

WALMART SALES PROJECT

Project Purpose

The Walmart Sales data visualization project aims to provide a clear understanding of sales performance across different branches and product lines. By analyzing the data, the team will identify trends, customer preferences, and sales patterns to optimize sales strategies. The visualization will enable stakeholders to make data-driven decisions that improve branch performance, product positioning, and overall customer satisfaction.

Key Objectives

1. Identify top-performing branches and products.
2. Analyze sales trends across branches and product lines.
3. Understand customer behavior and preferences.
4. Assess the effectiveness of pricing and sales strategies.
5. Provide actionable insights for optimizing future sales strategies.

KPIs (Key Performance Indicators)

1. **Total Sales per Branch:** Measure the total revenue generated by each branch.
2. **Top Product Lines:** Identify product lines that generate the highest sales.
3. **Customer Demographics:** Segment customers by gender and customer type to understand purchase patterns.
4. **Sales Quantity by Product Line:** Track the number of units sold for each product line.
5. **Average Unit Price:** Compare the average selling price across branches and product lines.
6. **Gross Margin Percentage:** Evaluate profitability across different branches and product lines.
7. **Sales by Payment Method:** Analyze the most popular payment methods and their correlation with sales.
8. **Customer Rating:** Measure customer satisfaction by branch and product.
9. **Sales by Date and Time:** Identify peak sales periods across different locations.
10. **Total Sales After Tax:** Calculate sales figures after tax deductions.
11. **Cost of Goods Sold (COGS):** Measure the expenses directly associated with product sales.

Visualizations

1. **Branch Sales Performance** (Bar Chart):
 - Visualize total sales by branch to highlight top performers.
2. **Product Line Sales Trends** (Line Chart):
 - Display sales trends for different product lines over time to identify growing or declining categories.
3. **Sales by Customer Demographics** (Pie Chart or Stacked Bar):
 - Compare customer types and genders to understand purchasing preferences.
4. **Average Unit Price and Quantity Sold** (Heat Map):
 - Visualize the relationship between average unit price and quantity sold across product lines and branches.
5. **Profitability by Branch and Product Line** (Tree Map):
 - Represent the gross margin percentage for each branch and product line to identify high-profit areas.
6. **Sales by Payment Method** (Donut Chart):
 - Show the distribution of payment methods used by customers.
7. **Customer Satisfaction Rating** (Scatter Plot):
 - Analyze customer ratings across branches and product lines to gauge satisfaction.
8. **Sales by Date and Time** (Area Chart):
 - Track sales patterns across different days and times to identify peak sales periods.

Expected Outcomes

- **Optimized Sales Strategies:** Use insights to adjust product pricing, promotions, and customer engagement strategies.
- **Improved Branch Performance:** Tailor strategies for underperforming branches based on data-driven insights.
- **Enhanced Customer Experience:** Cater to customer preferences and behavior to improve sales and satisfaction.