

# 🛒 Walmart Sales Analysis

## Walmart Sales Performance Dashboard

Interactive dashboard analyzing sales, profit, and customer behavior



### ❖ Concise Summary of the Data Analysis Workflow (Walmart Sales Dashboard)

#### 1. 📈 Data Collection

- Gathered Walmart transactional data including sales, customer details, product categories, and ratings.

#### 2. ✂️ Data Cleaning

- Removed duplicates, handled missing values, corrected data types, and standardized fields (e.g., gender, payment methods).

### 3. Data Transformation

- Aggregated sales, orders, and quantities by product line, customer type, time, and branch for analysis.

### 4. Exploratory Data Analysis (EDA)

- Visualized trends in product sales, payment modes, customer demographics, and temporal sales patterns.

### 5. Insight Extraction

- Identified top-performing products, peak purchase hours, popular payment methods, and balanced gender participation.

### 6. Dashboard Creation

- Built an interactive dashboard using filters for city, branch, gender, and payment method to allow dynamic insights.

### 7. Reporting & Recommendations

- Summarized key insights into strategic recommendations for business decision-making.
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## Tools Used

-  **Excel** – For preliminary data cleaning and quick analysis
  -  **SQL** – To query and manipulate structured datasets
  -  **Python** – For advanced data wrangling and exploratory analysis
  -  **Power BI** – To create an interactive, user-friendly dashboard
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## Walmart Sales Performance Dashboard Summary

### Key Findings:

-  **Total Sales** reached **\$2.38M**, with **93,300 units sold** and **19,170 total orders**.
  -  **Fashion Accessories** led product sales, followed by **Food & Beverages**.
  -  **Sales are evenly split by payment methods**: E-wallet, Credit Card, and Cash (each around 34%).
  -  **Customer gender distribution is equal** (50% male, 50% female).
  -  **Average product rating** is **250.427**, with males generally giving higher ratings.
  -  **Sales peak between 10 AM and 3 PM**, with a dip late at night.
  -  **Highest weekly sales** observed in **July** and **Saturdays**.
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### Supporting Data:

#### • Product Line Sales:

-  Fashion Accessories: ~4M
-  Food & Beverages: ~3M

-  Sports & Travel: ~2.5M
  -  **Customer Ratings:**
    -  Males rated higher than females.
  -  **Sales Trends:**
    -  Weekly sales peak in **May, July, and September**.
    -  Sales by hour highest from **10 AM to 3 PM**.
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## **Recommendations:**

-  **Stock more Fashion Accessories** due to high demand.
  -  **Optimize staffing and promotions between 10 AM - 3 PM**.
  -  **Target Saturday campaigns** with special offers.
  -  **Use gender-based insights** for personalized marketing.
  -  **Continue supporting all three payment methods** to retain customer satisfaction.
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## **Report & Insight:**

-  Balanced performance across demographics and payment preferences.
  -  Fashion Accessories outperformed other product lines.
  -  Customer behavior shows strong time- and day-based purchase patterns.
  -  Gender participation is equal, offering potential for segmented targeting.
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## **Conclusions:**

-  Walmart shows strong, well-rounded performance across key metrics.
-  Strategic planning around time slots and product types can increase ROI.
-  Equal gender and payment preference usage reflect broad customer appeal.