

Title:

E-Commerce Sales Analysis Using Python (EDA Project)

Project Overview:

- Objective: Analyse customer behaviour and product performance using sales data.
- Tools Used: Python (Pandas, Matplotlib, Seaborn)

Data Cleaning:

- Handled missing values
- Removed duplicates
- Converted columns like Amount and Date to proper formats

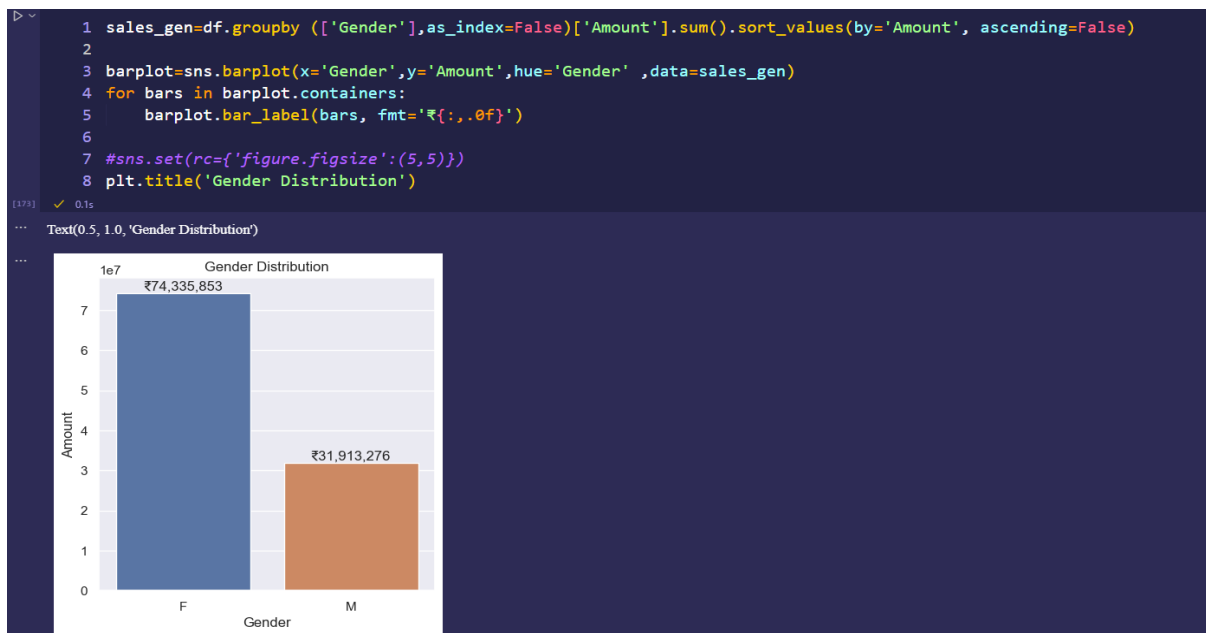
Exploratory Data Analysis:

- Analysed sales trends by:
 - Gender
 - Age Group
 - Marital Status
 - State
 - Occupation
- Found the most sold:
 - Product categories
 - Individual products

Based on the Genders



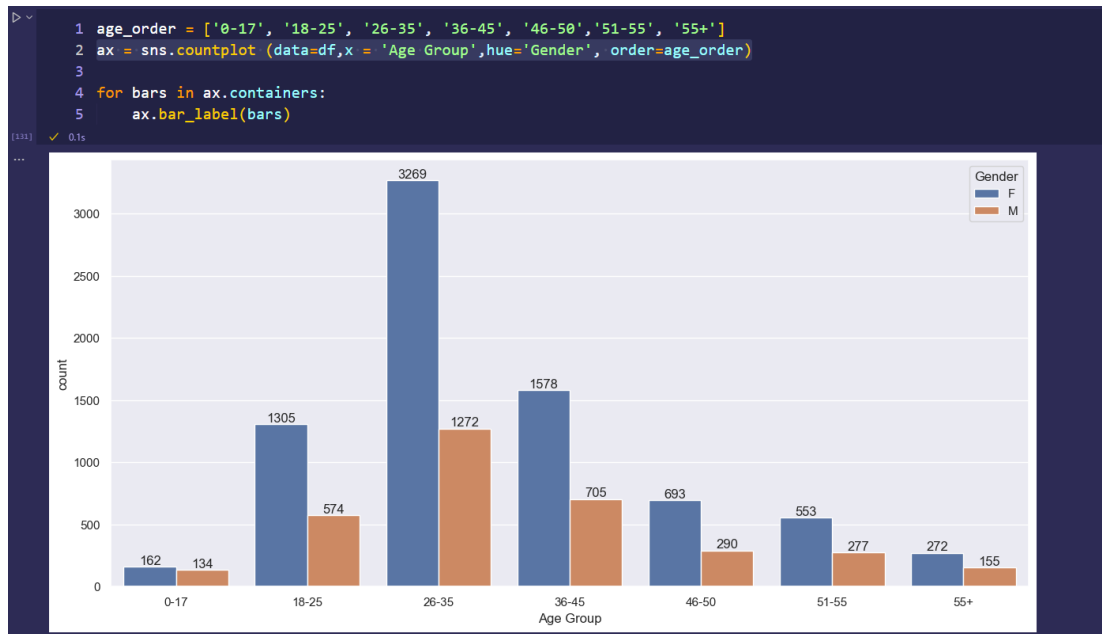
- Total Number of the buyer base on Gender the Female is more than men



- Based on gender, how much amount is spent by each gender
- According to the data, female customers have a higher total spending amount than male customers

The graphs indicate that the majority of buyers are female, and they also exhibit higher purchasing power compared to males.

Based on the Age



- The graph above illustrates the number of people in each age group.



- The chart illustrates the spending amount for each age group.

Most buyers fall within the 26–35 age range, and females make up the majority in this group.

Based on the State

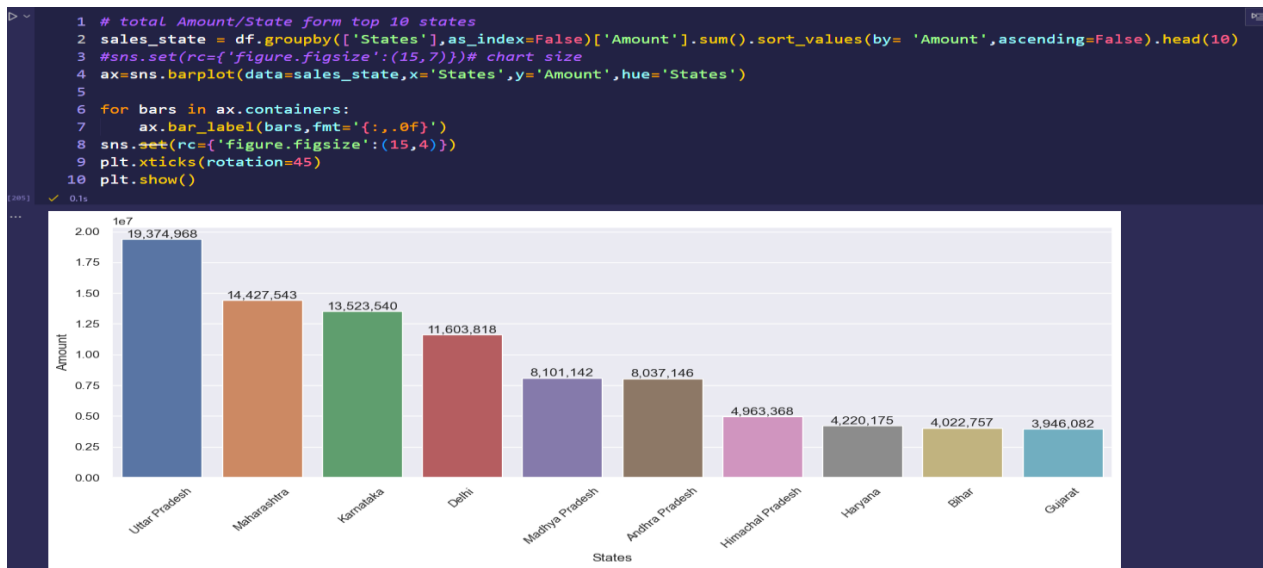
```
1 sales_state = df.groupby(['States'],as_index=False)['Orders'].sum().sort_values(by= 'Orders',ascending=False)
2 sales_state
```

[134] ✓ 0.0s Open 'sales_state' in Data Wrangler

	States	# Orders
14	Uttar Pradesh	4807
10	Maharashtra	3810
7	Karnataka	3240
2	Delhi	2740
9	Madhya Pradesh	2252
0	Andhra Pradesh	2051
5	Himachal Pradesh	1568
8	Kerala	1137
4	Haryana	1109
3	Gujarat	1066
1	Bihar	1062
6	Jharkhand	953
15	Uttarakhand	824
12	Rajasthan	555
11	Punjab	495
13	Telangana	312

The total number of states and the corresponding order counts per state.





- The graphs indicate that **Uttar Pradesh**, **Maharashtra**, and **Karnataka** contribute the highest number of orders and total sales amount, respectively.

Marital Status

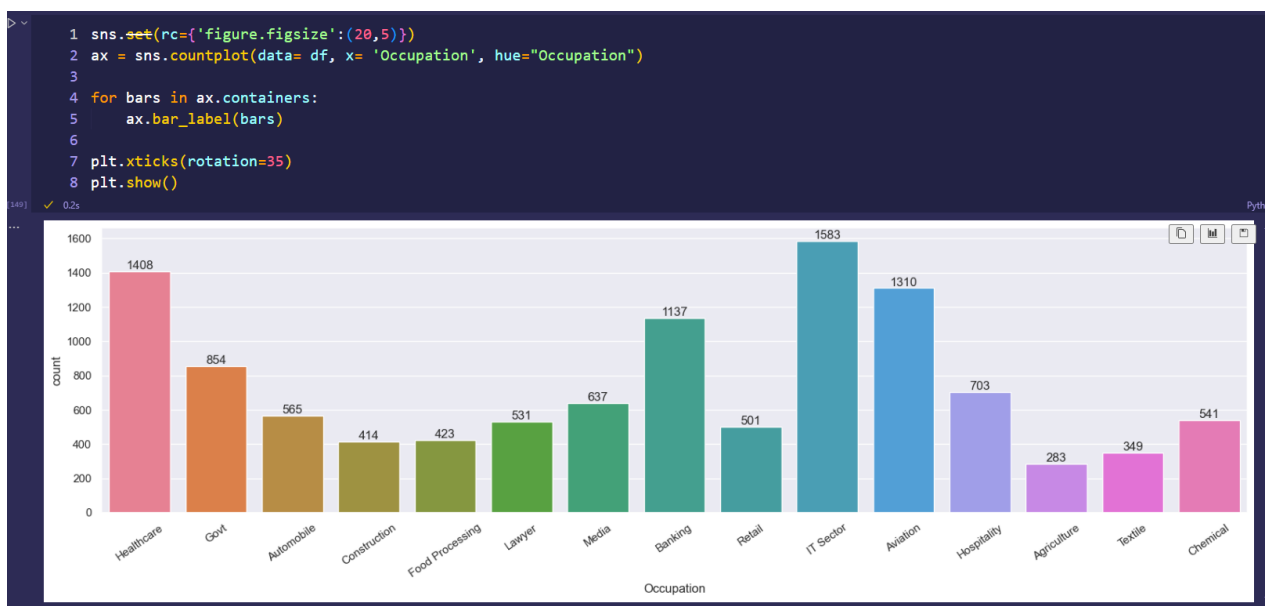


- The graph above shows the number of married and unmarried individuals.



- According to the graphs, most buyers are married females with strong purchasing power

Based on the Occupation



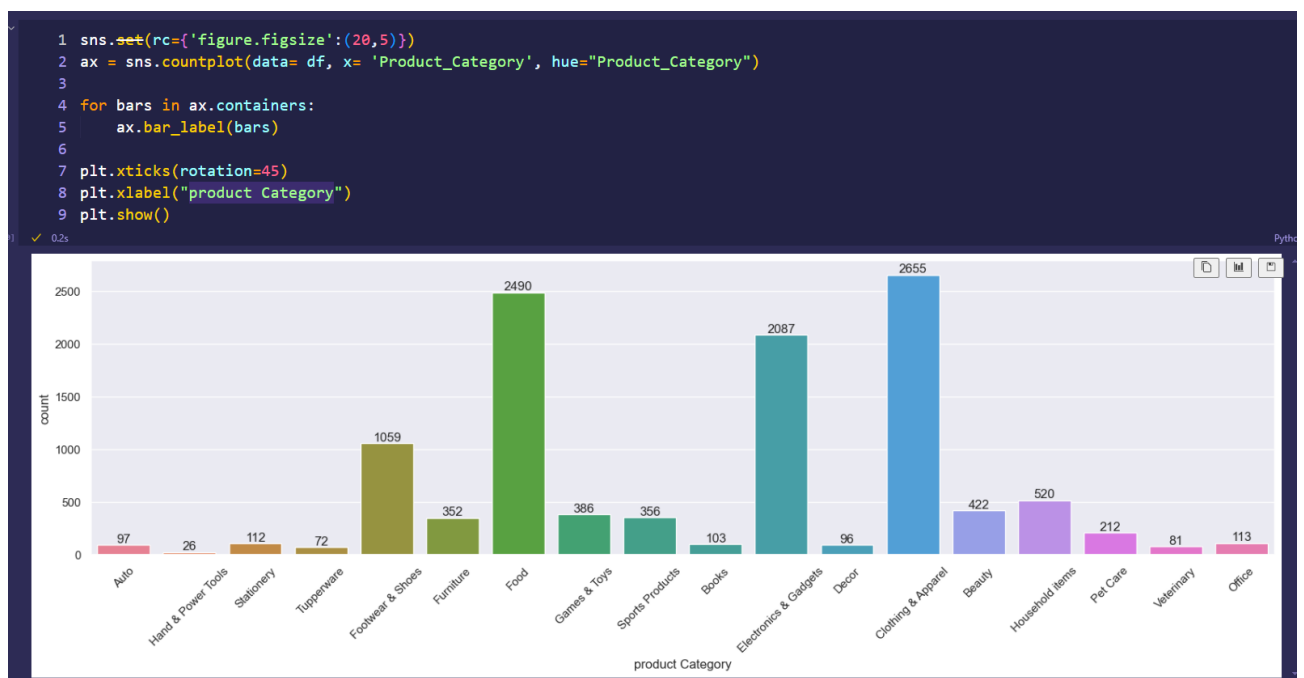
- The graph illustrates the number of people employed in various sectors.



- The graph illustrates the spending amount across different sectors.

The graphs indicate that the majority of buyers are employed in the IT, Healthcare, and Aviation sectors.

Based on the product Category





- The graphs indicate that the majority of products sold are from the Food, Clothing, and Electronics categories.

Based on the Product ID



- According to the above graph, it displays the order frequency for each product ID.

Conclusion

Married women aged 26–35 years from Uttar Pradesh, Maharashtra, and Karnataka, working in the IT, Healthcare, and Aviation sectors, are more likely to purchase products from the Food, Clothing, and Electronics categories.