Zomato

Customer Segmentation Analysis

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Sprint 7 – Final Project

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Problem Statement

About Zomato: Zomato is a multinational restaurant aggregator and food delivery company. As your first assignment in the onboarding process, you're given several test datasets to analyze the business performance of restaurants and customers registered in the service.

BI-Analytics Team in Zomato is performing a Customer Segmentation Analysis:

1. Who are Zomato's customers?
2. What segments can we split them into?
3. What is their purchasing behavior?
4. What are recommendations?

Zomato Customer Segmentation Plan

Preparation

- Data Exploration – Decide what data is needed to perform analysis
- Data Cleaning – apply calculations as necessary, communize units, remove characters, etc.
- Analysis Tool – Decide which tool is best for performing the analysis and preparing a dashboard
- Set up data in preferred tool for analysis

Analysis

- Create a dashboard showing age, gender split, occupation, monthly income, education, and family size.
- Create a dashboard showing customer spending
- Create a link between dashboards, filters and other items of note
- Note data source

Report

- What is the general profile of a Zomato customers?
- What is the average number of items and amount per sales ticket?
- What is the customer profile of the biggest spend month?
- What kind of purchasing behaviors are present in the data?

Conclusion

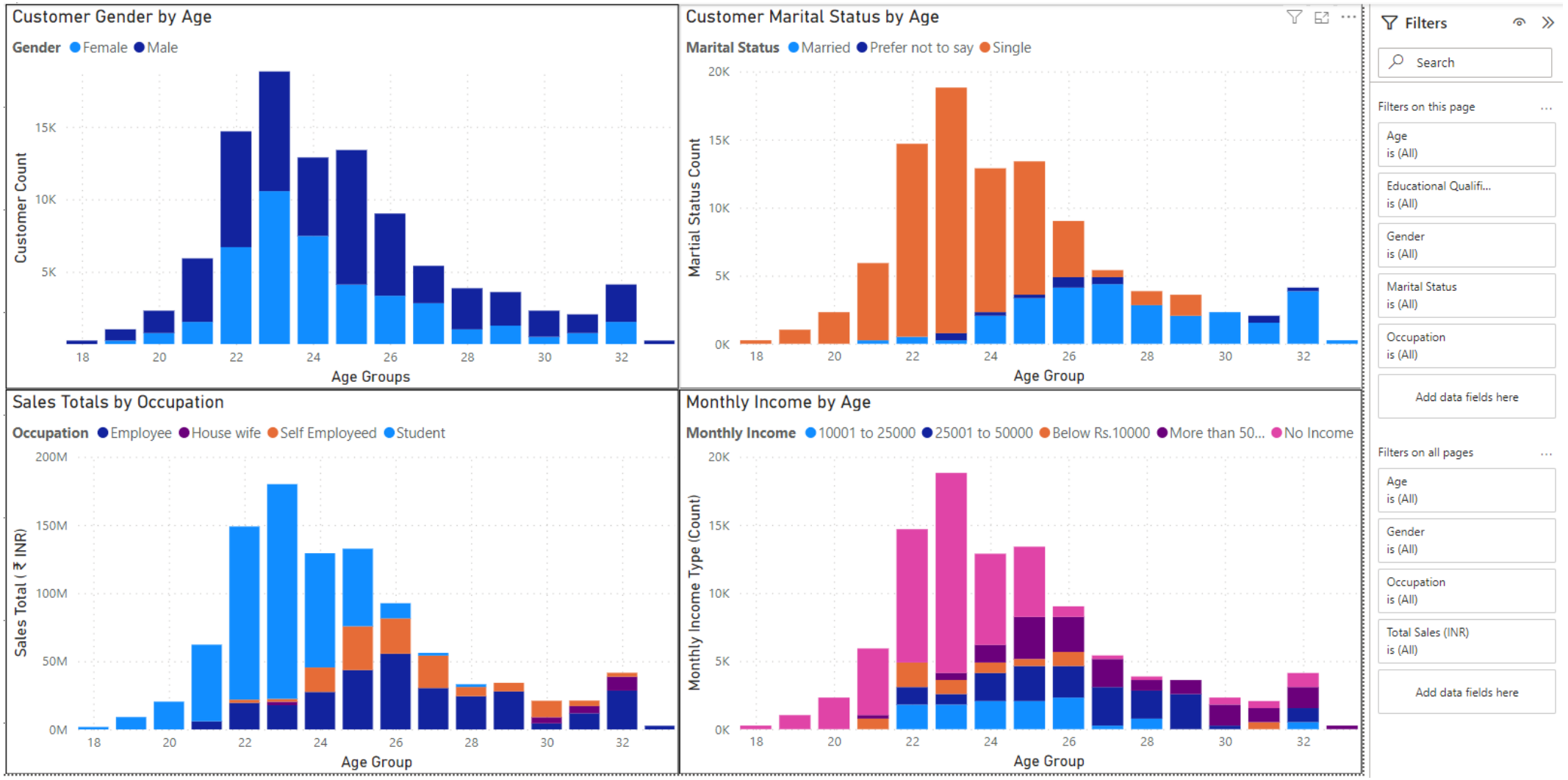
- Write a conclusion with recommendations
- Link or presentation of dashboard set up
- Additional notes

Data Preparation

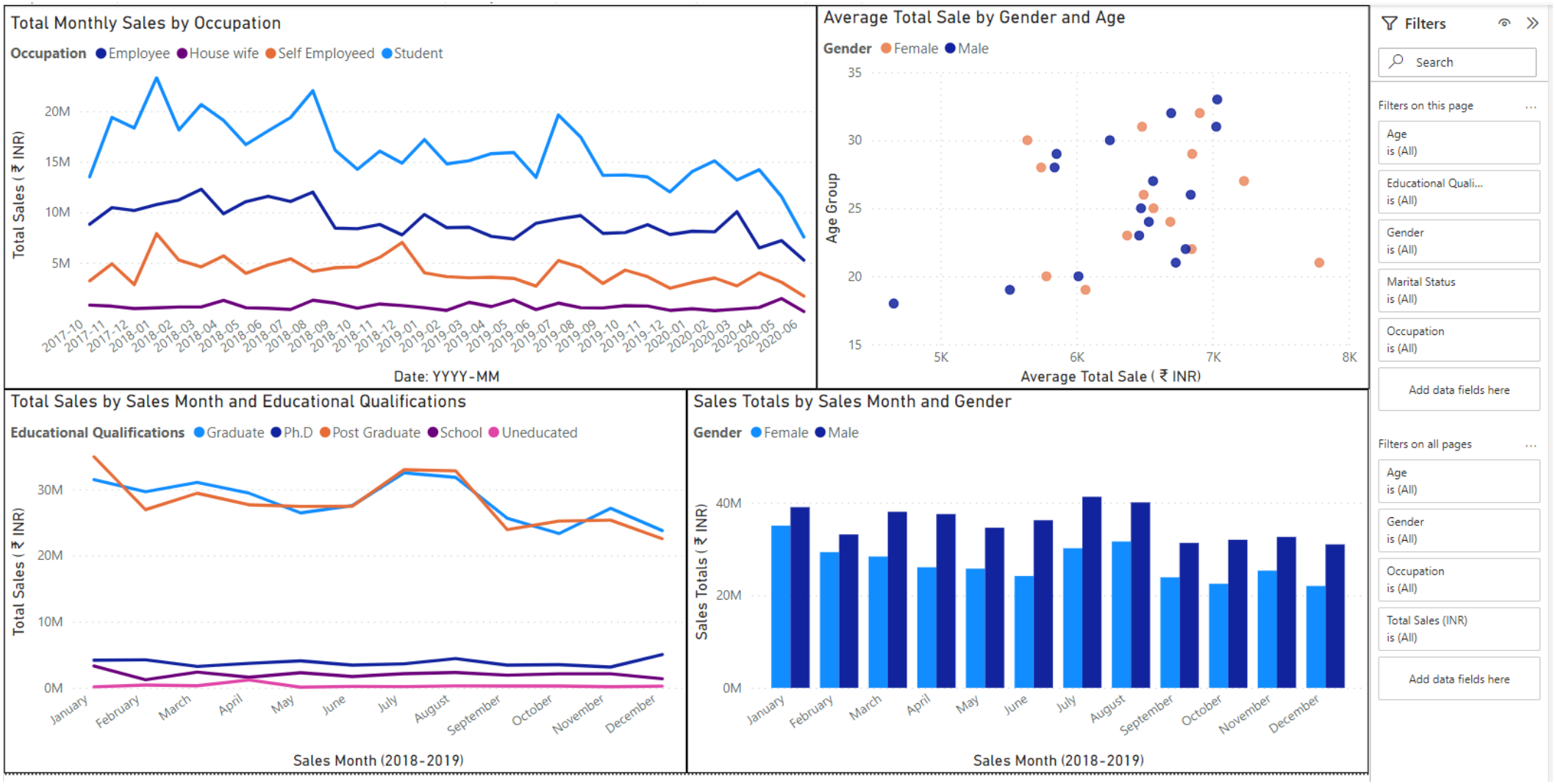
- Analysis Tool – ***Power BI***
- Data Exploration – Five data sources were provided for the analysis in CSV format – food, menu, orders, restaurant, and users. For the purposes of Customer Segmentation Analysis two files were used – users and orders.
- Data Cleaning & Calculations
  - ✓ Sales amounts were converted to the same currency (₹ INR) as sales_amnt_INR
  - ✓ User file was checked for correctly identified column formats – text vs whole numbers
  - ✓ The files User and Orders were linked with user_id
  - ✓ Order_date_new was added to change the date format to “YYYY-MM”
  - ✓ Sales_amount had two negative numbers – they were removed from the data source
  - ✓ Distinct_user_id was created to determine unique user count
  - ✓ Sale_per_qty was created to calculate the average sale per quantity

    Sale_per_qty = sales_amnt_INR / sales_qty

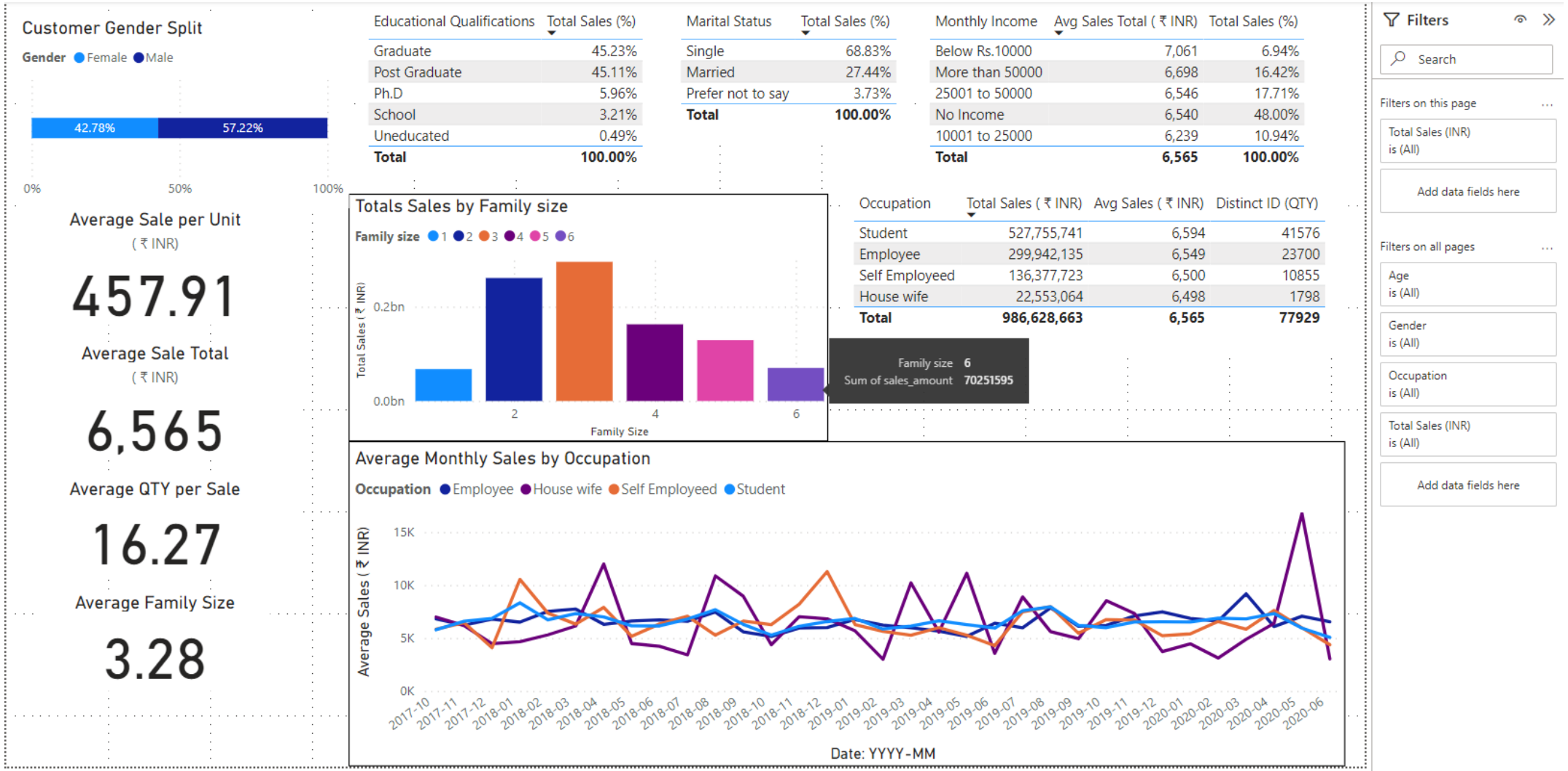
Dashboards – Age Demographics



Dashboards – Purchasing Insights



Dashboards – Summary Stats



Educational Qualifications	Total Sales (%)
Graduate	45.23%
Post Graduate	45.11%
Ph.D	5.96%
School	3.21%
Uneducated	0.49%
Total	**100.00%**

Marital Status	Total Sales (%)
Single	68.83%
Married	27.44%
Prefer not to say	3.73%
Total	**100.00%**

Monthly Income	Avg Sales Total (₹ INR)	Total Sales (%)
Below Rs.10000	7,061	6.94%
More than 50000	6,698	16.42%
25001 to 50000	6,546	17.71%
No Income	6,540	48.00%
10001 to 25000	6,239	10.94%
Total	**6,565**	**100.00%**

Occupation	Total Sales (₹ INR)	Avg Sales (₹ INR)	Distinct ID (QTY)
Student	527,755,741	6,594	41576
Employee	299,942,135	6,549	23700
Self Employeed	136,377,723	6,500	10855
House wife	22,553,064	6,498	1798
Total	**986,628,663**	**6,565**	**77929**

Conclusions

- 21-26 y/o Age Demographic Assessment:
  - Age: 75% of purchasers are ages 21-26 years old (dataset range is 18-33 years old)
  - Gender: 45% female/55% male (dataset split 43% female/57% male)
  - Marital Status: 83% are single (dataset 69% single)
  - Occupation: 66% are students/23% are employees (dataset 54% student/30% employee)
  - Monthly Income: 56% have no income (dataset 48% no income)
  - Education: 53% Post-Graduate/40% Graduate (dataset 45% Post-Graduate/45% Graduate)

- Sales Insights
  - Total monthly sales is consistently Students, Employee, Self Employed, House Wife in that order of highest to lowest month over month.
  - There is a strong correlation between age and average total sale. As age increases the average sales total increases as well. This was stronger in males than females.
  - From a sales month perspective highest sales were July and August. Whereas the lower months are Sept-Dec. Males have a higher purchasing amount due there being more of them in the sample size. This also holds true for education levels of purchasers (90% are Graduate or Post Graduate).

Conclusions

- General Stats:
  - Average Sale per Unit: 457.91 INR
  - Average Sale per Order: 6565 INR
  - Average QTY per Order: 16.27 (count)
  - Average Family Size: 3.28 (count)
  - Total Sales: 986,628,663 INR
  - Total Orders: 100,000 (count)
  - Distinct User IDs: 77,929 (count)

0 INR order - campaign

Occupation	Total Sales (₹ INR)	Avg Sales (₹ INR)	Distinct ID (QTY)
Employee	0	0	506
House wife	0	0	47
Self Employeed	0	0	204
Student	0	0	835
Total	**0**	**0**	**1592**

Total Sale > 200,000 INR order

Occupation	Total Sales (₹ INR)	Avg Sales (₹ INR)	Distinct ID (QTY)
Student	97,458,453	373,404	260
Employee	57,583,763	378,841	152
Self Employeed	27,700,705	401,459	69
House wife	4,846,491	346,178	13
Total	**187,589,412**	**378,204**	**494**

Total Sale < 100,000 INR order

Occupation	Total Sales (₹ INR)	Avg Sales (₹ INR)	Distinct ID (QTY)
Student	341,763,089	4,319	41389
Employee	193,731,143	4,276	23587
Self Employeed	86,331,625	4,161	10801
House wife	14,476,659	4,216	1794
Total	**636,302,516**	**4,281**	**77571**

Recommendations

- The data shows over 1600 purchases equal to 0 INR. This may indicate a sales initiative to bring customers in with a free offering. It is recommended exploring the effectiveness of that campaign in retaining customers. What is the frequency of purchases? What is the purchase value each time? What percentage never came back?
- 494 distinct purchasers (0.63%) have orders greater than 200,000 INR. Sales totaling 187,589,412 INR. This accounts for roughly 20% of the total sales in the data. Most of it comes from students and employees. Further research is recommended for this customer segment in terms of large orders.
- Additional investigation can be done for Housewife purchasers. The data indicates they have a comparable average sale value to Self Employed. These two groups may have similar purchasing patterns.