

## Customer Analysis

This company has been collecting transaction data from customers over the year 2021, and I have analysed this data to gain insights into their spending patterns. I have created a dashboard that has several visualizations that helps to understand how customers are spending their money and how their behaviour changes over time.

### 1. Transaction amount by merchant categories and age brackets:

- My first visualization is a stacked bar chart that shows the transaction amount by merchant categories and age brackets.
- I found that the most money is spent by customers aged 21-30 and 31-40, and the categories on which the most money is spent are e-commerce, shopping.
- Interestingly, I also found that people from 21-30 have spent a lot of money on online food.

#### Conclusion:

This visualization suggests that 21-30 and 30-40 age groups are highly active online shoppers, and can be targeted for marketing to encourage more spending.

### 2. Transaction volume trend over Time:

- My second visualization is a line chart that shows the transaction volume trend over time.
- I found that the number of successful transactions in the month of October and November 2021 were the most, while in the month of June and July it was the least.
- The transactions in November (32,245) were almost four times the transactions in July (8,041).

#### Conclusion:

This trend suggests that customers tend to spend more during a particular period, and that the company should consider offering targeted promotions during these times to encourage spending.

### 3. Relationship between customer salary and total amount spent:

- My third visualization is a table that shows the relationship between customer salary and total amount spent.
- Most customers fall into the salary range of 0-100000, with a total of 129974 customers and a total transaction amount of 534485965. This indicates that there is a large potential market among customers in this salary range.
- Although there are fewer customers in the higher salary ranges, their transaction amounts are still significant. For example, customers in the salary range of 100001-1000000 have a total transaction amount of 80860210, indicating that they may be willing to spend more on products or services.

#### Conclusion:

This suggests that we need to develop targeted marketing campaigns to cater to the different income groups in their customer base.

#### **4. The total transactions by city:**

- My fourth visualization is a map that shows the total transactions by cities in India.
- The map highlights that most transactions are concentrated in a few cities, with Bengaluru being the most prominent followed by Hyderabad, Mumbai and Chennai.
- This suggests that there may be opportunities to expand into other cities with unexplored potential. For example, the company could consider setting up marketing campaigns or partnering with local businesses to attract new customers in these areas.

##### **Conclusion:**

The company should focus on developing strategies to expand their customer base in other cities and increase its presence in the market.

#### **5. The transaction amount by transaction date and merchant category:**

- My fifth visualization is a heatmap that shows the transaction amount by transaction date and merchant category.
- We found that the categories with the most transactions are e-commerce, shopping, online food, and others.
- The months of October and November have the highest number of transactions, while July has the lowest transactions in above categories as well as overall.

##### **Conclusion:**

This suggests that the company should consider developing targeted promotions during the high-transaction months in particular categories to encourage customers to spend more.