

Walmart Sales Data Analysis Summary Report

Project Overview:

This report presents a summary of an exploratory data analysis conducted on Walmart's sales data. The goal of the analysis was to uncover patterns in customer demographics, purchasing behavior, and product ratings in order to inform data-driven business decisions.

Data Overview:

The dataset, titled "WALMART DATA.csv," includes customer-level transactional data such as:

- City
- Age
- Category
- Gender
- Purchase Amount
- Rating

Data Cleaning & Preparation:

- Null values were assessed using `pd.isnull()` and `pd.isnull().sum()`.
- A basic statistical summary of all features was obtained using `.describe()`.

Key Findings:

1. Gender Distribution:

- A count plot revealed the distribution of male and female shoppers.

2. Purchase Amount by Gender:

- Male customers contributed more to the overall purchase amount compared to female customers.

- This trend was visualized using a Seaborn barplot.

3. Ratings by Gender:

- Ratings were also aggregated by gender.
- A similar trend was observed, with males providing a higher cumulative rating.

4. Pair Plot Analysis:

- A pair plot segmented by gender showed relationships between variables such as age, purchase amount, and rating.

Visual Insights:

The visualizations used in this notebook (e.g., countplot, barplot, and pairplot) were crucial in highlighting:

- Gender-based trends in shopping behavior
- Distributions and relationships between numeric features

Conclusion:

The exploratory analysis provided useful insights into gender-based spending and rating trends. Males appear to dominate in total purchase value and rating contributions. These insights could guide future marketing strategies or product targeting efforts.

Prepared from the notebook: walmart data result.ipynb