# Grocery Sales Analysis Malhart

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# **Project Overview**

#### **Problem**

To optimize operational efficiency and profitability, Walmart needs to analyze brand performance, department and category trends, promotion effectiveness, and product popularity. These insights will inform stocking decisions, marketing strategies, and product lifecycle management, ensuring tailored customer experiences and maximizing revenue.



#### **Hypothesis**

Analysing the number of products sold and percentage sales contribution based on brand, department and category. We can know which brand makes walmart more money and which products need discount to attract more people to buy them based on the total sales with and without discount.



# Data Wrangling and Cleaning

### DATA CLEANING



Removing inaccurate and inconsistent data

# DATA WRANGLING

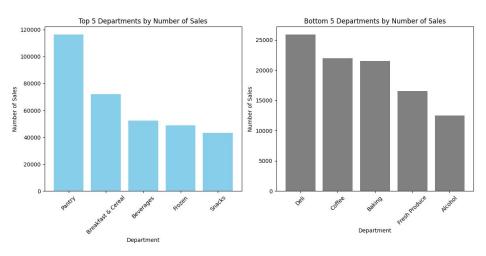


Transforming raw data into a more usable form

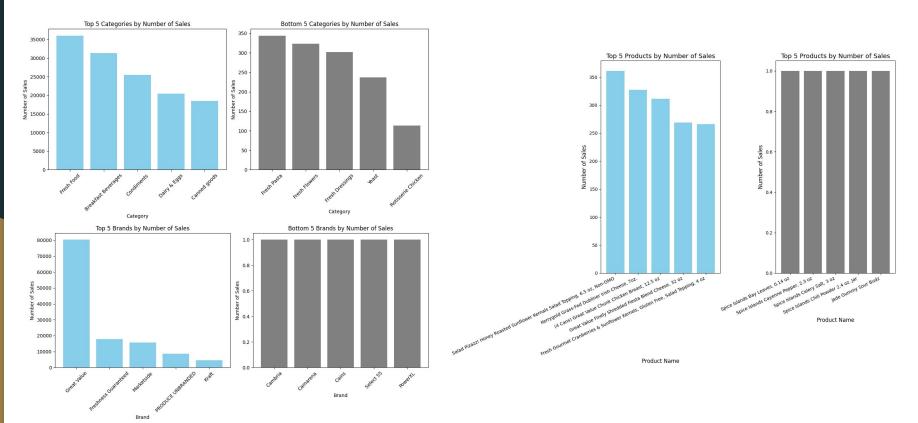
# **Exploratory Data Analysis**

Grouping and plotting bar charts for better understanding of the data in a visual form.

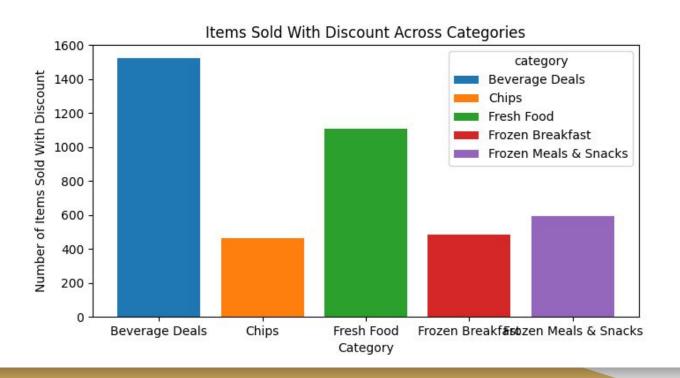
#### **Total Number of sales per Department**



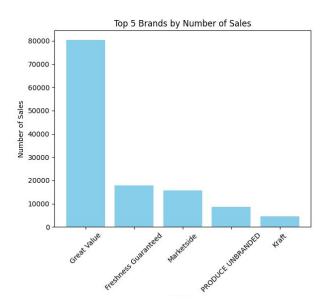
## Total Number of sales

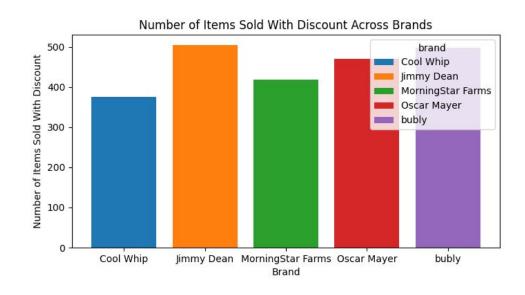


## Sales on discounted items

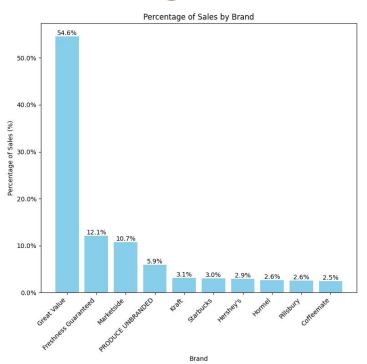


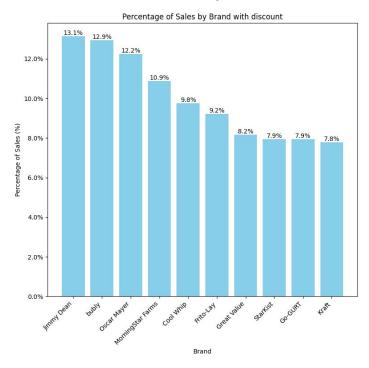
## Overall vs Discount sales





## Percentage distributions of sales by brand





# Major obstacle

Finding what hypothesis to do with the selected dataset as there were more rows and columns but could not use few of them to formulate the hypothesis I planned to ,when I selected the data set.

So, I had to create a new discount field which helped me in knowing more details about the sales.



# Results and Insights

- Brand Performance
- Department and Category Trends
- Effectiveness of Promotions
- Product Popularity

**Project Link** 

