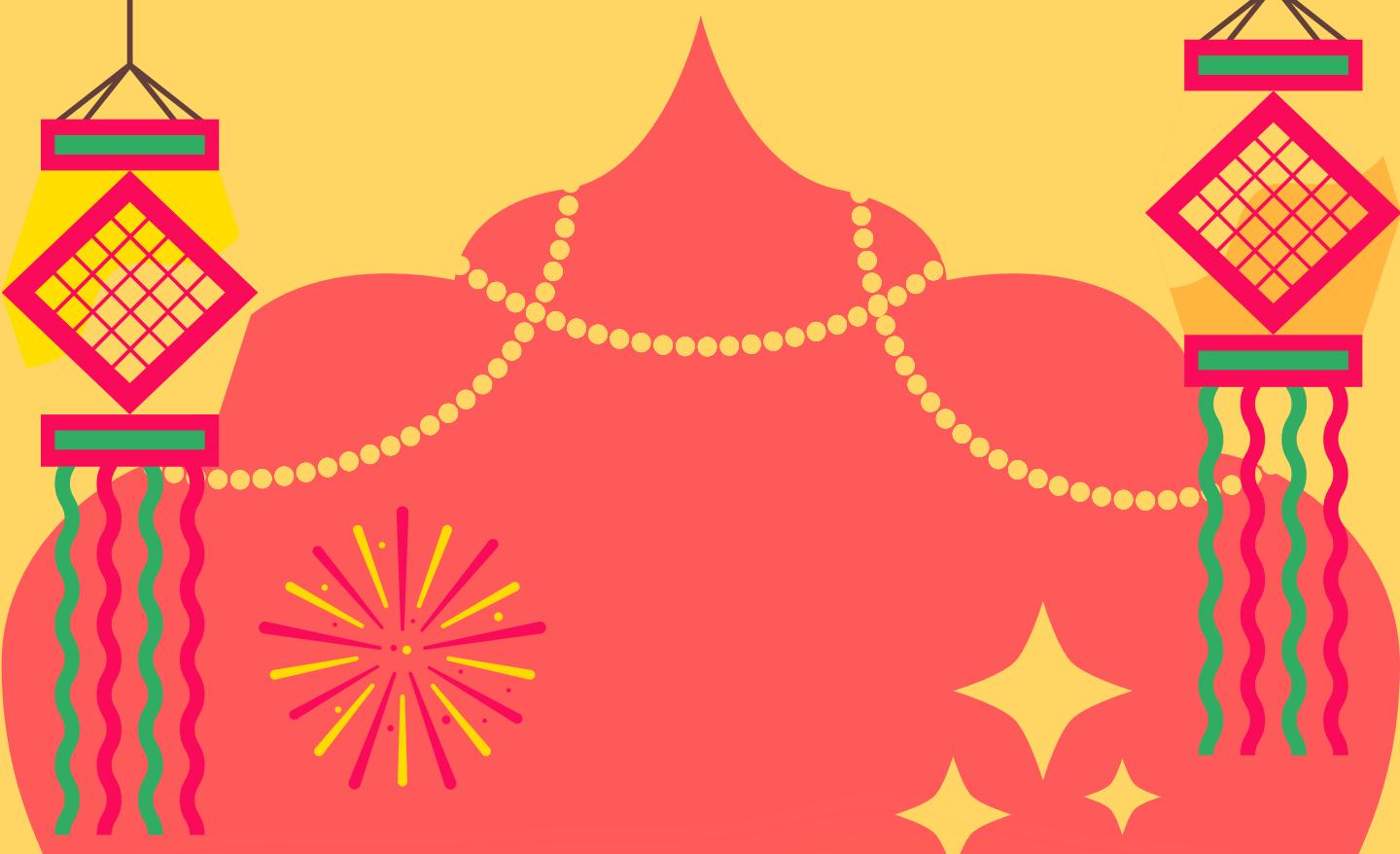


PYTHON DATA ANALYSIS
PROJECT



diwali
sales
analysis

MADE BY DEBARPITA
CHAKRABORTY



overview

THIS PYTHON PROJECT, "DIWALI SALES ANALYSIS," ENCOMPASSES COMPREHENSIVE DATA ANALYTICS PROCESSES. IT INCLUDES DATA CLEANING, MANIPULATION, PROCESSING, REMOVAL OF UNNECESSARY COLUMNS, REARRANGING COLUMNS, AGGREGATIONS, GROUPING, FILTERING, AND FINAL DATA VISUALIZATION. THE PROJECT AIMS TO PROVIDE A DETAILED ANALYSIS OF DIWALI SALES DATA, OFFERING INSIGHTS AND TRENDS TO SUPPORT INFORMED DECISION-MAKING.

Step By Step Description

Show the Dataset

Age Group	Age	Marital_Status	State	Zone	Occupation	Product_
26-35	28	0	Maharashtra	Western	Healthcare	
26-35	35	1	Andhra Pradesh	Southern	Govt	
26-35	35	1	Uttar Pradesh	Central	Automobile	
0-17	16	0	Karnataka	Southern	Construction	
26-35	28	1	Gujarat	Western	Food Processing	
26-35	28	1	Himachal Pradesh	Northern	Food Processing	
18-25	25	1	Uttar Pradesh	Central	Lawyer	
55+	61	0	Maharashtra	Western	IT Sector	
26-35	35	0	Uttar Pradesh	Central	Govt	
26-35	26	1	Andhra Pradesh	Southern	Media	

Dataset Information

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 11251 entries, 0 to 11250
Data columns (total 15 columns):
 #   Column           Non-Null Count  Dtype  
--- 
 0   User_ID          11251 non-null   int64  
 1   Cust_name        11251 non-null   object  
 2   Product_ID       11251 non-null   object  
 3   Gender           11251 non-null   object  
 4   Age Group        11251 non-null   object  
 5   Age              11251 non-null   int64  
 6   Marital_Status   11251 non-null   int64  
 7   State            11251 non-null   object  
 8   Zone             11251 non-null   object  
 9   Occupation       11251 non-null   object  
 10  Product_Category 11251 non-null   object  
 11  Orders           11251 non-null   int64  
 12  Amount           11239 non-null   float64 
 13  Status           0 non-null      float64 
 14  unnamed1         0 non-null      float64 
dtypes: float64(3), int64(4), object(8)
memory usage: 1.3+ MB
```

Check Null values

```
User_ID          0
Cust_name        0
Product_ID       0
Gender           0
Age_Group        0
Age              0
Marital_Status   0
State            0
Zone             0
Occupation       0
Product_Category 0
Orders           0
Amount           12
dtype: int64
```

Age Group	Total	Male	Female	State	Region
15-25	35	35	1	Andhra Pradesh	Southern
26-35	35	1	Uttar Pradesh	Central	
0-17	16	0	Karnataka	Southern	
26-35	28	1	Gujarat	Western	
...
18-25	19	1	Maharashtra	Western	
26-35	33	0	Haryana	Northern	
15-25	40	0	Madhya Pradesh	Central	
26-35	20	0	Karnataka	Southern	

Rename Columns

DESCRIBE COLUMNS

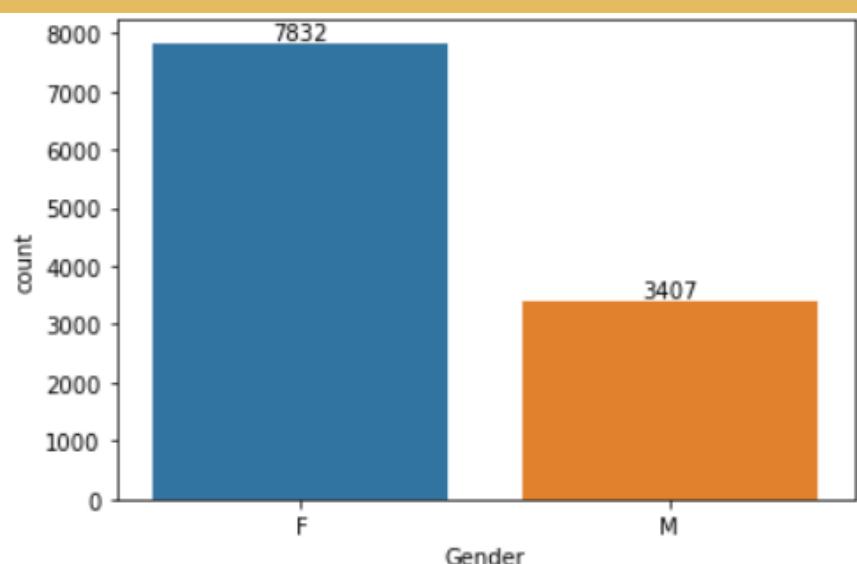
	Age	Orders	Amount
count	11239.000000	11239.000000	11239.000000
mean	35.410357	2.489634	9453.610553
std	12.753866	1.114967	5222.355168
min	12.000000	1.000000	188.000000
25%	27.000000	2.000000	5443.000000
50%	33.000000	2.000000	8109.000000
75%	43.000000	3.000000	12675.000000
max	92.000000	4.000000	23952.000000

Age	Marital_Status
00000	11239.000000
10357	0.420055
53866	0.493589
00000	0.000000
00000	0.000000
00000	0.000000
00000	1.000000
00000	1.000000

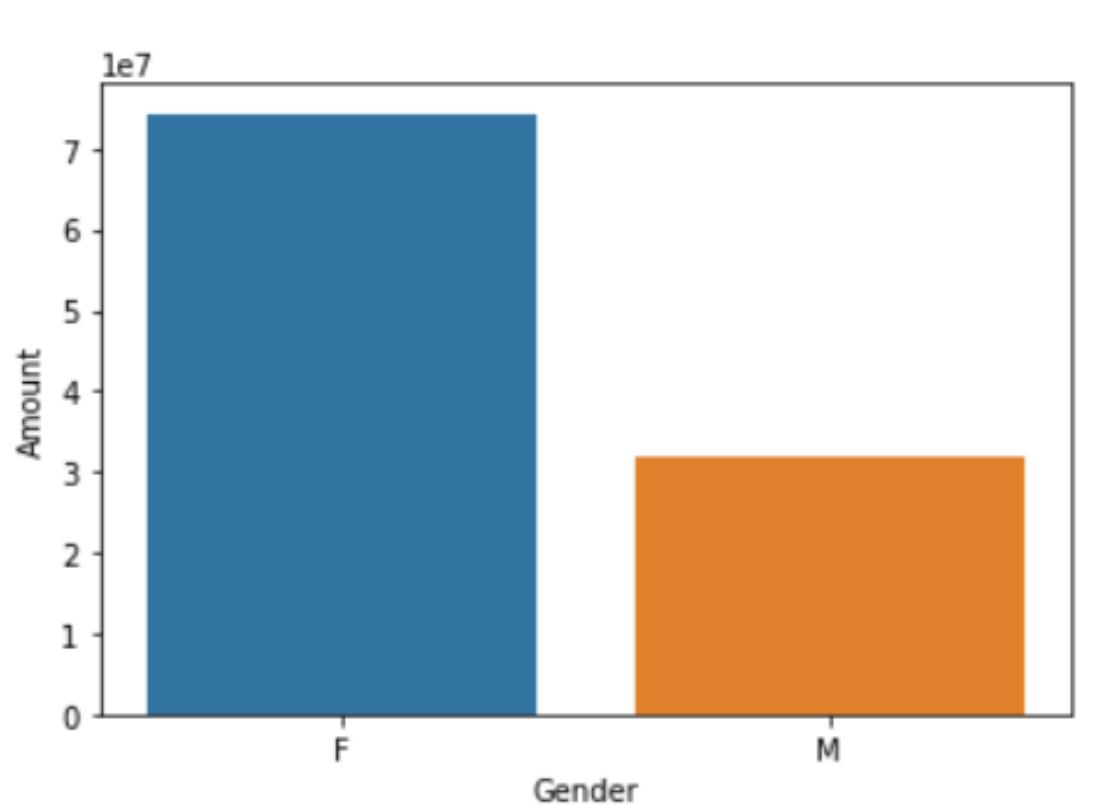
EXPLORATORY DATA ANALYSIS

GENDER

COUNT OF GENDER



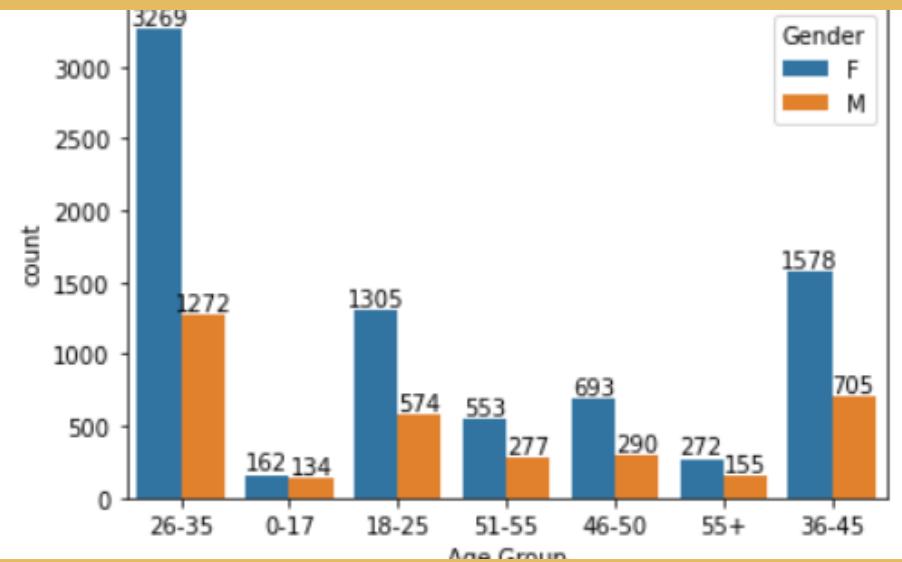
GENDER VS TOTAL AMOUNT



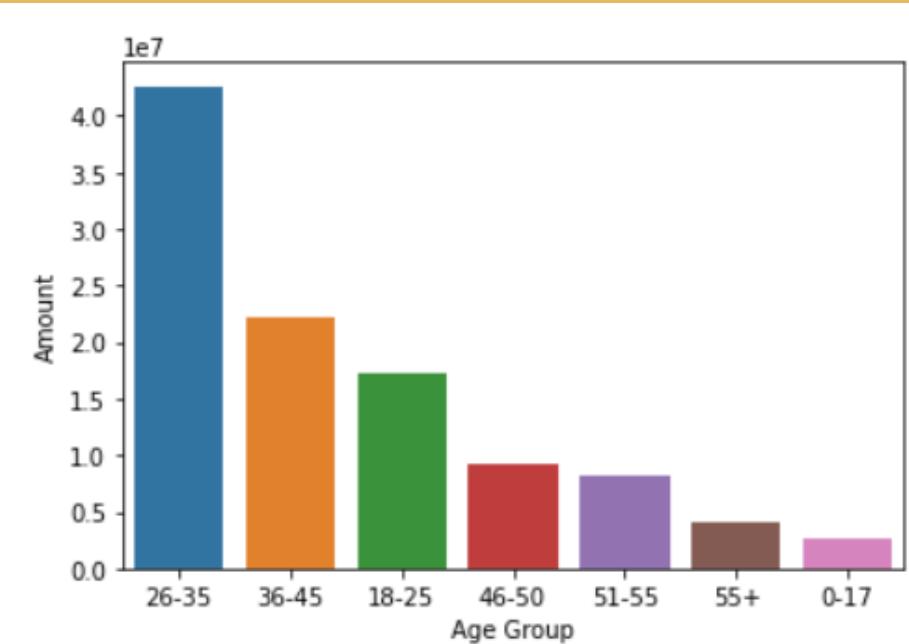
AGE

AGE GROUP

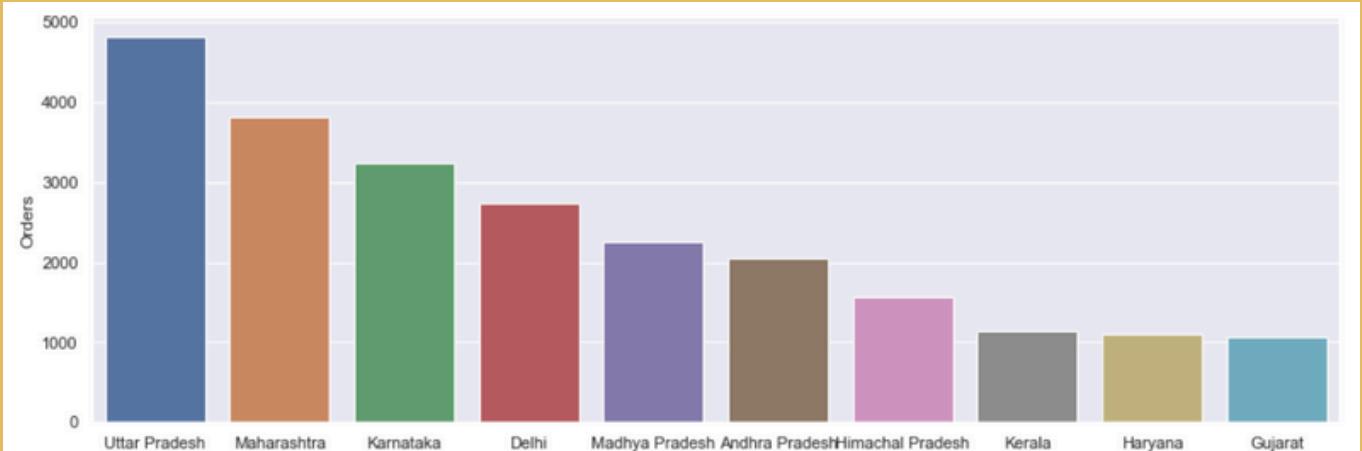
WISE GENDER



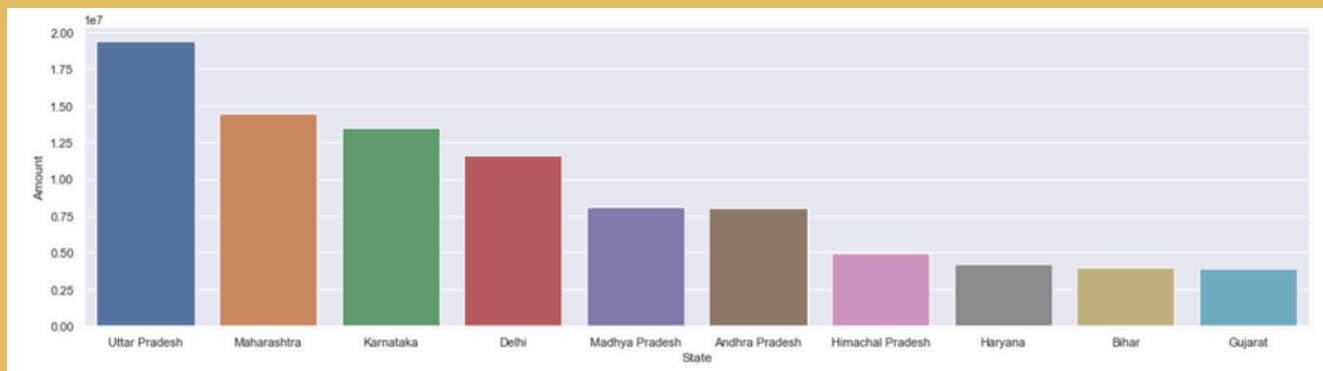
TOTAL AMOUNT VS AGE GROUP



STATE TOP 10 STATES (TOTAL ORDERS)

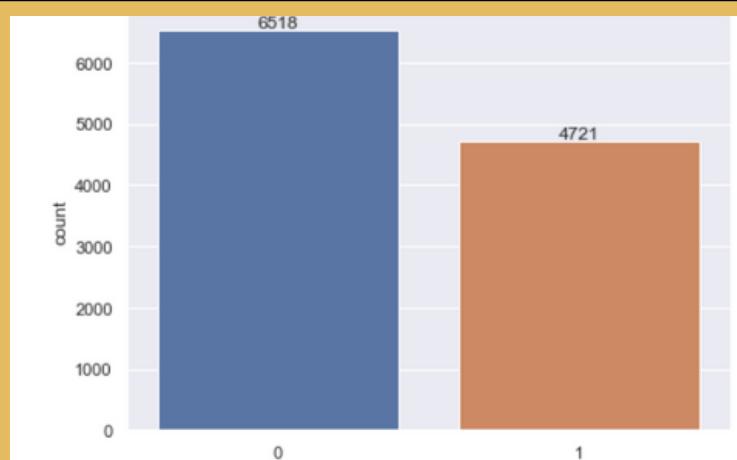


TOP 10 STATES (TOTAL SALES)

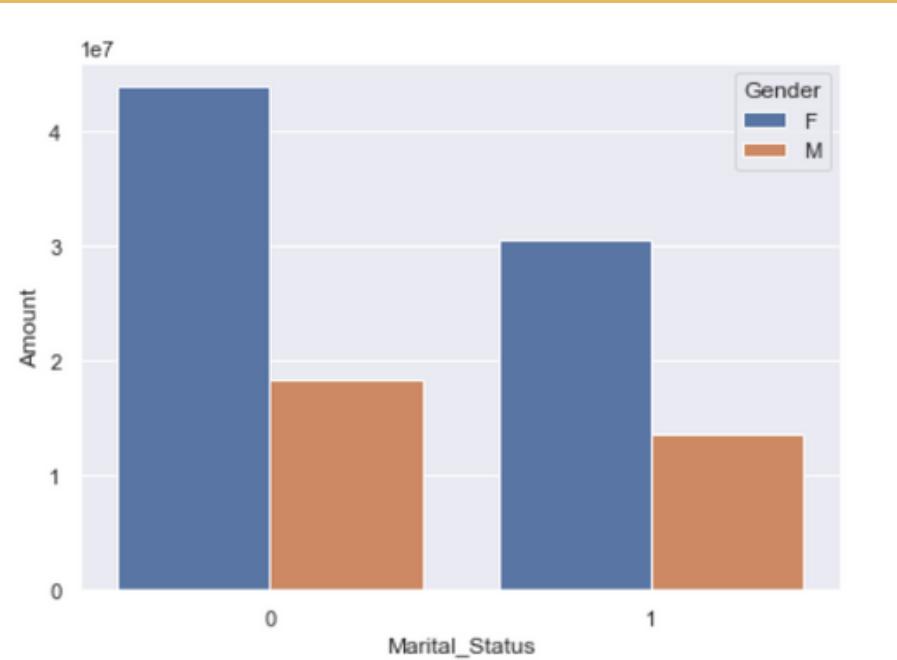


MATERIAL STATUS

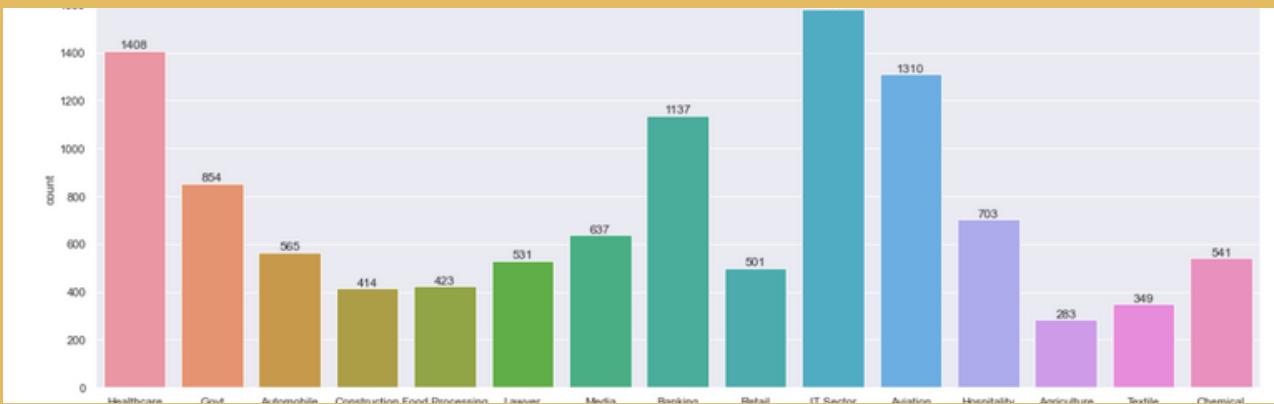
COUNT OF
MATERIAL
STATUS



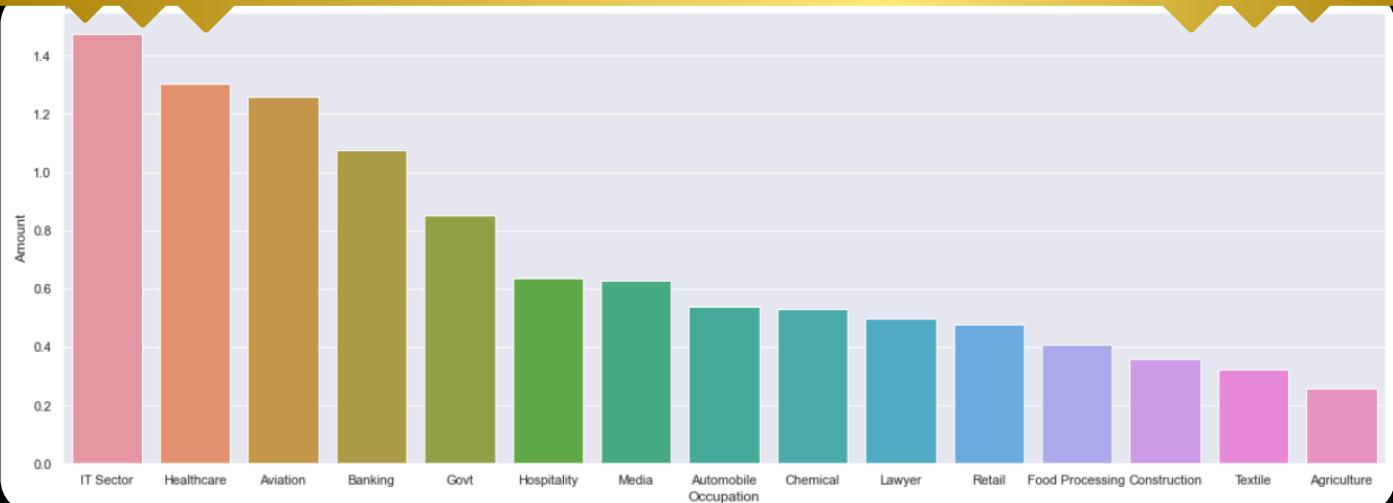
TOTAL SALES AMOUNT SEGMENTED BY MARITAL STATUS AND GENDER



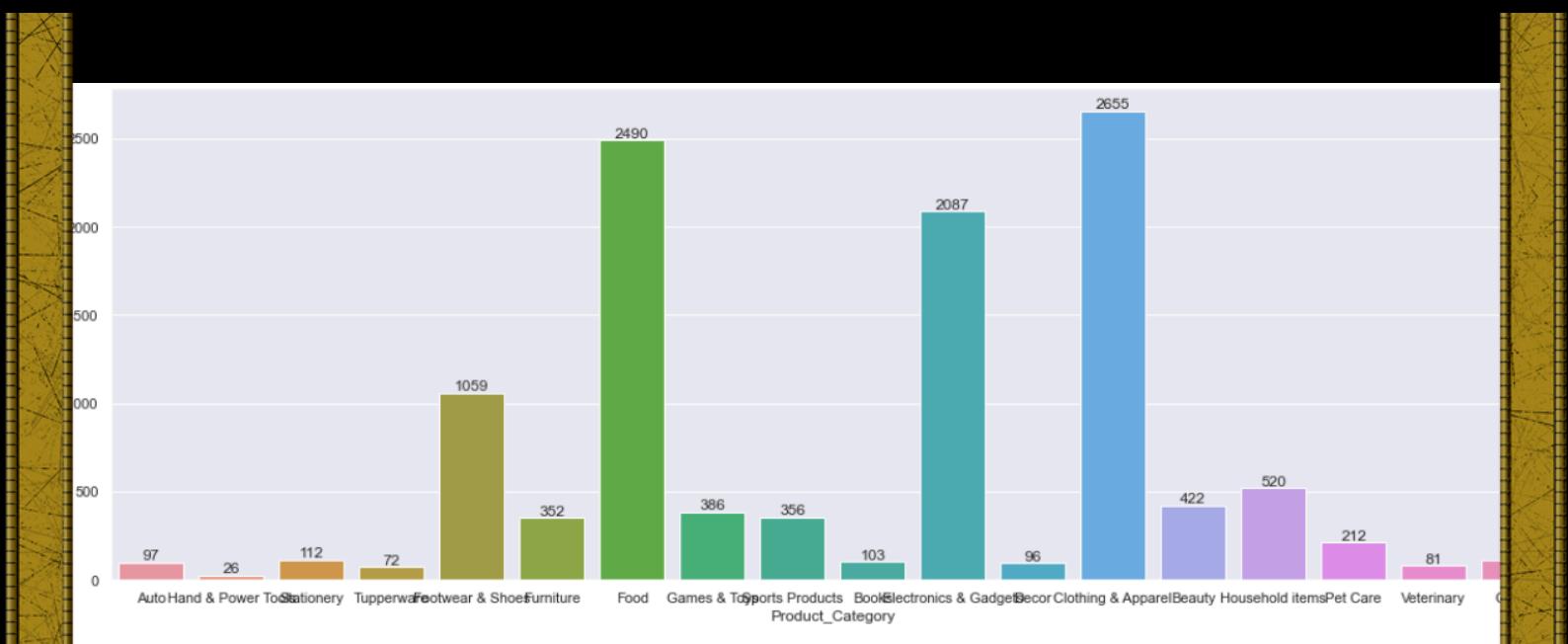
OCCUPATION FREQUENCY DISTRIBUTION OF SALES BY OCCUPATION CATEGORY



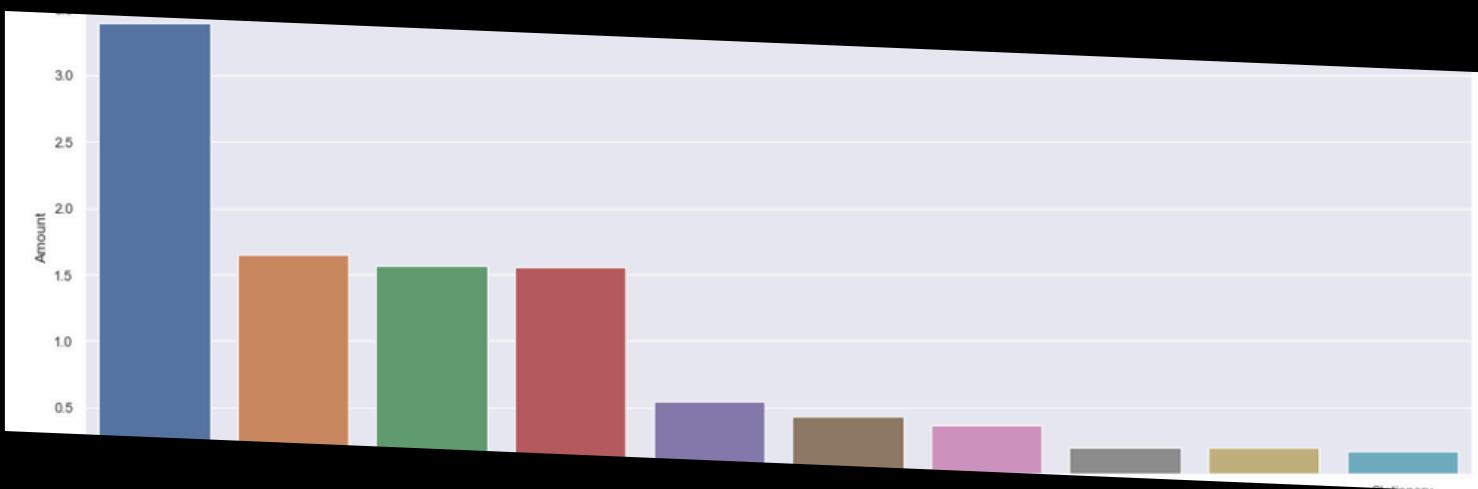
TOTAL SALES REVENUE BY OCCUPATION CATEGORY



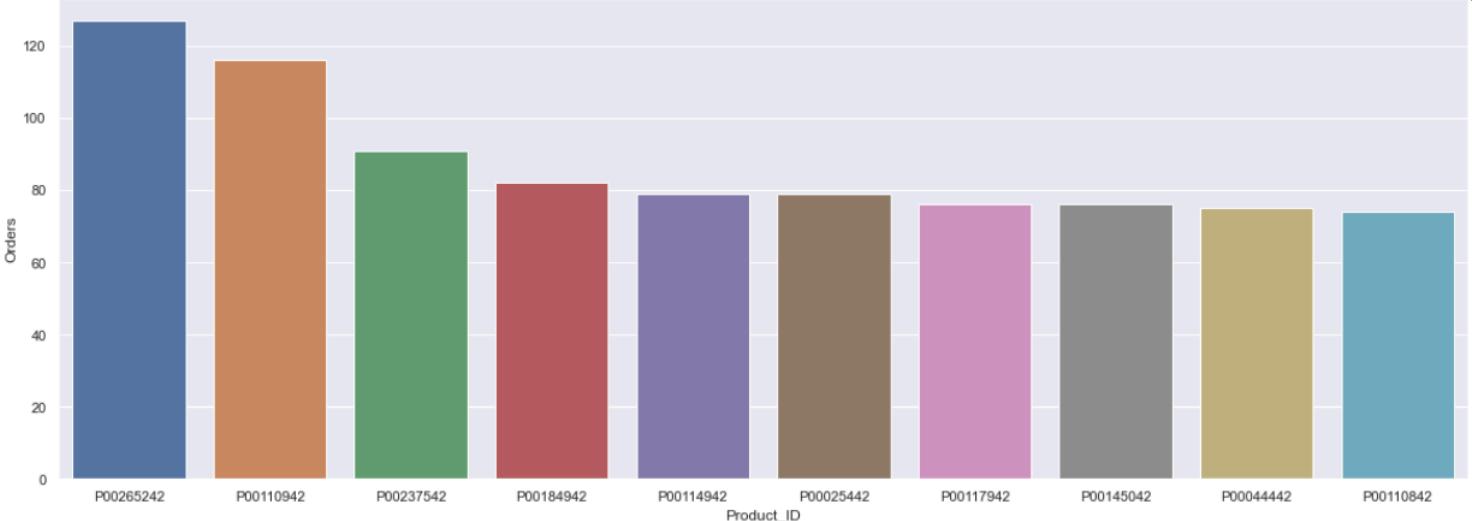
PRODUCT CATEGORY FREQUENCY DISTRIBUTION OF SALES BY PRODUCT CATEGORY



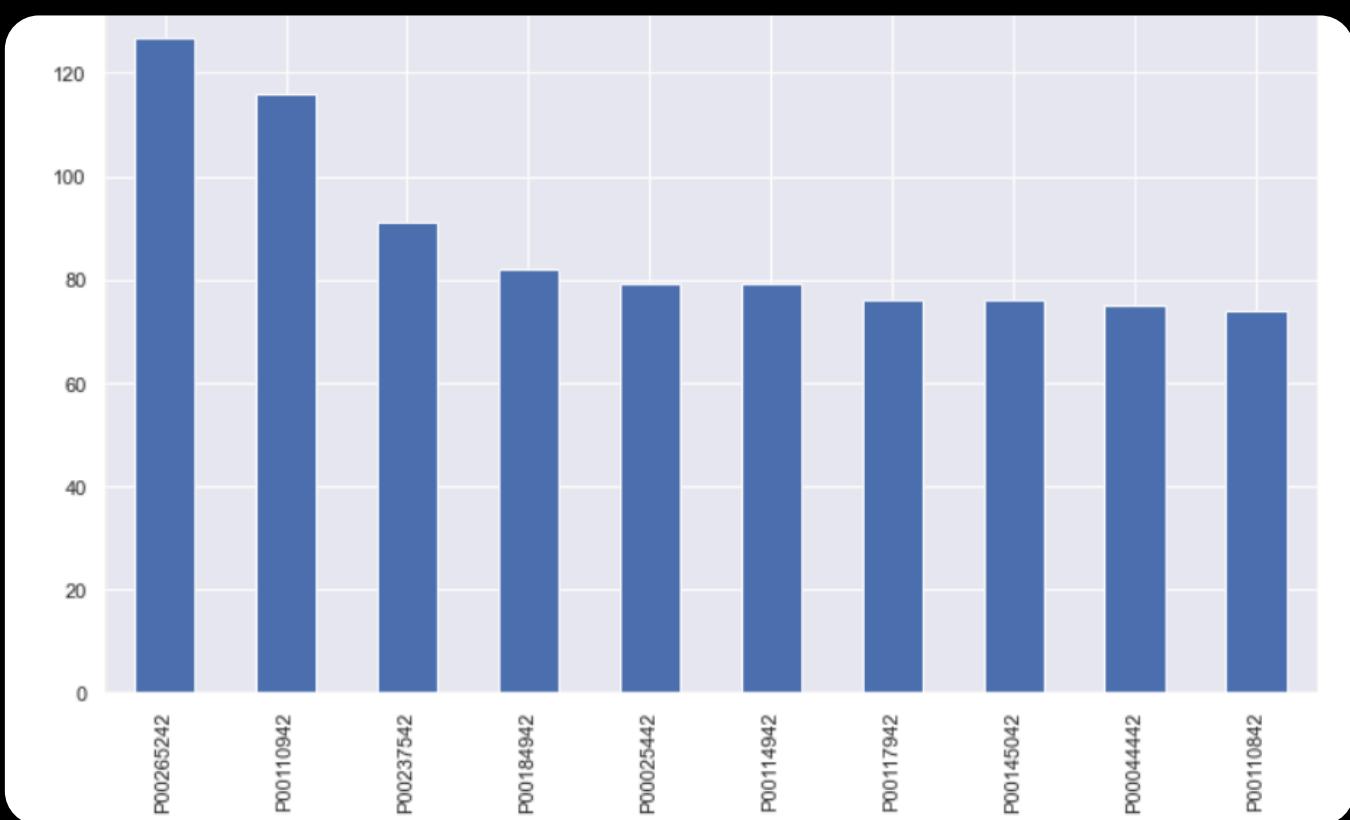
TOP 10 PRODUCT CATEGORIES BY TOTAL SALES AMOUNT



TOP 10 PRODUCTS BY TOTAL NUMBER OF ORDERS



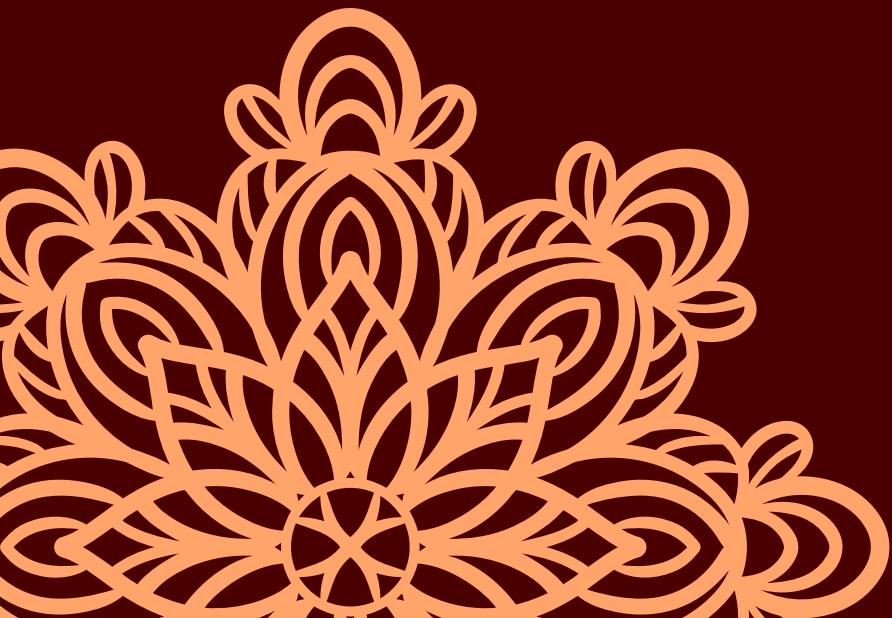
TOP 10 PRODUCTS BY TOTAL ORDERS

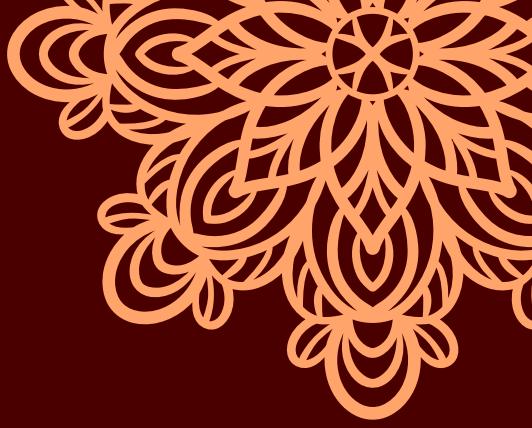


CONCLUSION

GENDER ANALYSIS

The majority of buyers during the Diwali sales were female. This trend is also reflected in their higher purchasing power compared to male buyers.

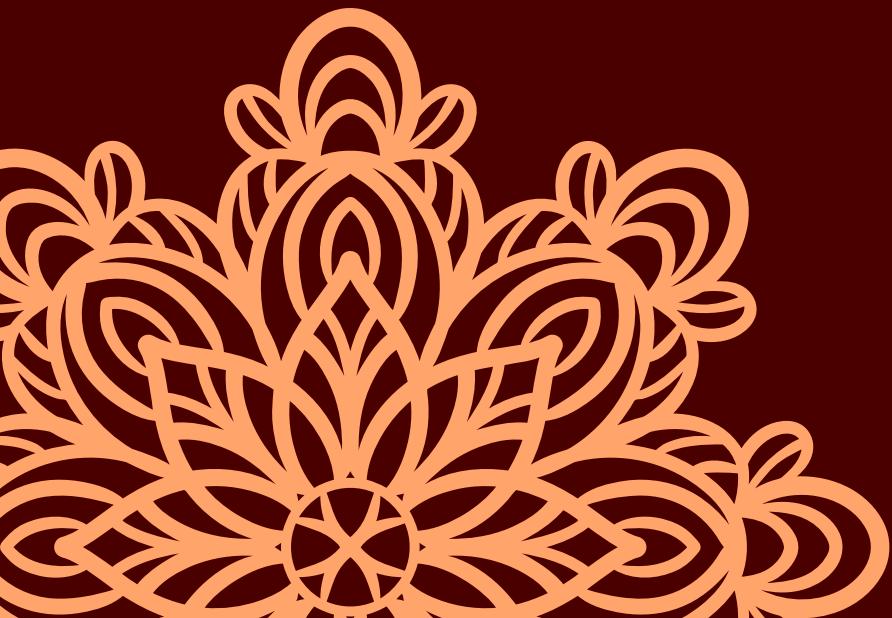




CONCLUSION

AGE GROUP ANALYSIS

The predominant age group among the buyers was 26-35 years, with a significant number of female buyers within this range.



CONCLUSION

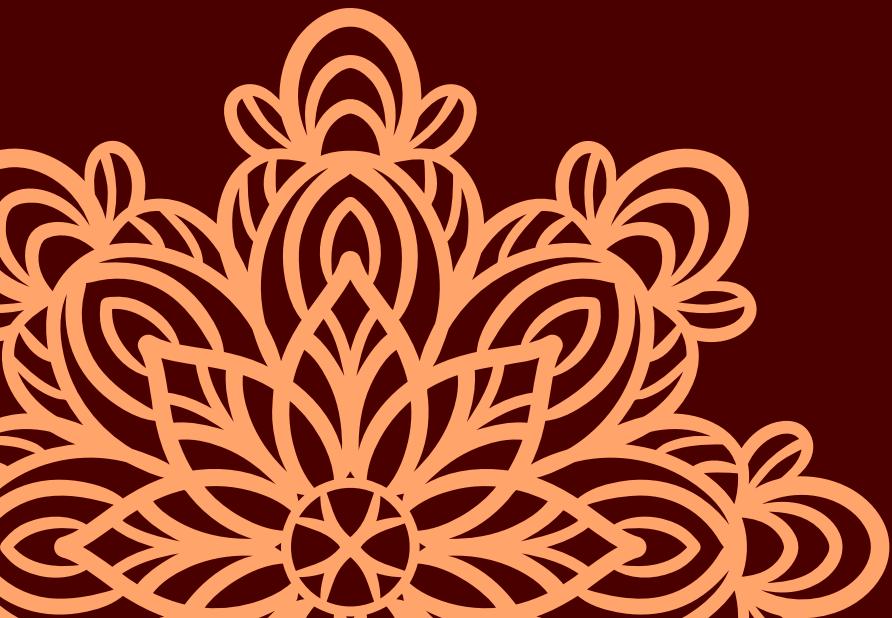
GEOGRAPHICAL ANALYSIS

Most orders and total sales were concentrated in Uttar Pradesh, Maharashtra, and Karnataka, indicating these states as major markets during the Diwali sales

CONCLUSION

MARITAL STATUS ANALYSIS

A large proportion of the buyers were married women, who also demonstrated high purchasing power, further emphasizing their significance in the consumer base





CONCLUSION

OCCUPATION ANALYSIS

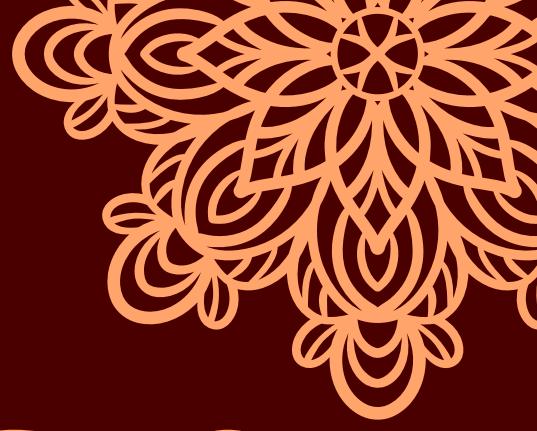
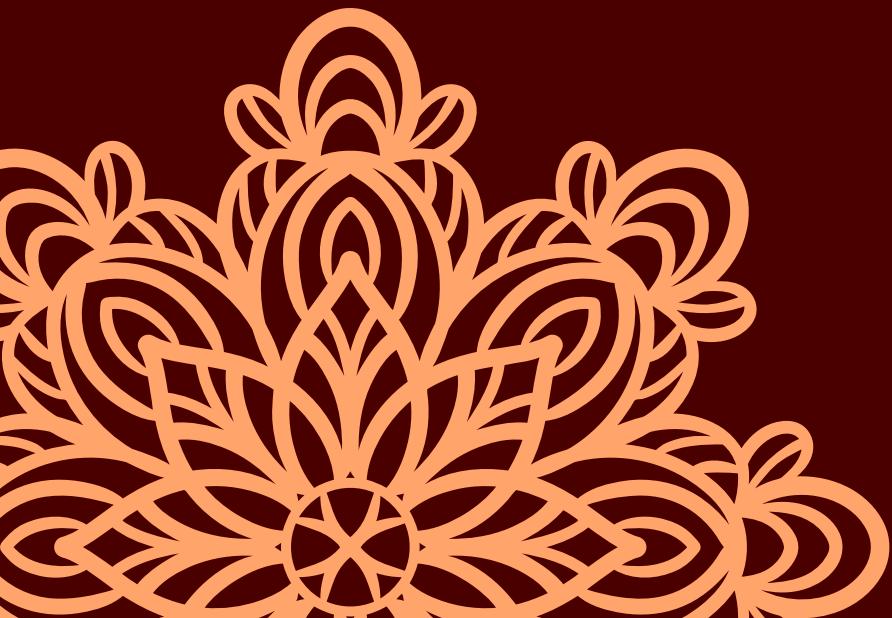
The primary sectors from which the buyers hailed were IT, Healthcare, and Aviation, indicating that professionals in these fields were prominent contributors to the sales



CONCLUSION

PRODUCT CATEGORY ANALYSIS

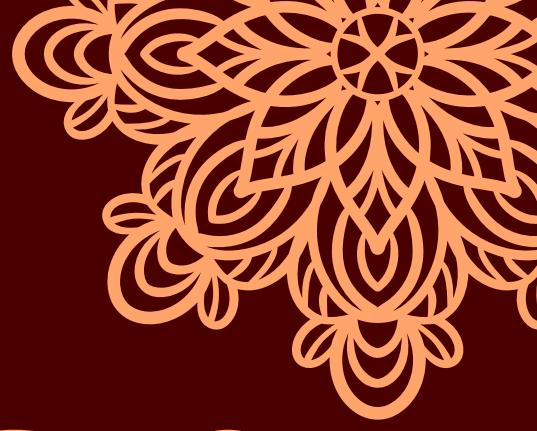
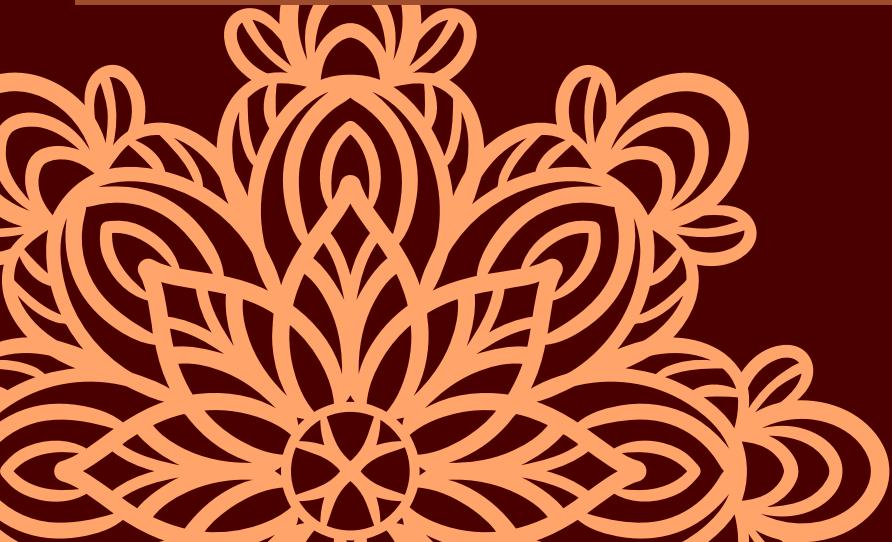
The top-selling product categories were Food, Clothing, and Electronics, highlighting these areas as key interests for consumers during the Diwali sales



CONCLUSION

TARGET DEMOGRAPHIC

The most likely buyers were married women aged 26-35 years from Uttar Pradesh, Maharashtra, and Karnataka, working in IT, Healthcare, and Aviation sectors. These consumers showed a strong preference for products in the Food, Clothing, and Electronics categories.



THANK
YOU