

## AIML Project Data Visualization:

Group-16

Domain- E-Commerce

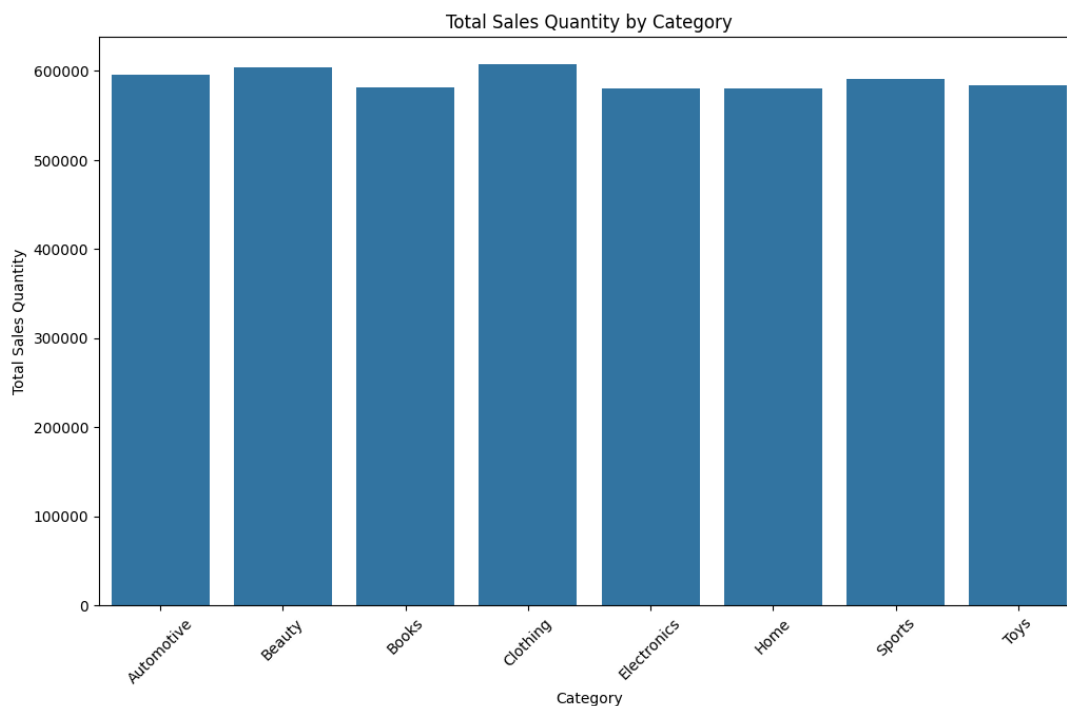
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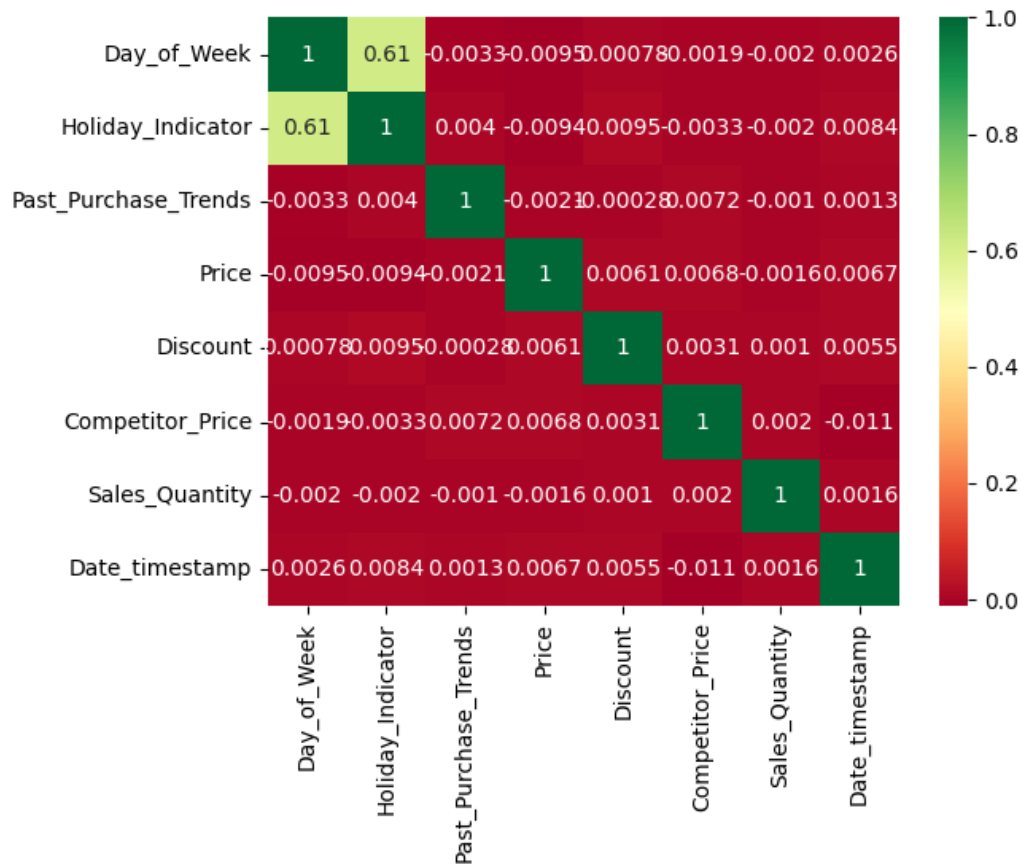
### Topic-Sales Forecasting of Products in E-commerce Websites

#### 1)Bar Graph



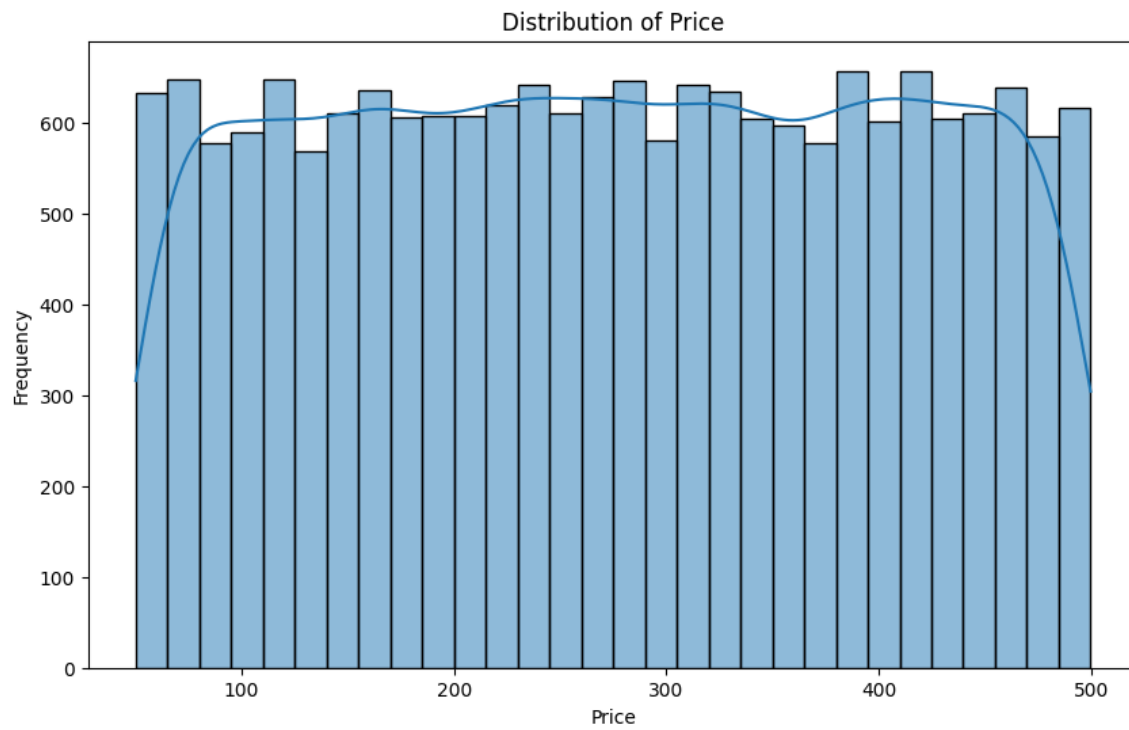
The bar graph shows how many products were sold in different categories like Automotive, Beauty, Books, Clothing, Electronics, Home, Sports, and Toys. The sales in all categories are almost the same, with only small differences. Clothing and Beauty sold a little more, while Books and Electronics sold a little less. This means demand is well balanced across all categories. No single category is much bigger than the others. This balance suggests that the company has a good mix of products and customers are buying from every category. Businesses can use this information to plan sales and stock without focusing too much on just one category. Overall, the graph shows steady and even sales across all product types.

## 2. Heatmap



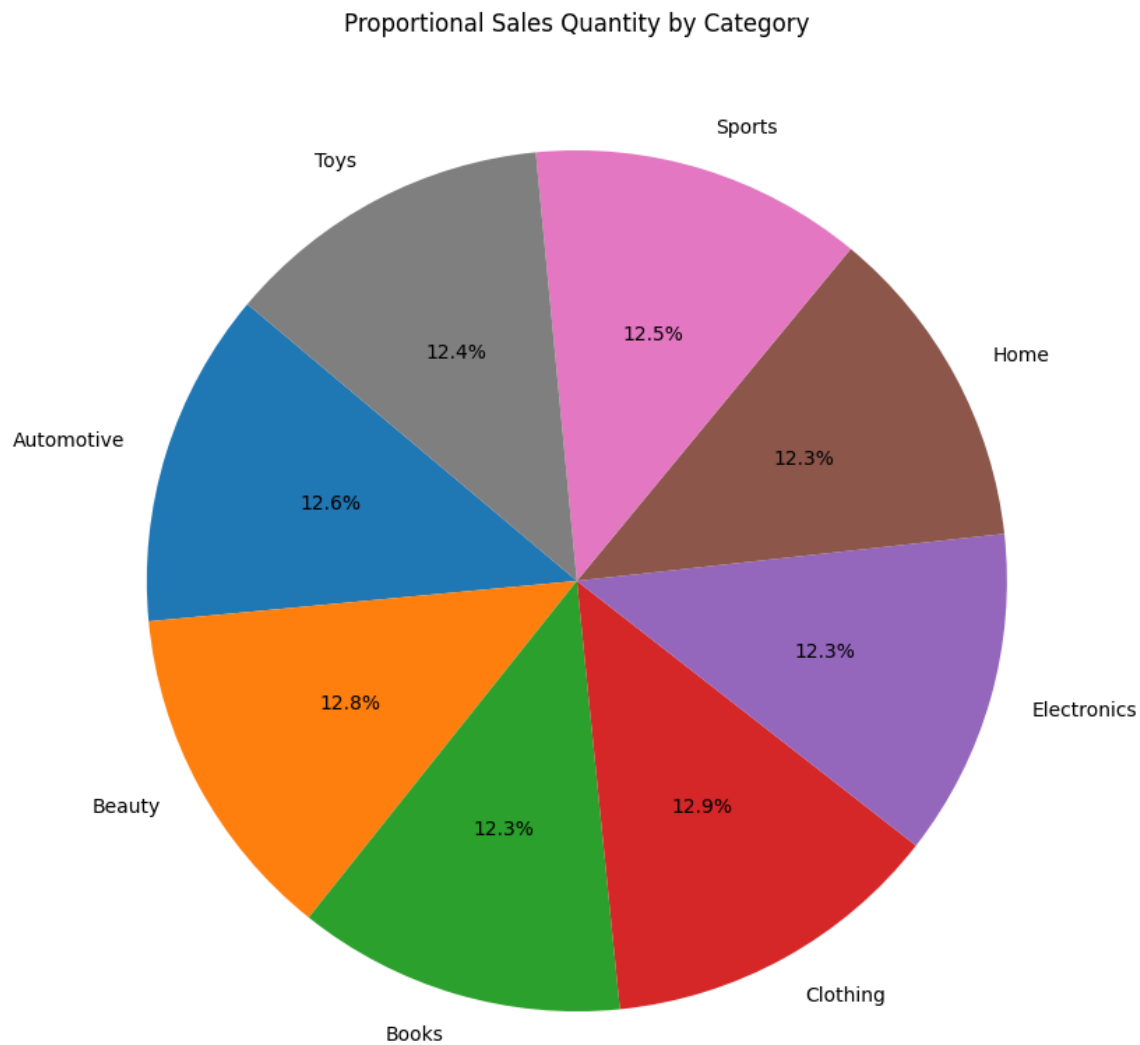
The heatmap shows the relationship between different numbers like day of the week, holiday, price, discount, competitor's price, and sales quantity. The strongest link is between "day of week" and "holiday," meaning sales are clearly affected by holidays. Other things like price, discount, and competitor price don't show much effect on sales. This means sales don't increase or decrease just because of small price changes. Instead, holidays and days of the week are more important for predicting sales.

### 3. Histogram



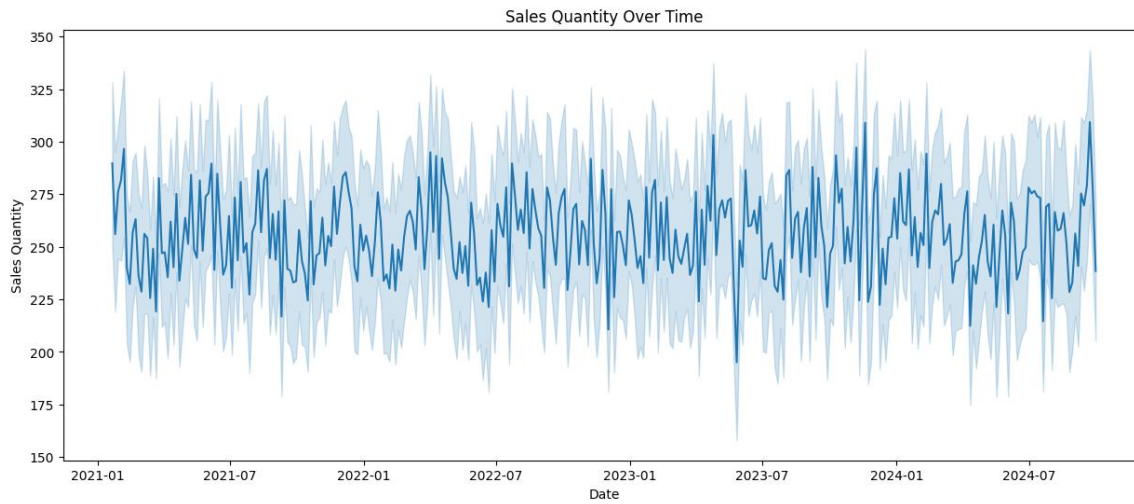
The histogram shows the spread of product prices. Prices range from around 50 to 500, and they are evenly spread out across this range. The shape of the graph shows that all prices are almost equally common. This is different from real-life markets, where cheaper or mid-range products usually sell more. In this dataset, the balance means we can study products of all prices equally. makes the data good for testing and comparing sales across both low and high price products.

#### 4. Pie Chart



The pie chart shows the share of sales in each category like Automotive, Beauty, Books, Clothing, Electronics, Home, Sports, and Toys. All categories have almost equal shares, about 12–13% each. Clothing and Beauty have slightly bigger shares, while Electronics and Home are slightly smaller. But overall, the chart shows balance. No single category dominates sales. This means customers buy evenly from all categories, and the company should keep stock balanced in each.

## 5. Time Series Plot



The time series plot shows how sales changed from 2021 to 2024. Sales go up and down around an average level of about 250. Sometimes sales go above 300 and sometimes below 200, but there is no clear long-term rise or fall. This means sales are stable but change a lot in the short term. The peaks may be because of holidays or events, while the drops may be normal low-demand times. Businesses should focus on handling these short-term ups and downs instead of expecting big long-term growth or fall.