GitHub-Link

WALMART SALES

Data Analysis

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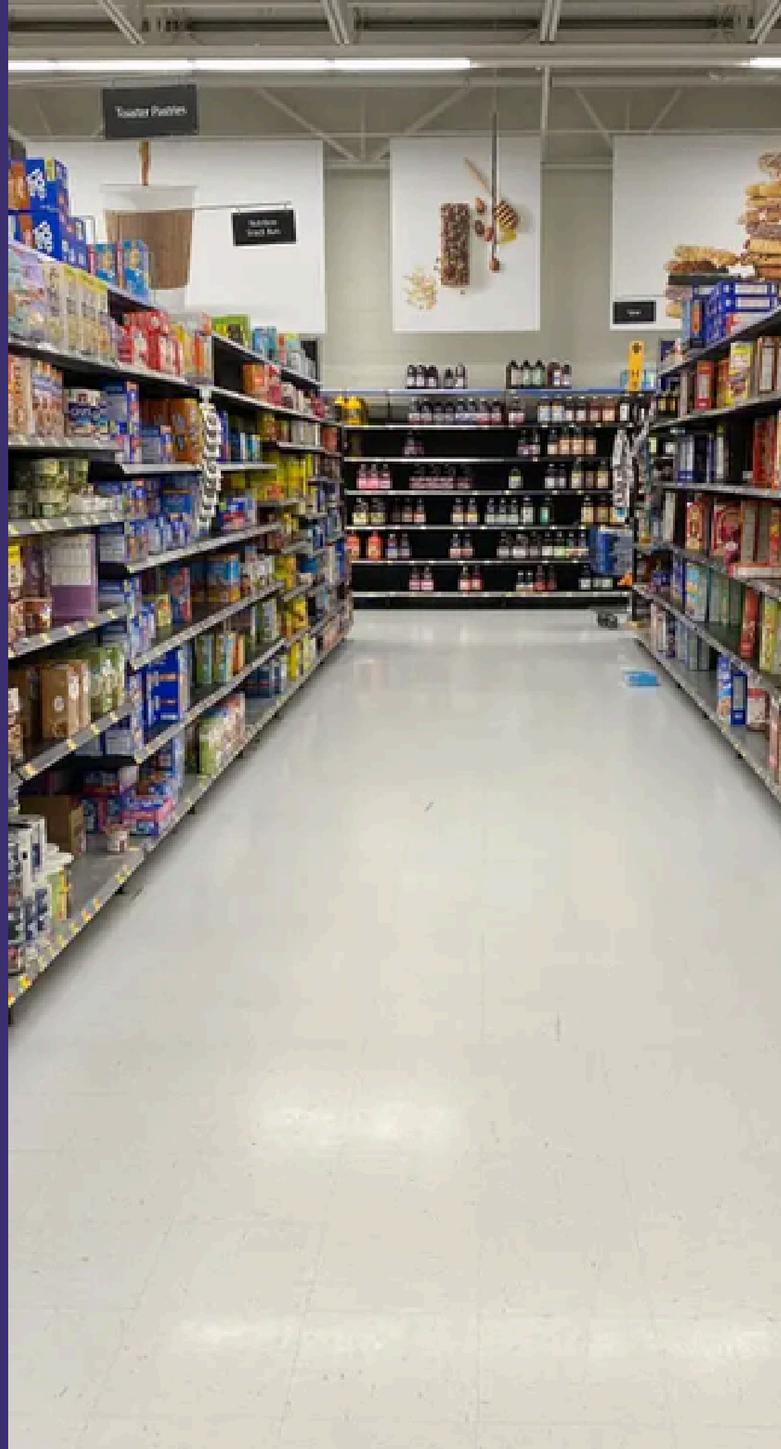
About

This project aims to explore the Walmart Sales data to understand top performing branches and products, sales trend of of different products, customer behaviors'.
The aims is to study how sales strategies can be improved and optimized.
The dataset was obtained from the Kaggle Walmart Sales Forecasting Competition.



Data

Column	Description	Data Type
invoice_id	Invoice of the sales made	VARCHAR(30)
branch	Branch at which sales were made	VARCHAR(5)
city	The location of the branch	VARCHAR(30)
customer_type	The type of the customer	VARCHAR(30)
gender	Gender of the customer making purchase	VARCHAR(10)
product_line	Product line of the product solf	VARCHAR(100)
unit_price	The price of each product	DECIMAL(10, 2)
quantity	The amount of the product sold	INT
VAT	The amount of tax on the purchase	FLOAT(6, 4)
total	The total cost of the purchase	DECIMAL(10, 2)
date	The date on which the purchase was made	DATE
time	The time at which the purchase was made	TIMESTAMP
payment_method	The total amount paid	DECIMAL(10, 2)
cogs	Cost Of Goods sold	DECIMAL(10, 2)
gross_margin_percentage	Gross margin percentage	FLOAT(11, 9)
gross_income	Gross Income	DECIMAL(10, 2)
rating	Rating	FLOAT(2, 1)

This dataset contains sales transactions from a three different branches of Walmart, respectively located in Mandalay, Yangon and Naypyitaw. The data contains 17 columns and 1000 rows:

WALMART Sales Analysis List

PRODUCT ANALYSIS

Conduct analysis on the data to understand the different product lines, the products lines performing best and the product lines that need to be improved.

CUSTOMER ANALYSIS

This analysis aims to uncover the different customers segments, purchase trends and the profitability of each customer segment.

SALES ANALYSIS

This analysis aims to answer the question of the sales trends of product. The result of this can help use measure the effectiveness of each sales strategy the business applies and what modificatoins are needed to gain more sales.

Business Questions To Answer

PRODUCT

1.How many unique product lines does the data have?
2.What is the most common payment method?
3.What is the most selling product line?

SALES

1.Number of sales made in each time of the day per weekday
2.Which of the customer types brings the most revenue?

CUSTOMER

1.What is the most common customer type?
2.What is the gender of most of the customers?
3.Which time of the day do customers give most ratings?
4.Which customer type buys the most?

1.How many unique product lines does the data have?

```
SELECT DISTINCT Product_line FROM "WalmartSalesData"
```

Product_line
Health and beauty
Electronic accessories
Home and lifestyle
Sports and travel
Food and beverages
Fashion accessories

2.What is the total revenue by month?

```
SELECT
    SUBSTRING(DATE,4,2) AS Month,
    ROUND(SUM(total),2) AS total_revenue
FROM WalmartSalesData
GROUP BY SUBSTRING(DATE,4,2)
ORDER BY total_revenue;
```

Month	total_revenue
01	116291.87
03	109455.51
02	97219.37

3.What product line had the largest revenue?

```
SELECT
    product_line,
    ROUND(SUM(total),2) as total_revenue
FROM WalmartSalesData
GROUP BY product_line
ORDER BY total_revenue DESC;
```

Product_line	total_revenue
Food and beverages	56144.84
Sports and travel	55122.83
Electronic accessories	54337.53
Fashion accessories	54305.9
Home and lifestyle	53861.91
Health and beauty	49193.74

4.Which of the customer types brings the most revenue?

```
SELECT
    Customertype,
    ROUND(SUM(total),2) AS total_revenue
FROM WalmartSalesData
GROUP BY Customertype
ORDER BY total_revenue;
```

Customertype	total_revenue
Normal	158743.31
Member	164223.44

5.What is the gender of most of the customers?

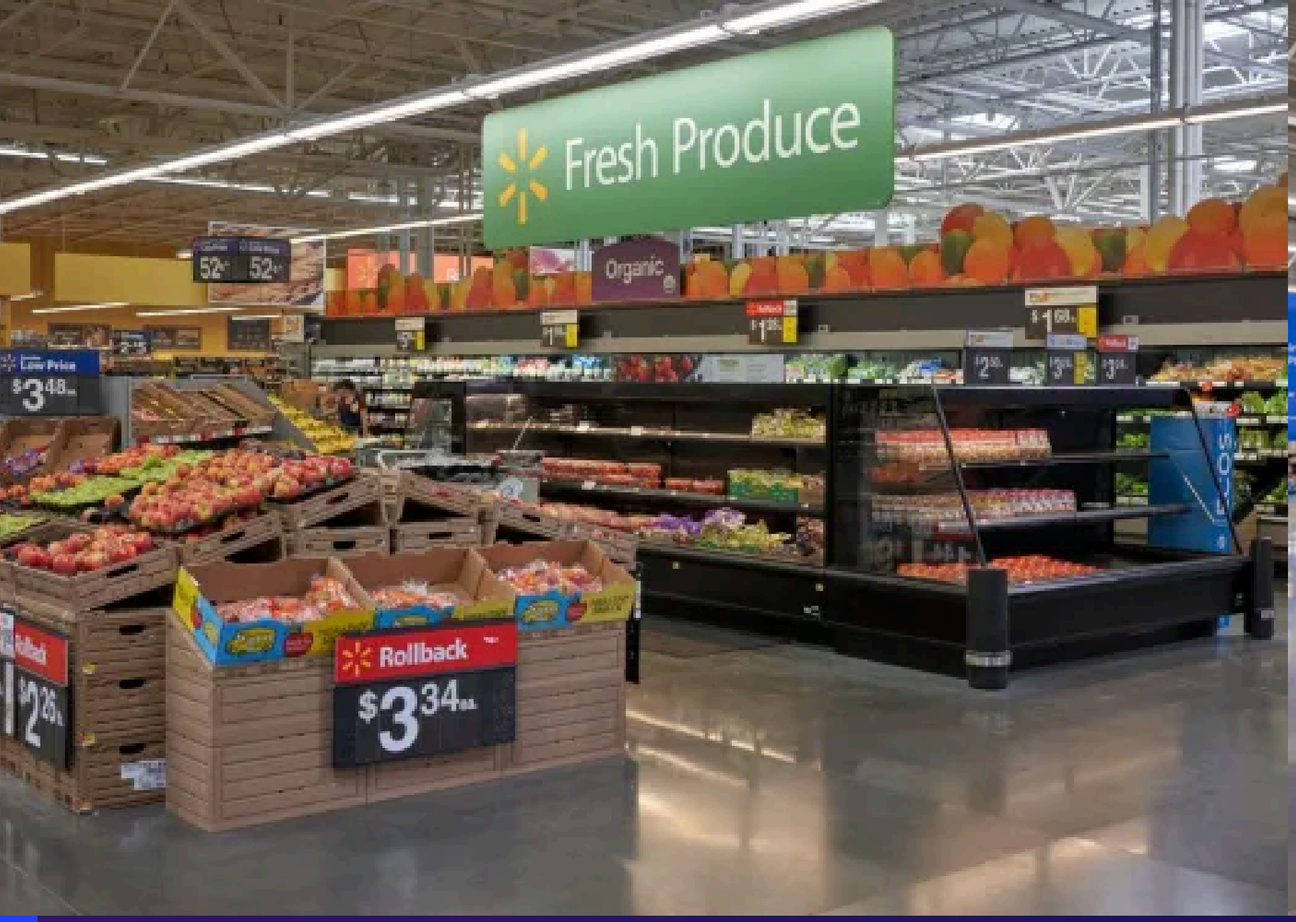
```
SELECT
    gender,
    COUNT(*) as gender_cnt
FROM WalmartSalesData
GROUP BY gender
ORDER BY gender_cnt DESC;
```

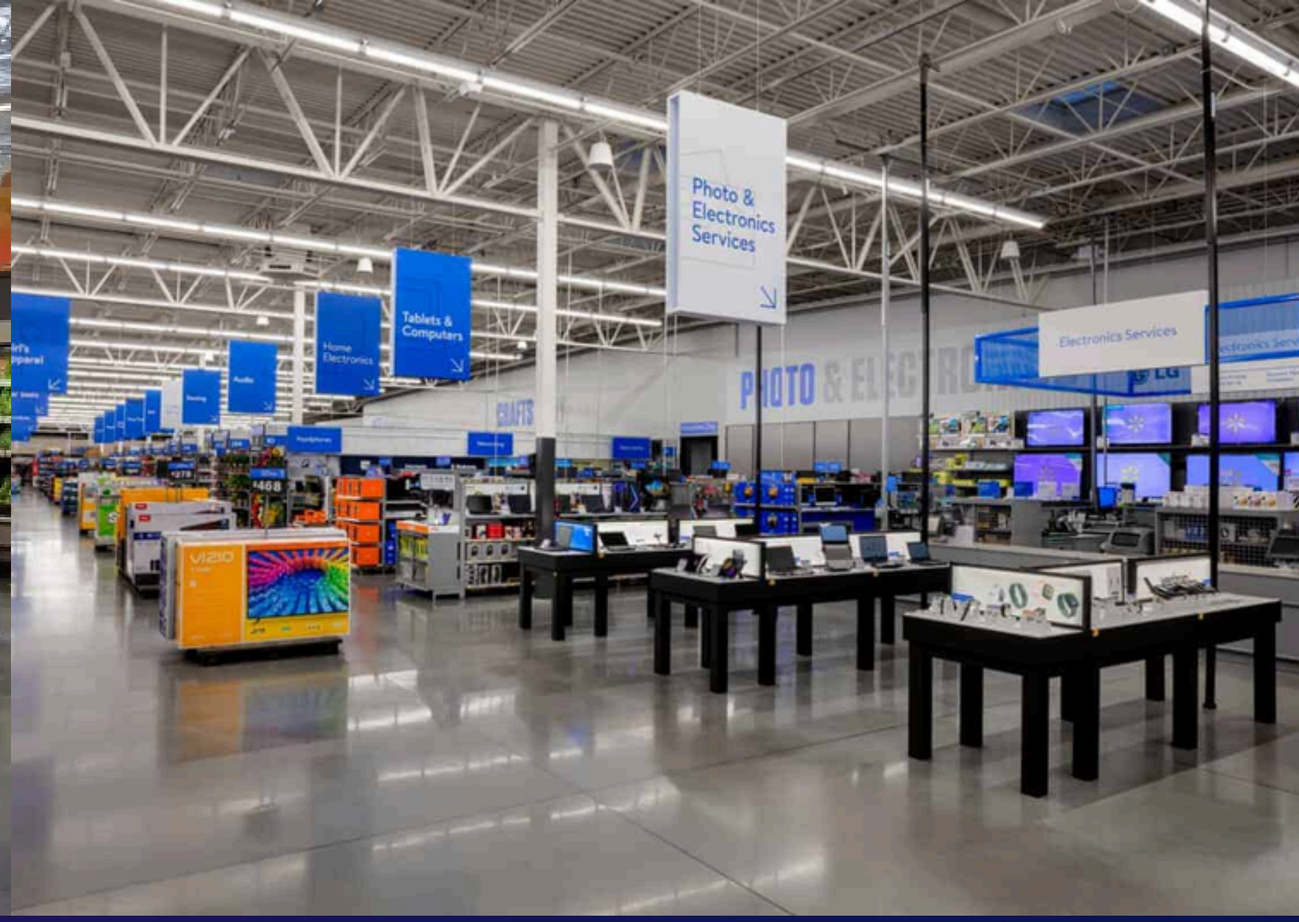
Gender	gender_cnt
Female	501
Male	499

6.What is the most common customer type?

```
SELECT
    Customertype ,
    count(*) as count
FROM WalmartSalesData
GROUP BY Customertype
ORDER BY count DESC;
```

Customertype	count
Member	501
Normal	499





CONCLUSION

Using SQL Server for Walmart sales data analysis has provided actionable insights on sales trends, regional variations, and product performance. These findings are pivotal for optimizing inventory, marketing, and resource allocation, ensuring Walmart's continued success in the retail sector.