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LAB EXERCISE 2 - REPORT

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Introduction

This report presents an analysis of our sales data from 2016 to 2018, focusing on the sales staff, customer loyalty, store sales, category sales, and brand sales. The report identifies the main trends, issues, and opportunities for improvement in each area, and provides recommendations to enhance the sales performance of the company. The report also highlights the data integrity issue of null values for some sales staff and suggests ways to address it.

Data Discoveries & Analysis

Dashboard

Geographic Distribution of Customer Base

This visualization displays the geographical distribution of TwoWheels customer. Each location is represented on a map, with the circle size indicating the density of customers in that area. It offers insights into where the majority of customers are located, helping identify key regions for targeted marketing and engagement strategies.

Trend: The customer base is geographically diverse, spread across the United States. The majority of the customers are located in New York, with fewer customers in Texas and California.

Issue: The concentration of customers in New York could limit the company's reach and market share in Texas and California.

Opportunity: The company can expand its customer base in Texas and California by researching and marketing products that are appropriate for these areas, considering local preferences and needs. Meanwhile, the company can double down on products that are popular in New York, such as road bikes. This could help the company tap into new markets, cater to existing ones more effectively, and increase sales.

Annual Sales Comparison Across Stores

This visualization provides a comprehensive view of annual sales by showcasing the distribution across different stores. Each pie chart represents a store, and the size of each slice corresponds to the percentage of total annual sales contributed by that specific store. It allows for a quick comparison of sales contributions from each store, aiding in strategic decision-making related to store performance and resource allocation.

Trend: Store sales are increasing steadily. However, the sales data from Q3 and Q4 of 2018 is incomplete, which may affect the accuracy of the analysis and conclusions drawn in this report.

Issue: The incomplete sales data from 2018 could provide a skewed picture of the sales performance.

Opportunity: The company can increase store sales by enhancing customer service and addressing customer complaints promptly, and by adapting to the changing customer needs and expectations.

Annual Sales Trend by Category

This visualization depicts the annual sales trends for TwoWheels' different product categories using line charts. Each line on the chart represents a product category, and the x-axis indicates the progression of time throughout the year. The y-axis measures the sales volume. This visualization is valuable for identifying trends and patterns in category-specific sales over the course of the year. It enables stakeholders to recognize growth or decline trends in each category, assisting in strategic planning, inventory management, and marketing efforts.

Trend: Category sales are increasing especially for the new category electric bikes and road bikes but decreasing for cyclocross bikes. This could be due to changing customer preferences and the rise in popularity of electric and road bikes.

Issue: The decrease in sales for cyclocross bikes could affect the overall category sales.

Opportunity: The company can leverage the increase in category sales by focusing more on these categories and stocking up products that are in high demand, and by diversifying its product portfolio and offering more variety and options to customers.

Annual Sales Breakdown by Brand

This visualization presents an overview of TwoWheels' annual sales breakdown by brand. Each bar represents a brand, and the height of the bar reflects the sales volume associated with that brand. It facilitates a comparison of sales performance among different brands, helping to identify top-performing brands and areas for potential brand-specific marketing strategies or product improvements.

Trend: Brand sales have seen a decreasing trend in 2017 and 2018. However, the sales data from 2018 is incomplete, which may affect the accuracy of the analysis and conclusions drawn in this report.

Issue: The decrease in brand sales could be due to a loss of brand reputation, or a lack of brand differentiation or innovation.

Opportunity: The company can boost brand sales by improving brand awareness and recognition, and by creating a unique brand identity and value proposition that distinguishes it from competitors.

Scorecard

Sales Staff Performance (2 top visualizations)

The top left bar chart provides a visual representation of the sales performance of individual staff members. Each bar represents a staff member, and the height of the bar corresponds to their total sales. This visualization allows for a quick comparison of sales achievements among staff, assisting in recognizing high-performing individuals and areas for improvement.

The top right bar chart displays the total sales, in dollars, generated by the sales staff for a selected brand. Each bar represents a staff member, and the length of the bar indicates the monetary value of sales attributed to the chosen brand. It offers insights into the effectiveness of staff in promoting and selling products from a specific brand, aiding in brand-specific performance evaluation and targeted training.

Trend: The data shows a variation in sales staff performance across all brands. Certain staff members have higher sales, indicating a trend of superior performance. The overall sales staff performance is good.

Issue: The variation in sales staff performance could affect the overall sales performance of the company and create a gap between the best and the worst performers.

Opportunity: The company can improve the sales performance of all staff members by providing comprehensive sales training and rewarding the best performers.

Customer Loyalty and Repeat Purchase Behavior (2 bottom visualizations)

The bottom right table provides the number of repeat order behavior of customers for a selected brand. The table assists in identifying patterns and trends related to customer loyalty and repeat purchases for the chosen brand. It is a valuable tool for strategizing customer retention efforts and enhancing brand-specific marketing campaigns. The bottom left bar chart represents the overview of each brand, the blue

chart represents the count of unique customers and the orange one represents the quantity of sold items in each brand.

Trend: There are a few customers with multiple orders, but the majority are one-time buyers. This could be due to the nature of the product being bikes, which are not frequently purchased items.

Issue: The majority of customers being one-time buyers could affect the company's revenue and growth.

Opportunity: The company can enhance customer loyalty and encourage repeat purchases by maintaining high product quality and customer service standards, and offering incentives such as discounts, loyalty programs, or referrals.

Data Integrity Issue

Issue: There are null values for some sales staff, indicating a problem with the data integrity. Additionally, the sales data from Q3 and Q4 of 2018 is incomplete.

Cause: The presence of null values could be due to incomplete data or data entry errors. The incomplete sales data from Q3 and Q4 of 2018 could be due to data collection or reporting issues. Recommendation: The company can address this issue by implementing stricter data validation checks and ensuring complete data entry. For the incomplete sales data from Q3 and Q4 of 2018, the company should investigate the cause of the issue and take corrective actions to ensure complete and accurate data collection and reporting in the future.

Conclusion

The analysis highlights key areas for improvement and growth. Tailored training and incentives can uplift sales staff performance, while strategies to nurture customer loyalty are pivotal for sustained revenue. Though store sales show promise, incomplete data underscores the need for robust data collection. Adapting to changing category trends and revitalizing brand sales are essential for market competitiveness. Rectifying data integrity issues through stringent validation measures is crucial for reliable future analysis. Overall, implementing the outlined recommendations positions the company for enhanced performance and market resilience.