Exploratory Data Analysis (EDA) Report

Dataset: Pizza Sales
Tools Used: Python, Pandas, Matplotlib, Seaborn

1. Objective

The objective of this task is to perform exploratory data analysis (EDA) on the pizza sales dataset to uncover insights, trends, and relationships in the data using statistical summaries and visualizations.

2. Observations for each visual

2.1 Distribution of Numeric Columns:

- Quantity is mostly 1 per order, with rare bulk orders.
- Unit prices range between $10–$20, with premium pizzas above $25.
- Total price per order varies widely, driven by both price and quantity

2.2 Pizza Size Distribution

- Medium pizzas are the most popular, followed by large pizzas.
- Small and Extra-Large sizes are the least ordered.

2.3 Pizza Category Distribution

- Classic and Veggie pizzas dominate the menu.
- Supreme and Chicken categories are less frequent.

3. Top Pizzas Analysis

3.1 By Quantity

- A few pizzas (e.g., Classic Deluxe, Five Cheese) dominate overall sales volume.

3.2 By Revenue

- Premium pizzas (often Large or XL versions) contribute the most revenue.

4. Time-Based Analysis

4.1 Monthly Sales Trend

- Sales fluctuate across months, showing seasonal demand patterns.
- Certain months show peaks, possibly due to promotions or holidays

5. Pair plot

- Confirms positive relationships among unit price, quantity, and total price.
- Most orders cluster around single quantities with moderate prices.

6. **Heatmap**

- Strong positive correlation between quantity and total price.
- Moderate correlation between unit price and total price.

7.Conclusion

The EDA reveals that medium-sized, classic, and veggie pizzas are the backbone of sales. Seasonal patterns and a small set of top pizzas significantly drive revenue. These insights can guide marketing, menu design, and inventory management to boost profitability.