

Interactive Sales Dashboard Report

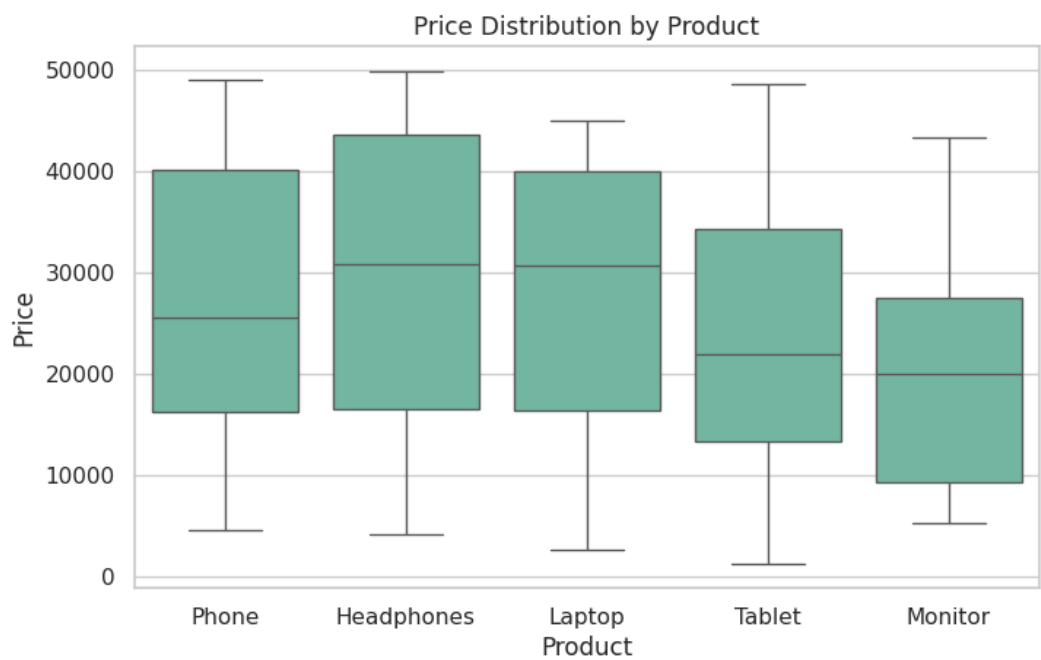
Project Description

This project presents an interactive and statistical sales dashboard built using Python data visualization libraries such as Seaborn, Matplotlib, and Plotly. The objective is to analyze sales performance, understand pricing distribution, identify regional trends, and uncover correlations between key numerical variables.

Setup Instructions

1. Install required libraries using **`pip install -r requirements.txt`**
2. Ensure the dataset file **`sales_data.csv`** is in the project directory
3. Run **`dashboard.ipynb`** or **`dashboard.py`** to generate visualizations
4. Review static plots and interactive charts for insights

Price Distribution by Product



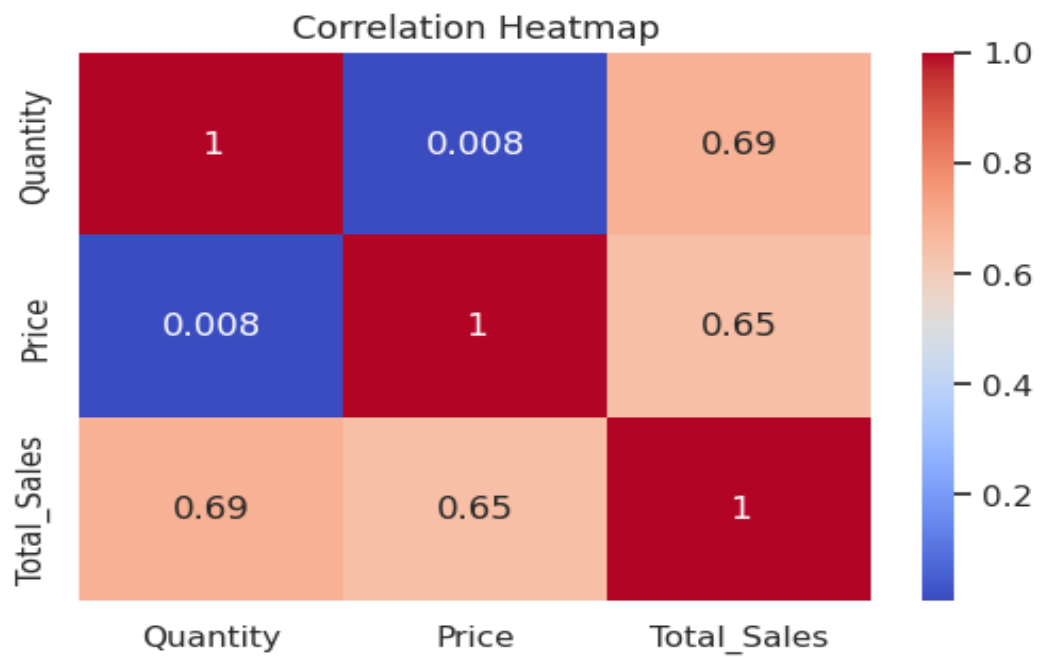
This box plot visualizes the price distribution across different products. It highlights median prices, variability, and potential outliers for each product category.

Total Sales Distribution by Region



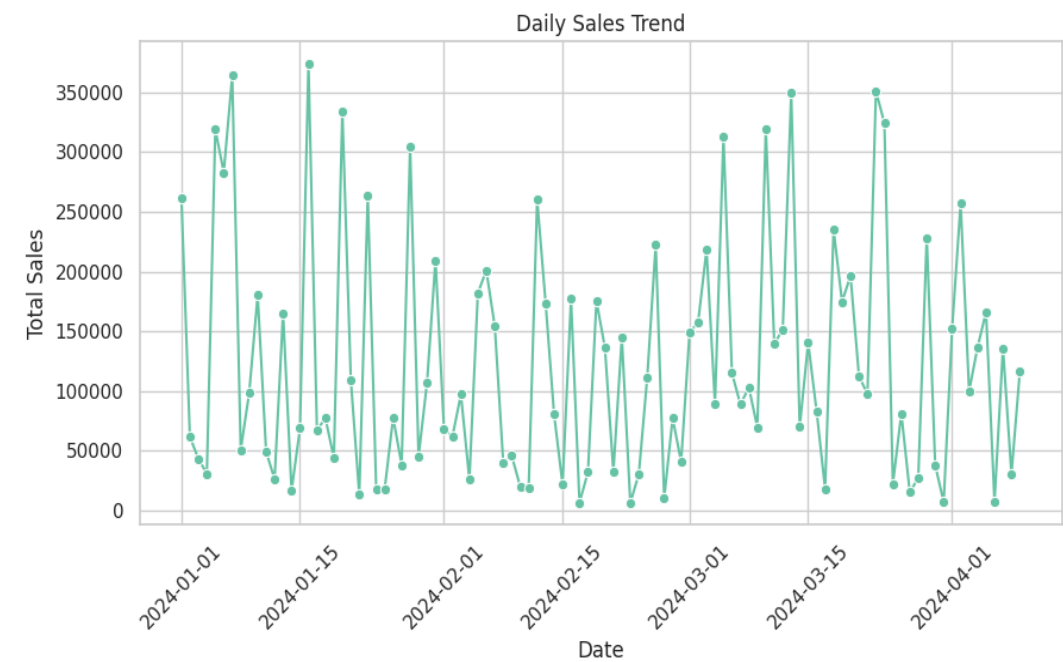
The violin plot illustrates how total sales vary across regions. It combines density distribution with statistical summaries, showing regional performance differences.

Correlation Heatmap



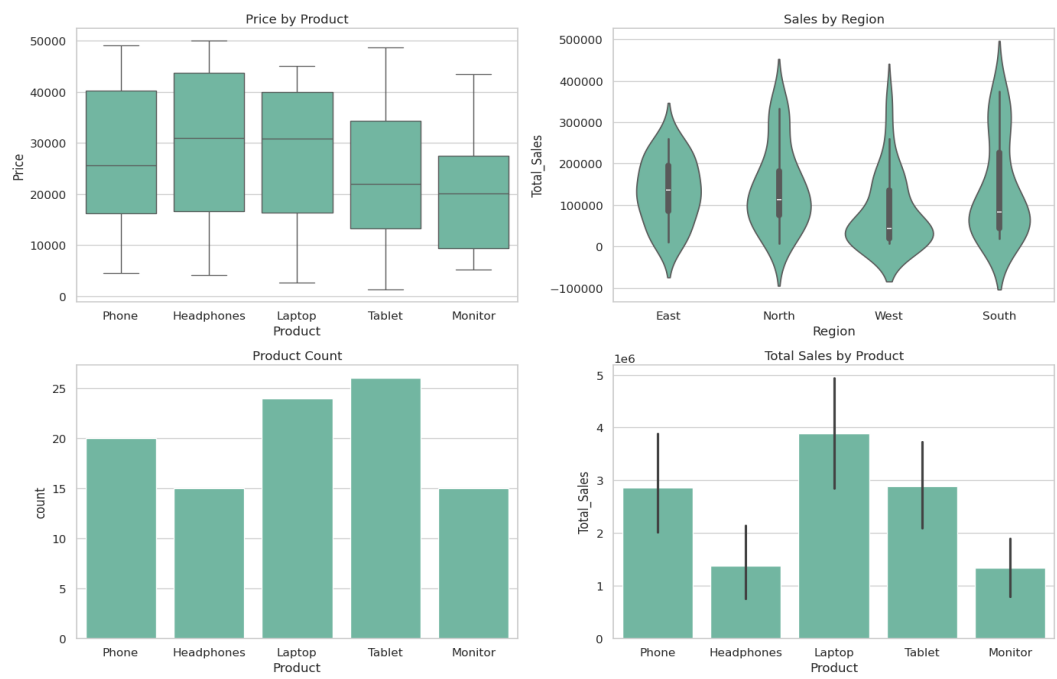
This heatmap displays correlations between Quantity, Price, and Total Sales. A strong positive correlation is observed between Quantity and Total Sales.

Daily Sales Trend



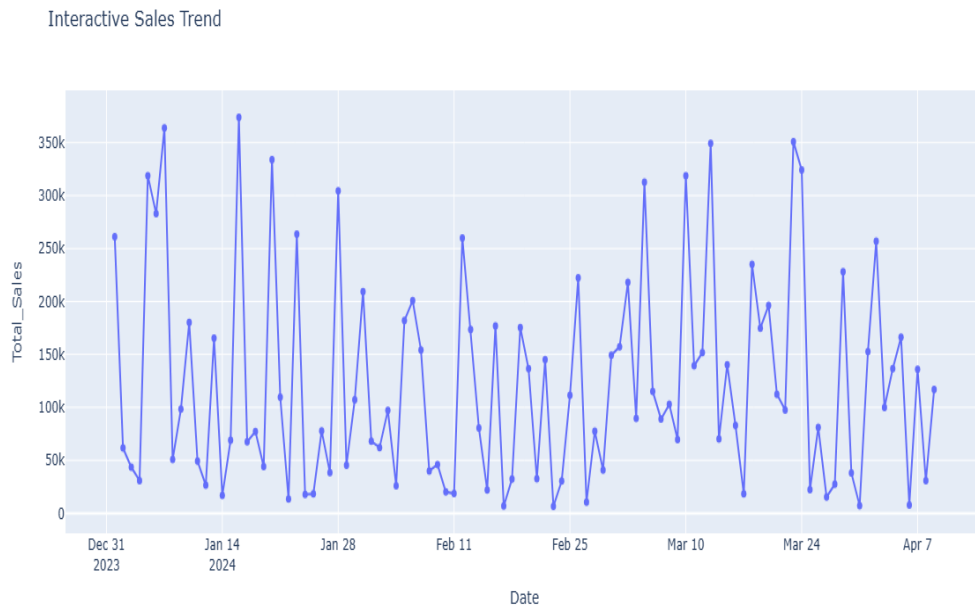
This line chart shows daily sales trends over time, helping identify spikes, drops, and overall sales movement patterns.

Multi-Plot Sales Dashboard



This combined dashboard includes multiple statistical plots for product pricing, regional sales, product count, and total sales by product for holistic analysis.

Interactive Sales Trend (Plotly)



An interactive line chart enabling hover-based exploration of sales values over time, enhancing user-driven analysis and insight discovery.