Sales Analysis Dashboard

Objective:

The purpose of this project was to create an interactive and visually appealing Power BI dashboard to analyse and visualize sales data. The dashboard aims to provide insights into sales trends, product performance, and regional sales distribution, helping to inform strategic business decisions.

Data Source:

The sales data was sourced from an Excel file, including the following columns: Order ID, Product, Quantity Ordered, Price Each, Order Date, Purchase Address, Month, Sales, City, and Hour.

Tools Used:

Power BI: Used for data visualization and dashboard creation.
Excel: Used for initial data storage and preprocessing.
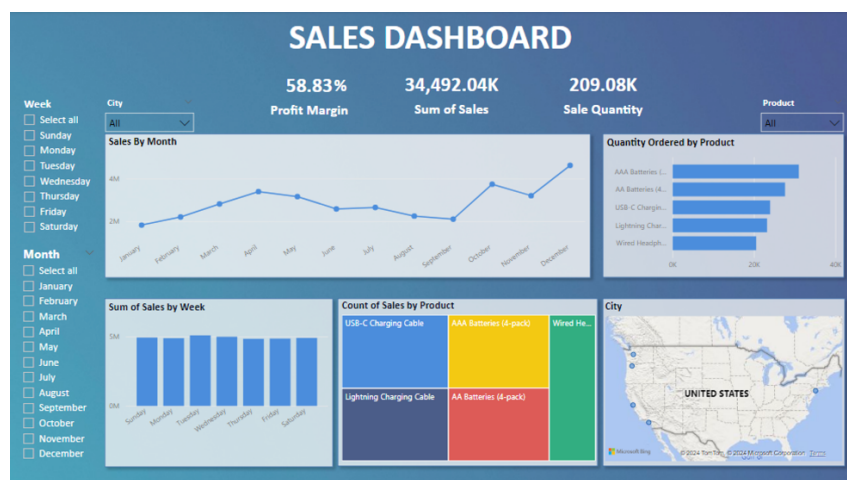
Dashboard Overview:

Key Metrics:

Profit Margin: 58.83%
Sum of Sales: 34,492.04K
Sale Quantity: 209.08K

Visualizations:

- **Sales By Month (Line Chart):**
  This chart displays the monthly sales trend over the year. It shows a significant increase in sales during December, indicating a seasonal peak.

- **Quantity Ordered by Product (Bar Chart):**
  This bar chart ranks the products by the quantity ordered. AAA Batteries (4-pack) are the most ordered product, followed by AA Batteries (4-pack) and USB-C Charging Cable.

- **Sum of Sales by Week (Bar Chart):**
  This chart breaks down the total sales by each day of the week, showing a consistent distribution of sales with a slight peak towards the end of the week.

- **Count of Sales by Product (Tree Map):**
  This tree map visualizes the count of sales by product. USB-C Charging Cable and AAA Batteries (4-pack) have the highest counts, indicating their popularity.

- **Sales Distribution by City (Map):**
  This map shows the geographic distribution of sales across various cities in the United States, highlighting key sales locations.

Interactive Features:
- **Week Filter:** Allows users to filter the data by specific days of the week to analyze daily sales trends.

- **Month Filter:** Enables selection of specific months to focus on sales data for periods

- **City Filter:** Allows filtering of sales data by city to provide localized insights.

- **Product Filter:** Users can filter the sales data by product to analyze the performance of individual products.

Insights and Analysis:
- **Overall Sales Performance:**
  The dashboard shows a total sales sum of 34,492.04K with a profit margin of 58.83%, indicating a healthy profitability.

- **Monthly Sales Trend:**
  December shows a significant increase in sales, likely due to holiday shopping, suggesting a strong seasonal impact on sales.

- **Product Performance:**
  The AAA Batteries (4-pack) and USB-C Charging Cable are top-selling products, indicating their high demand and popularity among customers.

- Sales by Day of the Week:
  Sales are relatively stable throughout the week with a slight increase towards the weekend, suggesting that customers are more likely to make purchases towards the end of the week.

- Geographic Distribution:
  Major cities like New York, San Francisco, and Dallas are key sales hubs, which can be targeted for future marketing and sales strategies.

Conclusion:

The Power BI dashboard effectively consolidates and visualizes the sales data, providing actionable insights into sales trends, product performance, and geographic distribution. These insights can be leveraged to optimize marketing strategies, inventory management, and overall business operations.

Future Recommendations:

- Expand Analysis: Include additional data such as customer demographics and sales channels to provide a more comprehensive analysis.

- Year-over-Year Comparison: Integrate historical data to analyse year-over-year sales performance and growth trends.

- Customer Feedback: Incorporate customer feedback and return rates to understand product satisfaction and areas for improvement.