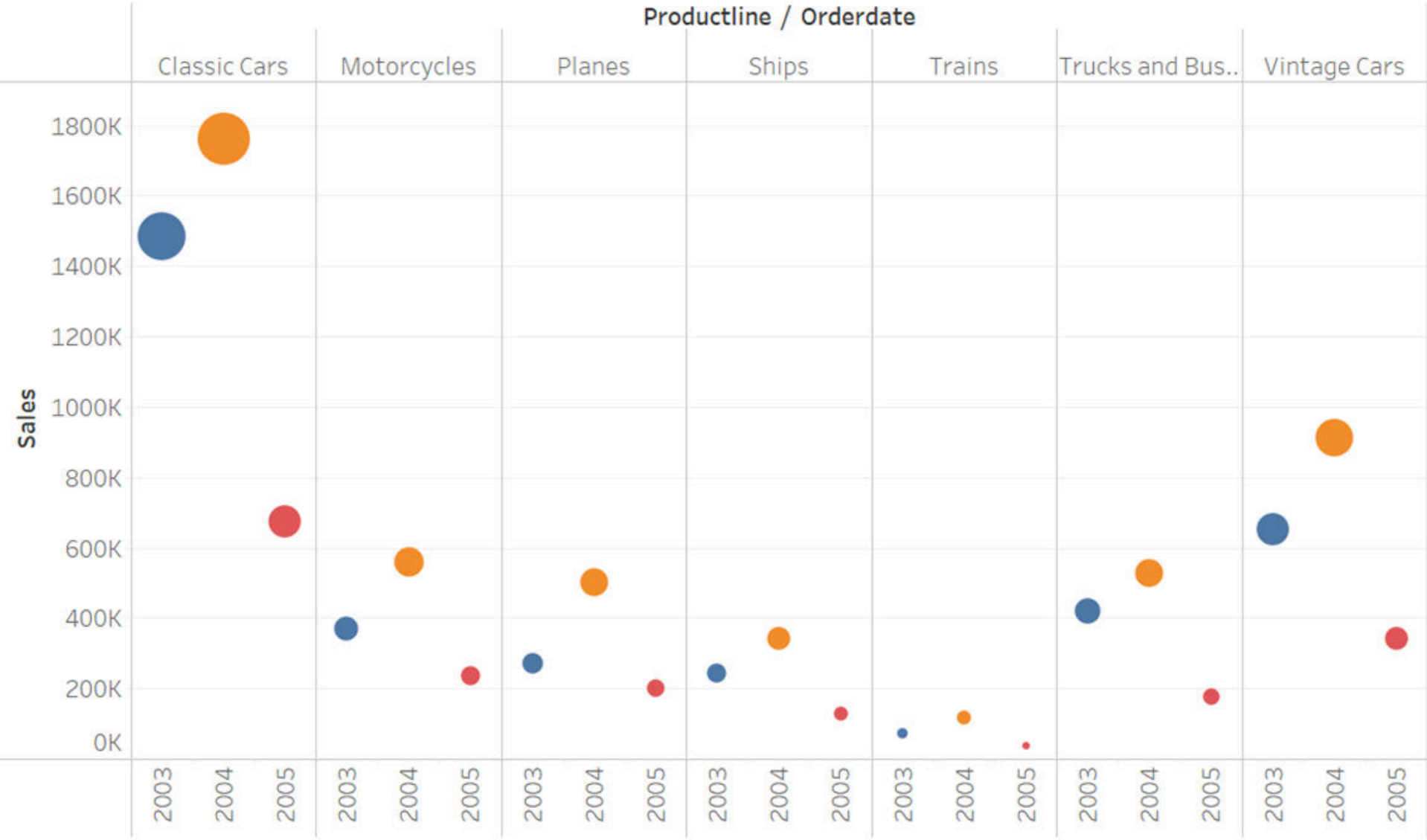
- This could be due to factors like holiday shopping seasons, year-end clearances, or specific marketing campaigns that are particularly effective in November.

Part1

Sales Forecasting

3(c). What factors might influence future sales based on historical data?

Factors Influencing Future Sales Based on Historical Data



Sum of Sales for each Orderdate Year broken down by Productline. Color shows details about Orderdate Year. Size shows sum of Sales.

Interpretation:

Factors Influencing Future Sales Based on Historical Data.

Key Insights:

- Classic Cars Dominate Sales: Classic cars have consistently been the top-selling product line across all years, with significantly higher sales compared to other product lines.

Increasing Sales Trend:

- There's a general upward trend in sales for all product lines over the years, indicating potential growth opportunities.

Seasonal Variations:

- While not explicitly shown in the chart, it's worth noting that seasonal factors like holidays and economic conditions can influence sales patterns.

Product Line Performance:

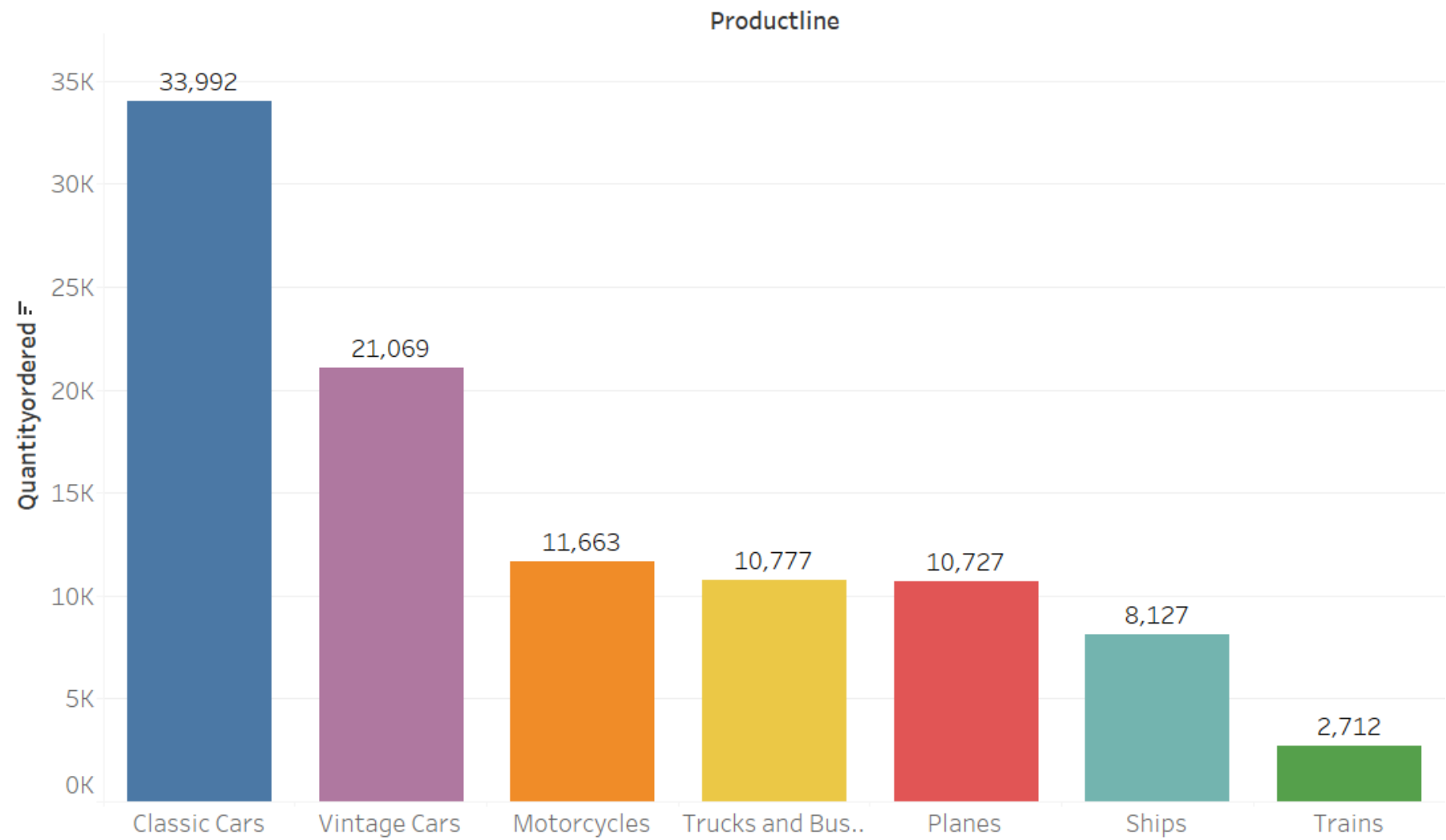
- Analyzing the individual performance of each product line can help identify strengths, weaknesses, and potential areas for improvement.

Part1

Product Performance

4(a).Which product lines have the highest and lowest quantities ordered?

Identify Product Lines with Highest and Lowest Quantities Ordered



Sum of Quantityordered for each Productline. Color shows details about Productline. The marks are labeled by sum of

Interpretation:

Overview:

This bar chart shows the quantities ordered across different product lines of miniature automobiles.

Key Findings:

Highest Quantity Ordered:

- Classic Cars lead with a significant quantity ordered of 33,992 units, indicating strong customer demand in this category

.Lowest Quantity Ordered:

- Trains have the lowest quantities ordered, totaling only 2,712 units, which may suggest lower popularity or niche market interest.

Implications:

Focus on High-Demand Products:

- Classic Cars and Vintage Cars represent high-demand categories, suggesting potential for focused marketing and inventory investment.

Review Low-Demand Products:

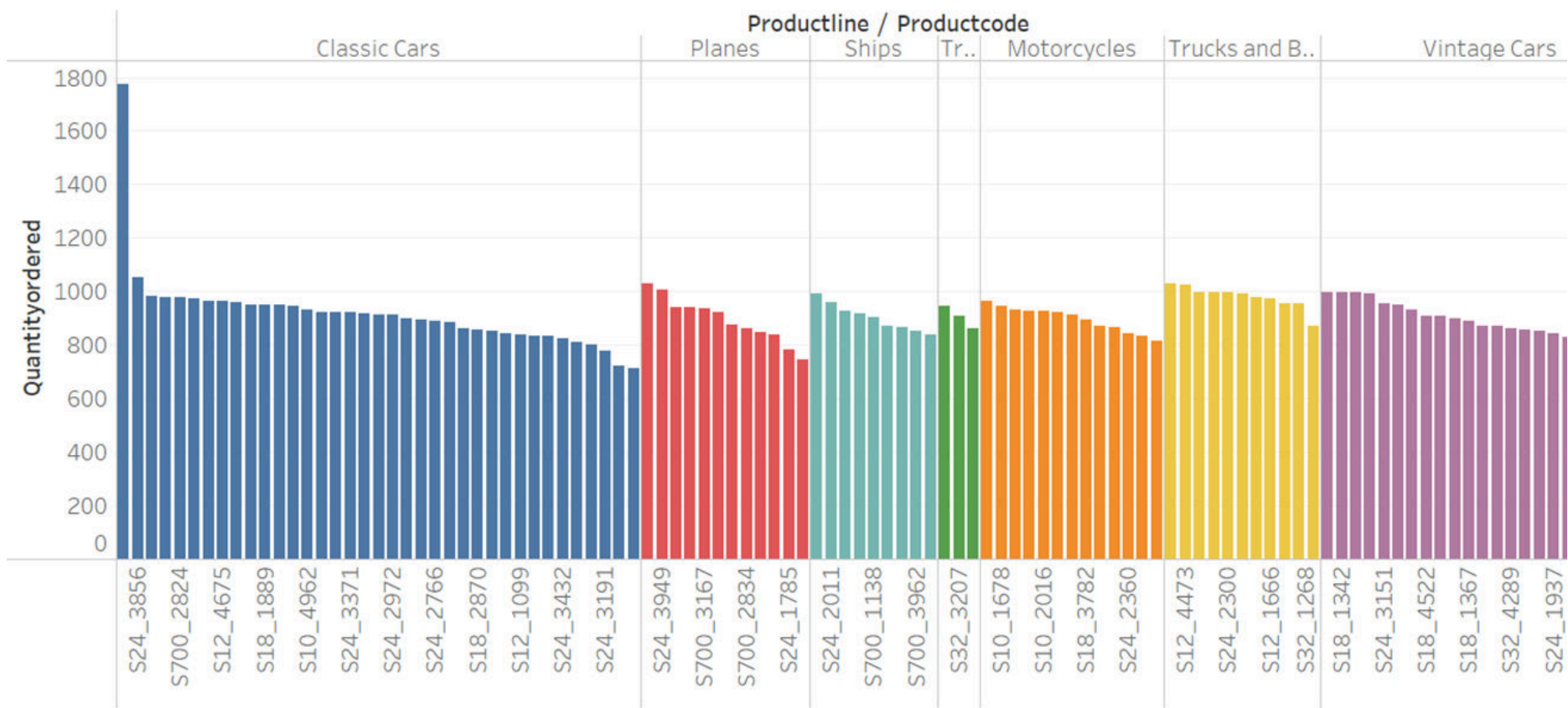
- Trains and Ships could be further analyzed to understand market fit and explore ways to boost sales or optimize inventory.

Part1

Product Performance

4(b). How does product performance vary based on product codes?

Analyzing Product Performance by Product Code



Sum of Quantityordered for each Productcode broken down by Productline. Color shows details about Productline.

Interpretation:

Overview:

This chart breaks down the performance of each product within various product lines based on the quantity ordered.

Key Findings:

- **Highest Quantity Ordered:** The product code S18_323 from the Classic Cars product line stands out with the highest quantity ordered, totaling 1,774 units.
- **Product Distribution:** Quantities ordered vary across product lines, with Classic Cars generally having higher order volumes compared to other categories.

Implications:

- **High-Demand Products:** Specific products like S18_323 in Classic Cars are popular among customers, suggesting a strategic focus on these high-performing items.
- **Potential for Inventory Optimization:** Insights from this analysis can guide inventory management by emphasizing the stocking of high-demand products and reviewing slower-moving items in other product lines.

Part2

Inventory Management

1(2).How can analyzing ordered quantities help in optimizing inventory levels over months or quarters?

Interpretation:

Overview:

This chart breaks down the performance of each product within various product lines based on the quantity ordered.

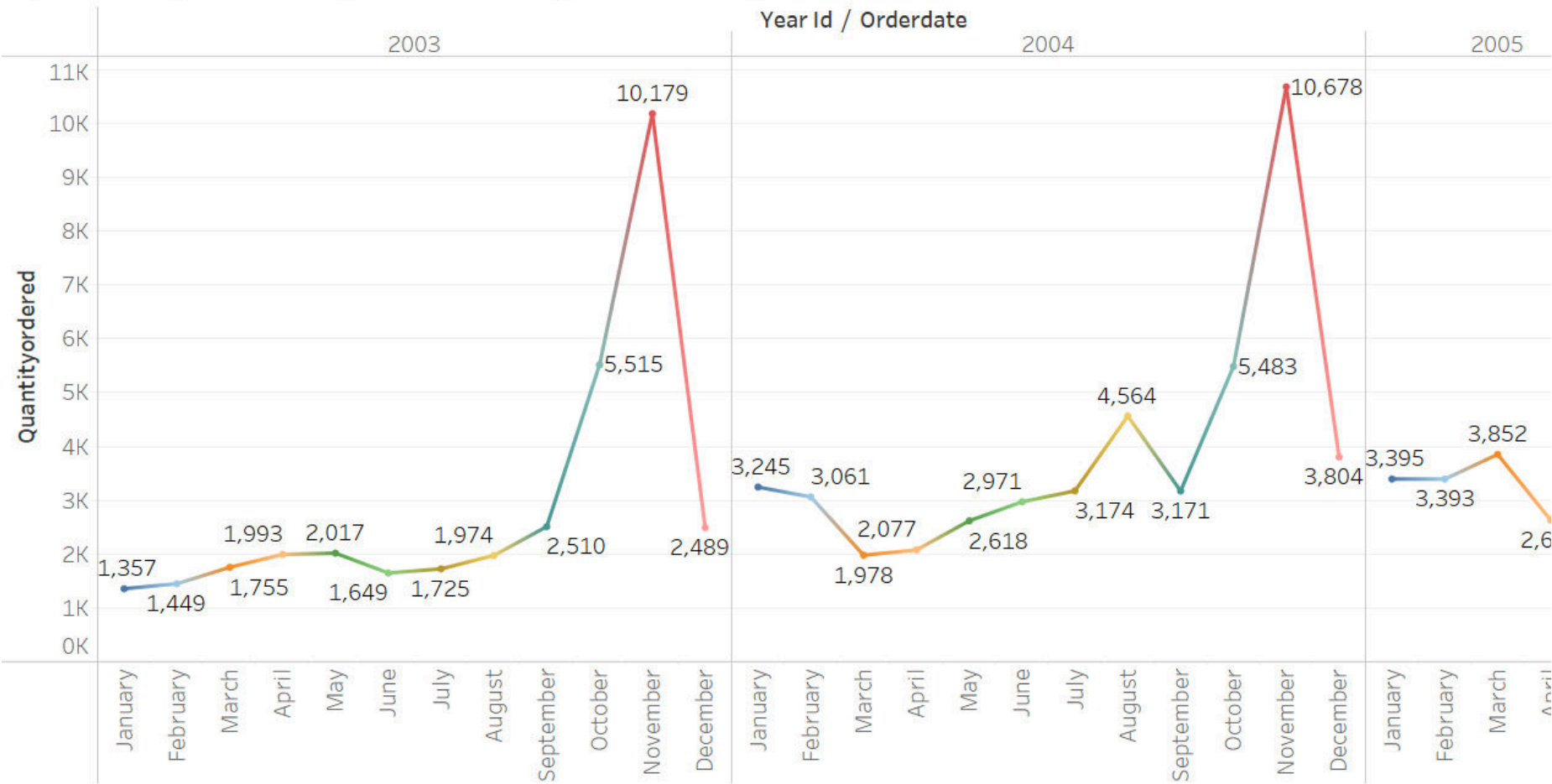
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Optimizing Inventory Levels Using Ordered Quantities Over Time.



The trend of sum of Quantityordered for Orderdate Month broken down by Year Id. Color shows details about Orderdate Month. The marks are labeled with the sum of Quantityordered.

Part2

Order Fulfilment Analysis

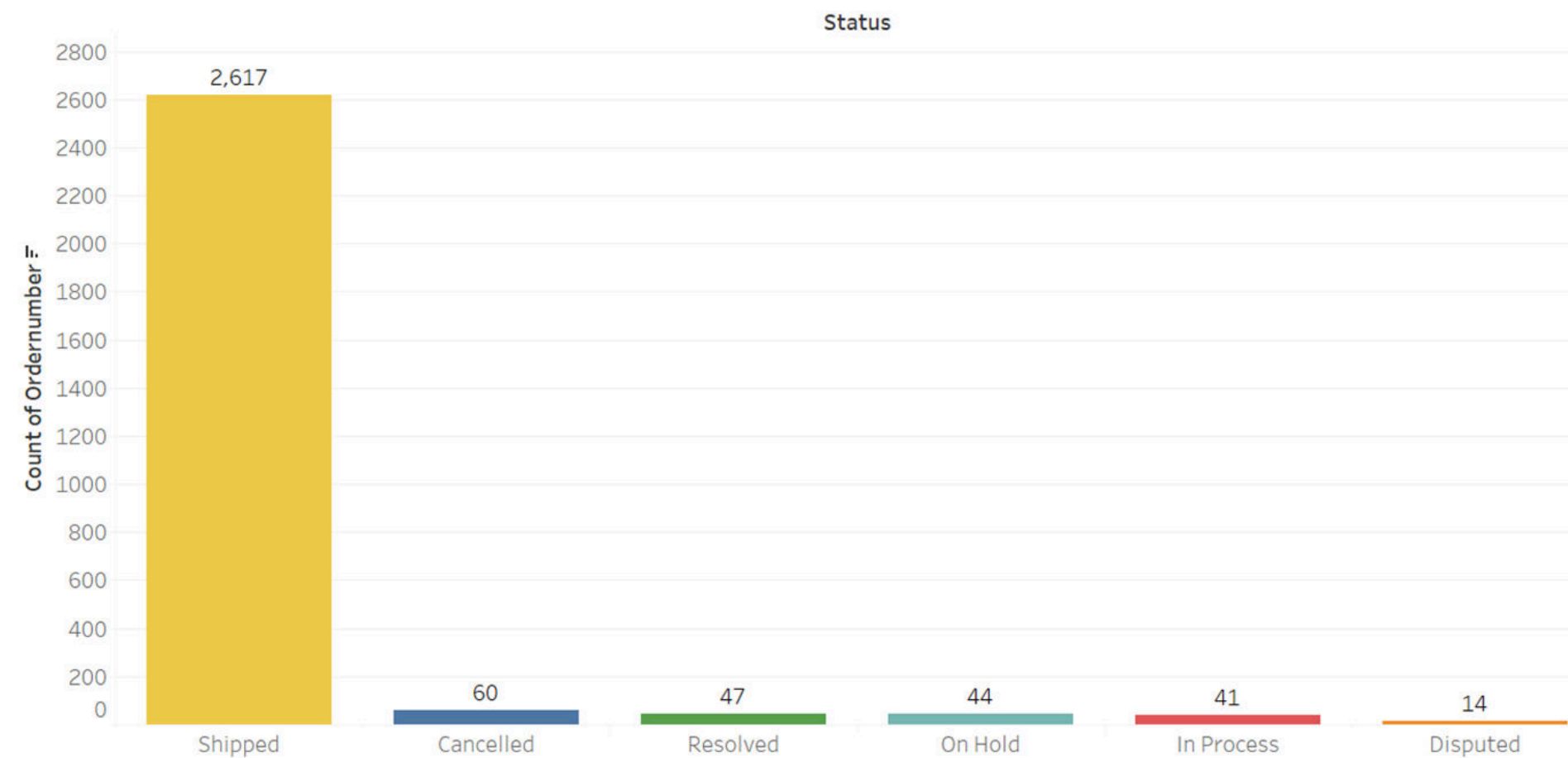
2(1). What is the distribution of order statuses (e.g., Shipped, Pending)?

Interpretation:

Key Insights:

- **Shipped orders dominate:** The majority of orders (2617) have been successfully shipped, indicating efficient order fulfillment.
- **Low Cancellation and Dispute Rates:** The relatively low number of canceled (60) and disputed (14) orders suggests a high level of customer satisfaction and minimal issues during the order process.
- **In-Process and On-Hold Orders:** A moderate number of orders are still in process (41) or on hold (44), indicating ongoing activity and potential delays.
- **Resolved Issues:** A small number of orders (47) have been resolved, suggesting effective handling of customer inquiries and complaints.

Distribution of Order Statuses



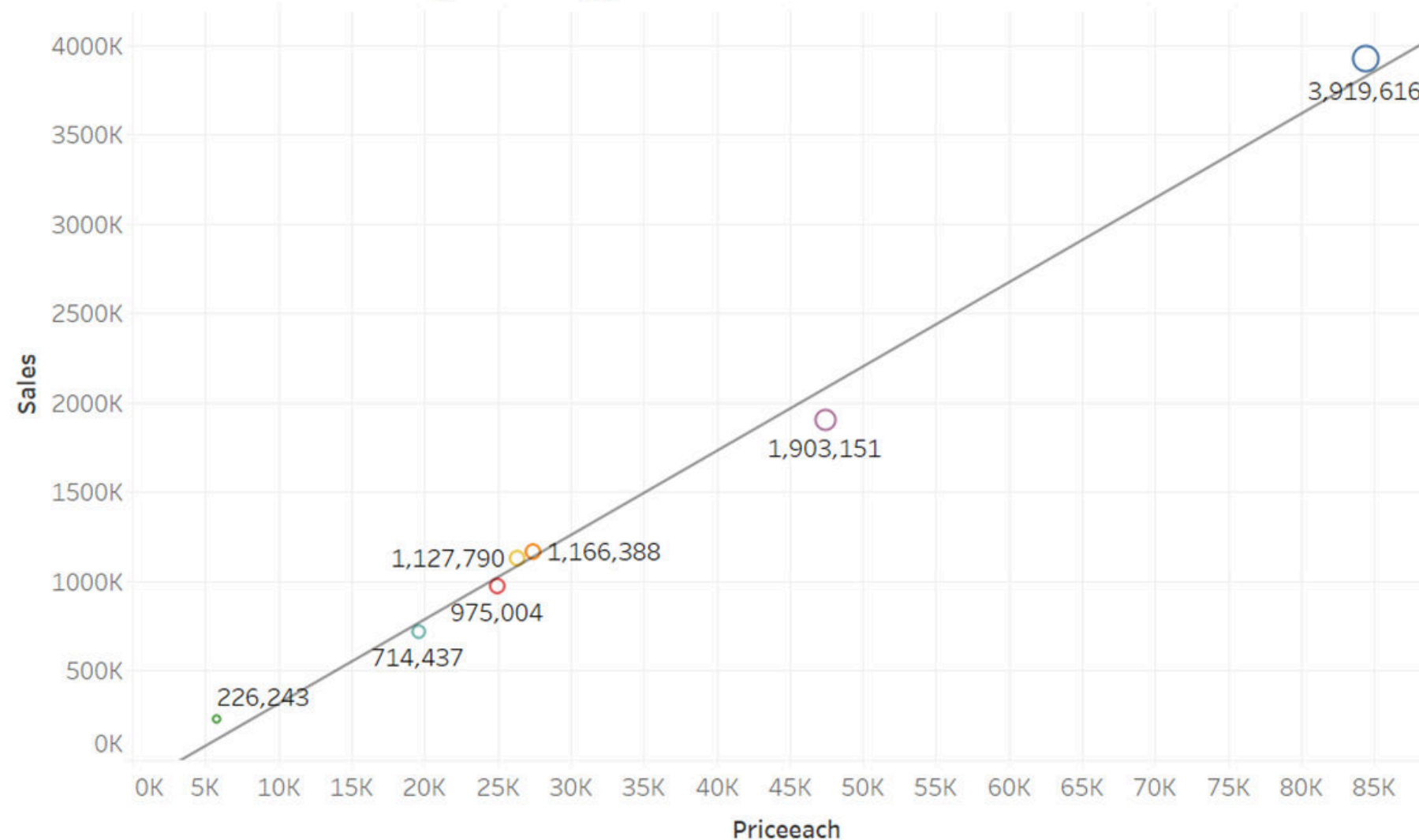
Count of Ordernumber for each Status. Color shows details about Status. The marks are labeled by count of Ordernumber.

Part2

Pricing Strategy

4(e).Is there any relation between pricing strategy and sale across all products?

Relation Between Pricing Strategy and Sales Across All Products.



Sum of Priceeach vs. sum of Sales. Color shows details about Productline. Size shows sum of Quantityordered. The marks are labeled by sum of Sales.

Interpretation:

Key Insights:

- **Positive Correlation:** The chart shows a positive correlation between price and sales. This suggests that as the price of a product increases, so does the total sales generated.
- **Product Line Variation:** Different product lines exhibit varying levels of this correlation. While some product lines (like Classic Cars) show a strong positive correlation, others may have a weaker or even negative relationship.
- **Quantity Ordered:** The size of the bubbles represents the quantity ordered for each product line at a particular price point. Larger bubbles indicate higher sales volumes.
- **Price Sensitivity:** The slope of the trend line for each product line can be interpreted as its price sensitivity. A steeper slope indicates higher price sensitivity, meaning that a small change in price can significantly impact sales.

Conclusion:

Key Findings:

- **Sales Trends:** There is a clear seasonal pattern in sales, with peak sales occurring in November and December. This suggests that holiday seasons and year-end promotions significantly influence sales.
- **Product Performance:** Classic cars consistently dominate sales, followed by motorcycles and planes. However, other product lines like ships, trains, trucks, and buses also contribute to overall sales.
- **Pricing Strategy:** There is a positive correlation between price and sales, indicating that higher-priced products tend to generate higher sales. However, this relationship varies across different product lines.
- **Order Fulfillment:** The majority of orders are successfully shipped, indicating efficient order fulfillment processes.
- **Customer Satisfaction:** Low cancellation and dispute rates suggest a high level of customer satisfaction.

Recommendations:

- **Leverage Seasonal Trends:** Capitalize on the peak sales season in November and December by implementing targeted marketing campaigns and promotions.
- **Optimize Product Mix:** Continue to focus on popular product lines like classic cars while also exploring opportunities to boost sales of other product lines.
- **Fine-tune Pricing Strategy:** Conduct a detailed analysis of pricing sensitivity for each product line to optimize pricing strategies and maximize revenue.
- **Enhance Order Fulfillment:** Continuously monitor and improve order fulfillment processes to ensure timely and accurate delivery.
- **Prioritize Customer Satisfaction:** Implement effective customer service strategies to address customer inquiries and resolve issues promptly.

Thank You.