

Improving Sales Opportunities for Next Quarter

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How can the VP of sales improve sales opportunities by next quarter?

Summary:

This report provides a comprehensive sales data analysis to identify opportunities for improving sales performance in the next quarter. Key findings include high-performing products, regions with the most sales, and monthly sales trends. Based on these insights, several actionable recommendations are provided to enhance overall sales performance.

Libraries:

- Pandas: To work with the Data.
 - Pyodbc: To connect the SQL server to Python.
 - Matplotlib: To plot the graphs.
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Data Collection and Preparation:

The data for this analysis was collected from the company's SQL server, including the following tables:

- proj_sales: Contains order details, including order number, line item, order date, delivery date, customer key, store key, product key, quantity, and currency code.
- proj_products: Contains product details, including product key, product name, unit cost in USD, and unit price in USD.
- proj_exchange_rates: Contains exchange rate details, including date, currency, and exchange rate.
- proj_stores: Contains store details, including store key, country, and state.

The data was merged to include relevant details for analysis, such as product prices, sales quantities, and profit calculations.

Data Analysis:

Sales by Product:

Top 10 Products by Sales Volume and Profit:

1. WWI Desktop PC2.33 X2330 Black
2. WWI Desktop PC1.80 E1800 White
3. Adventure Works Desktop PC1.60 ED160 Black
4. Adventure Works Desktop PC2.30 MD230 White
5. Adventure Works Desktop PC2.30 MD230 Black
6. WWI Desktop PC1.60 ED160 Black
7. WWI Desktop PC1.60 E1600 Black
8. WWI Desktop PC1.60 E1600 Silver
9. Adventure Works Desktop PC1.60 ED160 White
10. WWI Desktop PC1.60 E1600 Red

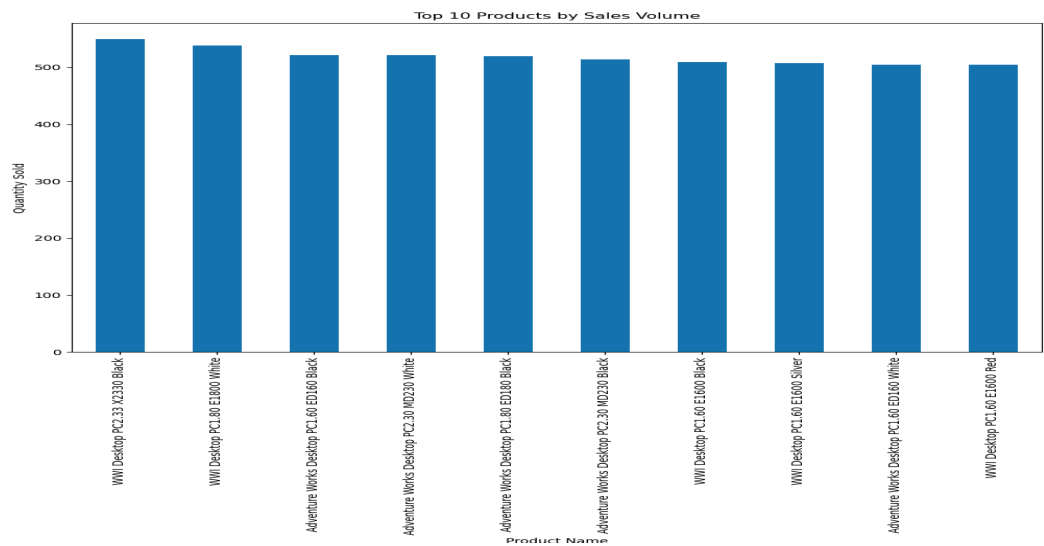
Sales by Region:

Top 10 Regions by Sales Volume and Profit:

1. Online
 2. Northwest Territories
 3. Nevada
 4. Kansas
 5. South Carolina
 6. Nebraska
 7. Oregon
 8. Connecticut
 9. Arkansas
 10. West Virginia
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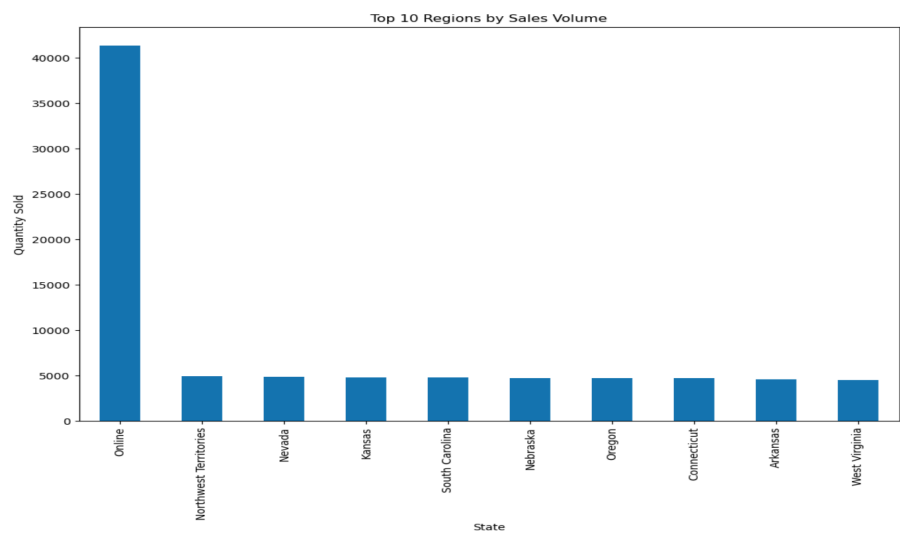
Visualizations:

1. Top 10 Products by Sales Volume:



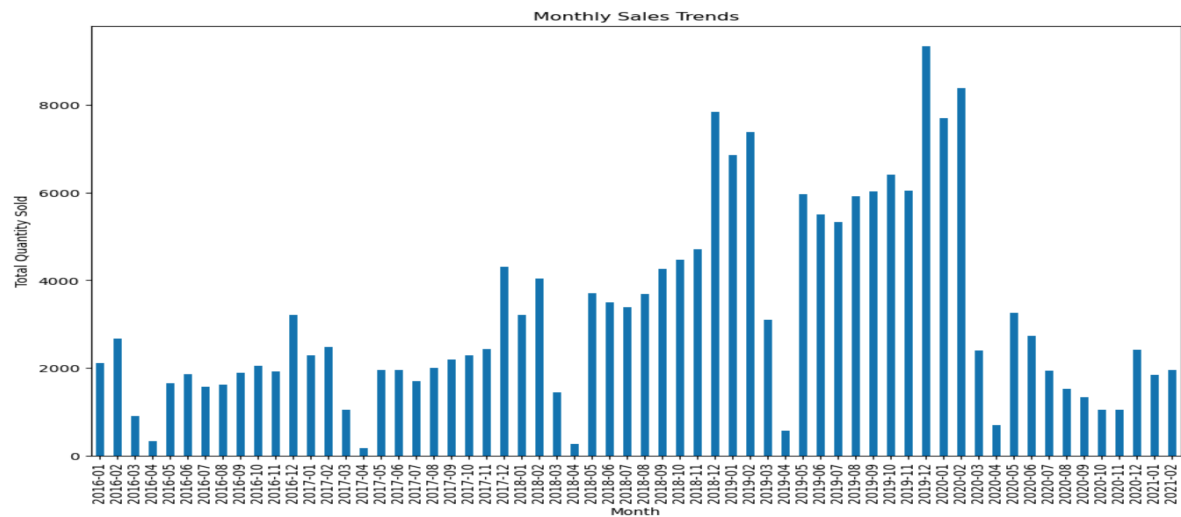
The graph shows the top ten products in terms of the total quantity sold. These top-selling goods reflect significant market demand. The product "WWI Desktop PC2.33 X2330 Black" leads in sales, making it an important item in the company's inventory and marketing strategy.

2. Top 10 Regions by Sales Volume:



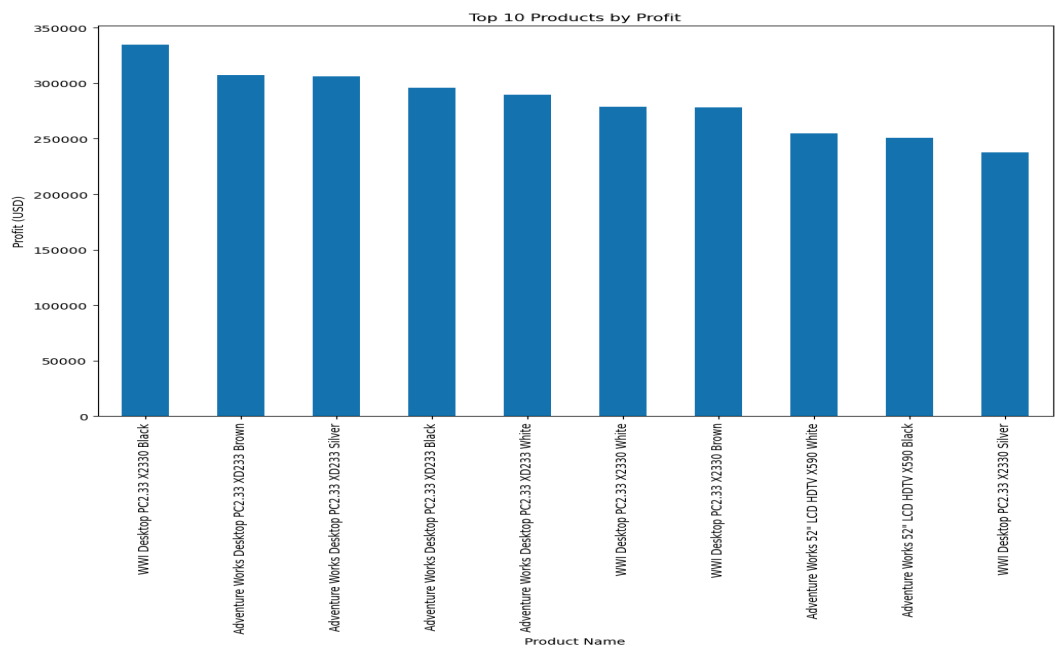
This chart highlights the regions with the highest sales volume. Online sales dominate, followed by sales in various US states. The significant online sales volume suggests a robust e-commerce presence. Focusing on online strategies can further enhance sales performance.

3. Monthly Sales Trends:



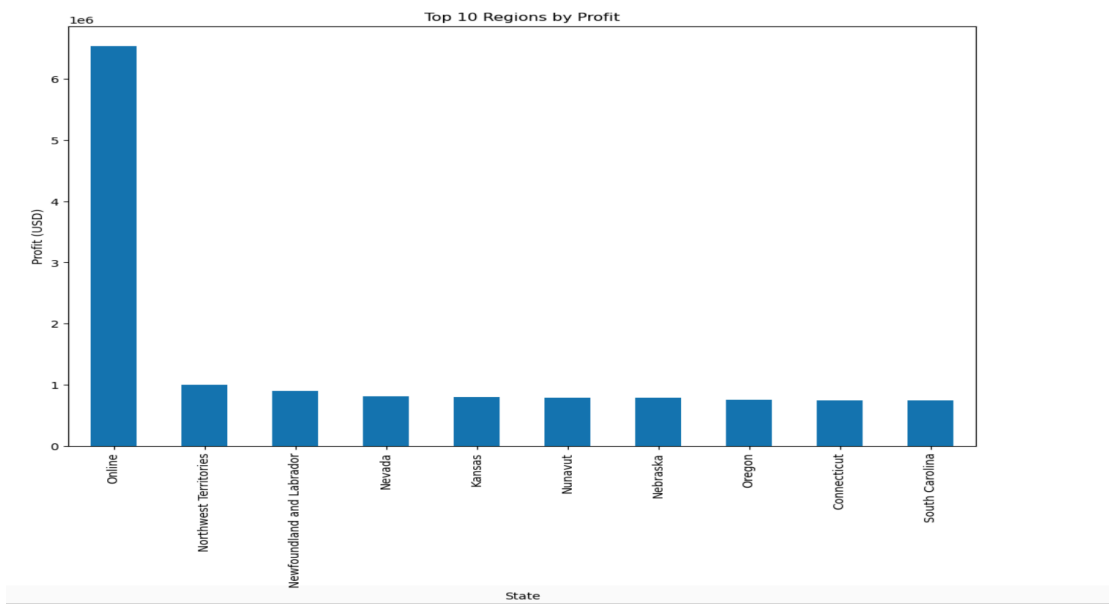
The bar chart illustrates the monthly sales trends over the analysis period. The monthly sales trends show fluctuations in sales volume throughout the year. Peaks in sales are observed during specific months, indicating potential seasonal trends. For instance, higher sales in the months leading up to the holiday season suggest increased consumer spending during this period. Understanding these trends helps in planning inventory and marketing campaigns to capitalize on peak sales periods.

4. Top 10 Products by Profit:



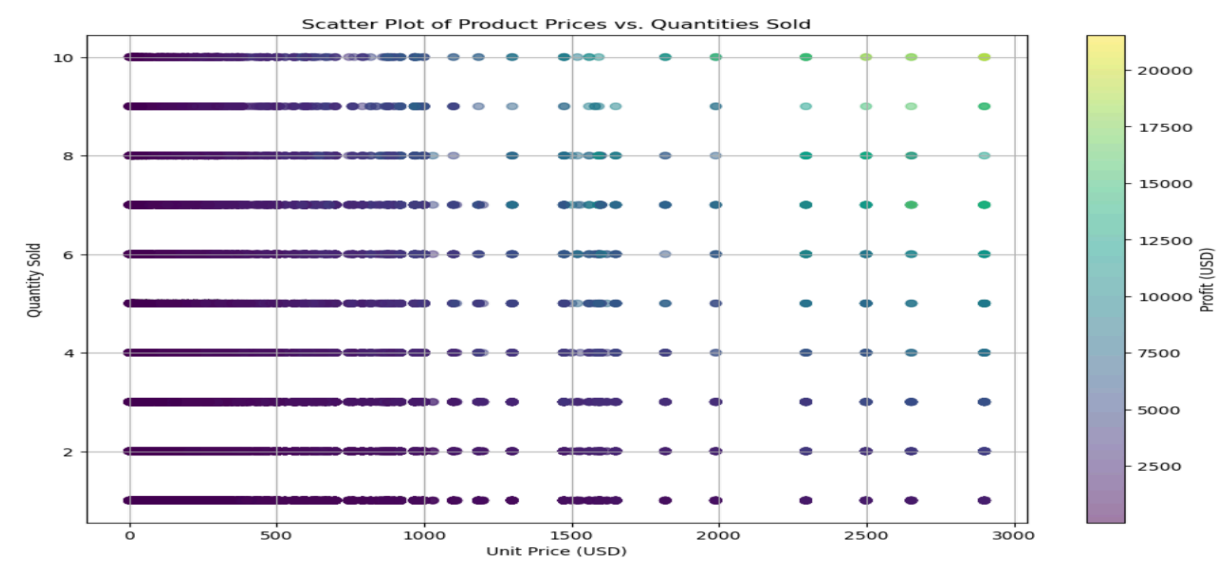
The bar chart displays the top 10 products by profit, showing which products are most profitable.

5. Top 10 Regions by Profit:



This chart shows the top 10 regions by profit, indicating where the company makes the most money. The profit analysis highlights the products and regions contributing the most to the company's bottom line. The "WWI Desktop PC2.33 X2330 Black" is the most profitable product, emphasizing its importance not just in sales volume but also in profitability. Online sales again stand out as the most profitable region, reinforcing the need to prioritize e-commerce strategies.

6. Scatter Plot of Product Prices vs. Quantities Sold:



The scatter plot illustrates the relationship between product prices (in USD) and quantities sold, with color, indicating the profit (in USD). The majority of the products are sold at lower price points, with varying quantities, and higher-priced products tend to generate higher profits. This graph helps identify pricing strategies that maximize both sales volume and profit.

Opportunities:

1. Focus on High-Performing Products:

- **Inventory Management:** Increase inventory for the best-selling and most profitable products to minimize stockouts and match consumer demand. For example, maintain a consistent supply of "WWI Desktop PC2.33 X2330 Black."
- **Marketing:** Increase marketing resources to promote these high-performing products. To attract more clients, use advertising campaigns that highlight their qualities and advantages.

2. Improve Online Sales Strategies:

- **E-Commerce Enhancement:** Given the growing popularity of online sales, invest in improving the e-commerce platform. Improve the website's performance, user experience, and mobile compatibility to increase conversions.
- **Digital Marketing:** Increase digital marketing initiatives, such as social media advertising, email marketing, and search engine optimization (SEO), to generate more visitors to the online business.

3. Target Regional Markets:

- **Localized campaigns:** Create suitable marketing initiatives for high-performing locations like the Northwest Territories and Nevada. Customize promotions to reflect regional preferences and cultural specifics.
- **Regional Promotions:** Offer unique promotions, discounts, and events in certain areas to drive sales even more.

4. Leverage Seasonal Trends:

- **Seasonal Promotions:** Use data from monthly sales trends to develop seasonal specials. For example, develop Christmas sales efforts far in advance to capitalize on peak consumer buying periods.
- **Inventory Planning:** Adjust inventory levels based on expected seasonal demand to guarantee appropriate stock during peak periods and avoid excess inventory during off-peak times.

5. Pricing Strategy:

- **Identify High-Volume Low-Price Products:** Products with lower price points that show high sales volumes are crucial. Maintaining or slightly increasing prices in this range can still sustain high sales volumes while slightly improving margins.

- **Leverage High-Price High-Profit Products:** The plot indicates that higher-priced products generate significant profits. These products should be strategically marketed to highlight their value proposition to justify their price, potentially increasing sales volumes.
 - **Dynamic Pricing Models:** Use dynamic pricing strategies for mid-priced items. To optimize profit margins, adjust pricing in response to demand, seasonality, and competition.
 - **Discounts and Offers:** Implement strategic discounts and bundle offers to increase the average order value and clear slow-moving inventory.
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Conclusion:

By focusing on high-performing products and regions, leveraging seasonal sales trends, and optimizing pricing strategies, the company can significantly improve its sales performance in the next quarter. The detailed analysis and visualizations provided in this report offer actionable insights to drive strategic decisions and enhance overall profitability.