Q Dataset Link

store_inventory.csv

📌 Objective

To evaluate how store inventory interacts with external and internal sales-driving factors like pricing, promotions, weather conditions, and seasonal demand patterns.

Dataset Fields

Column Name	Data Type	Description
Date	Date	The date of the transaction.
Store ID	String	Unique identifier for the store.
Product ID	String	Unique identifier for the product.
Category	String	Product category (e.g., Clothing, Electronics).
Region	String	Region where the store is located.
Inventory Level	Integer	Available stock at the start of the day.
Units Sold	Integer	Number of units sold that day.
Units Ordered	Integer	Number of units ordered that day (restocking).
Price	Float	Listed selling price per unit.
Discount	Float	Discount amount applied to each sale.
Weather Condition	String	Description of weather (e.g., Snowy, Sunny).
Promotion	Integer (0/1)	1 if the product was under promotion; else 0.
Competitor Pricing	Float	Average market price for similar products.
Seasonality	String	The current season (e.g., Winter, Summer).

Epidemic	Integer (0/1)	1 if sales were affected by an epidemic; else 0.
Demand	Integer	Modeled/forecasted customer demand for the product.

Key Calculated Metrics

1. Revenue

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Units Sold × (Price - Discount)
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➤ Measures actual earnings after discounts.

2. Remaining Inventory

Inventory Level - Units Sold

➤ Indicates stock that remains unsold at day's end.

3. Demand Ratio

Demand / Inventory Level

➤ Highlights how well inventory matches expected demand.

📈 Use Cases

- Evaluating promotion effectiveness on sales and revenue.
- Analyzing sales patterns by season and weather.
- Adjusting inventory levels based on real vs. expected demand.
- Comparing pricing strategy with competitors.
- Studying impact of external disruptions (e.g., epidemics) on store operations.

Visualizations

- Bar chart: Revenue by category or store.
- Line chart: Sales trends over time.

- Box plot: Units sold vs. weather condition.
- Scatter plot: Price vs. Competitor Pricing.

Google Collab: Store Inventory