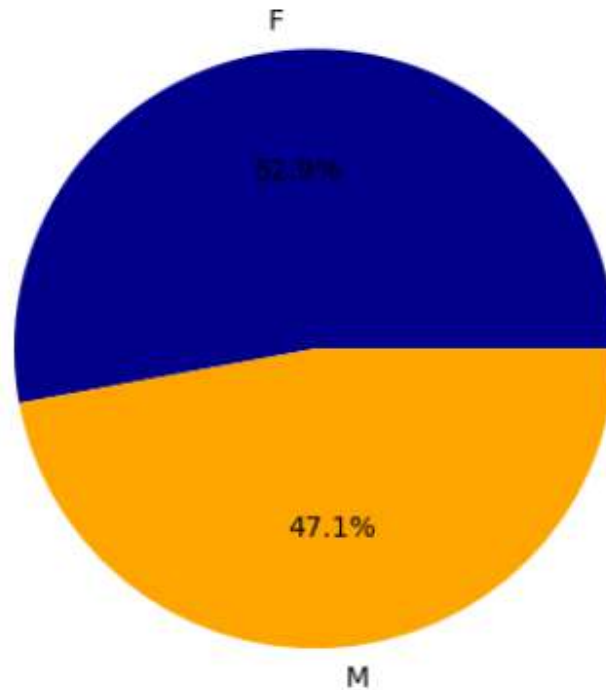


Distribution of Customers by Gender



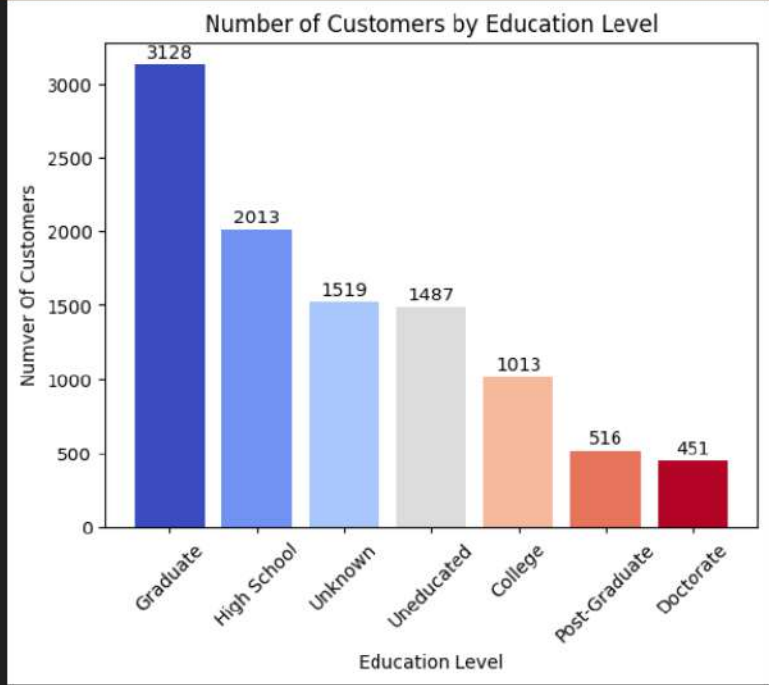
Females make up the majority of customers:

Females: 52.9% & Males: 47.1%

The distribution is relatively balanced, with a slight female majority:

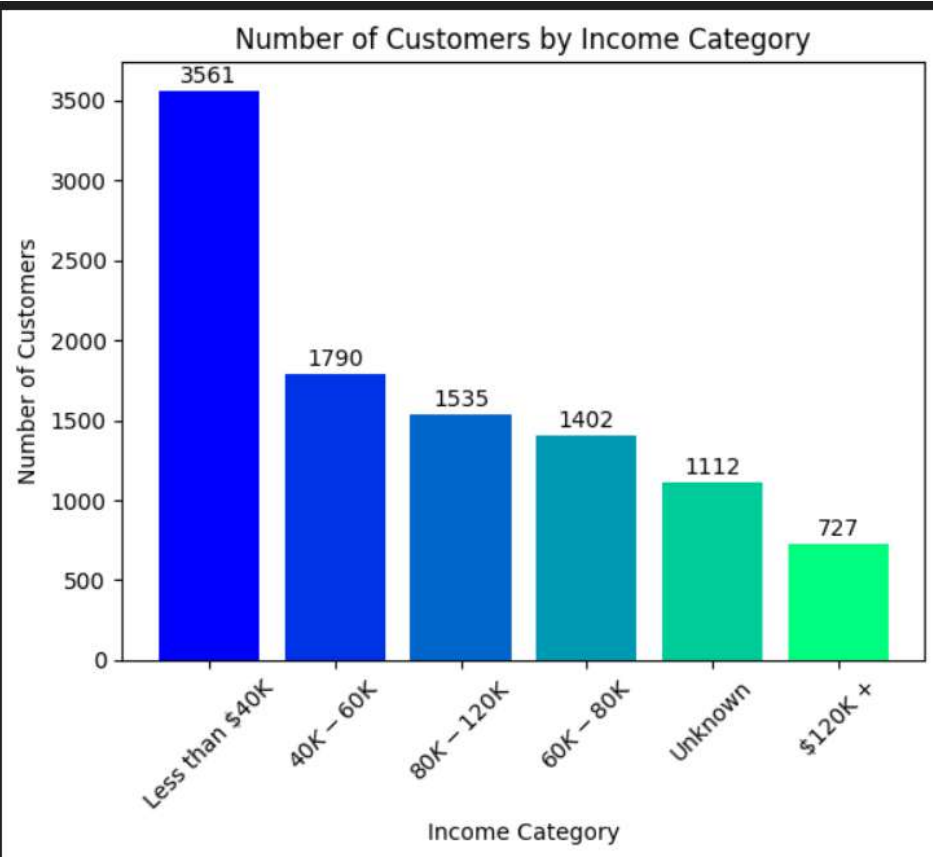
The gender gap is small (about 5.8%), indicating a fairly even distribution.

However, females are slightly more represented in this dataset.

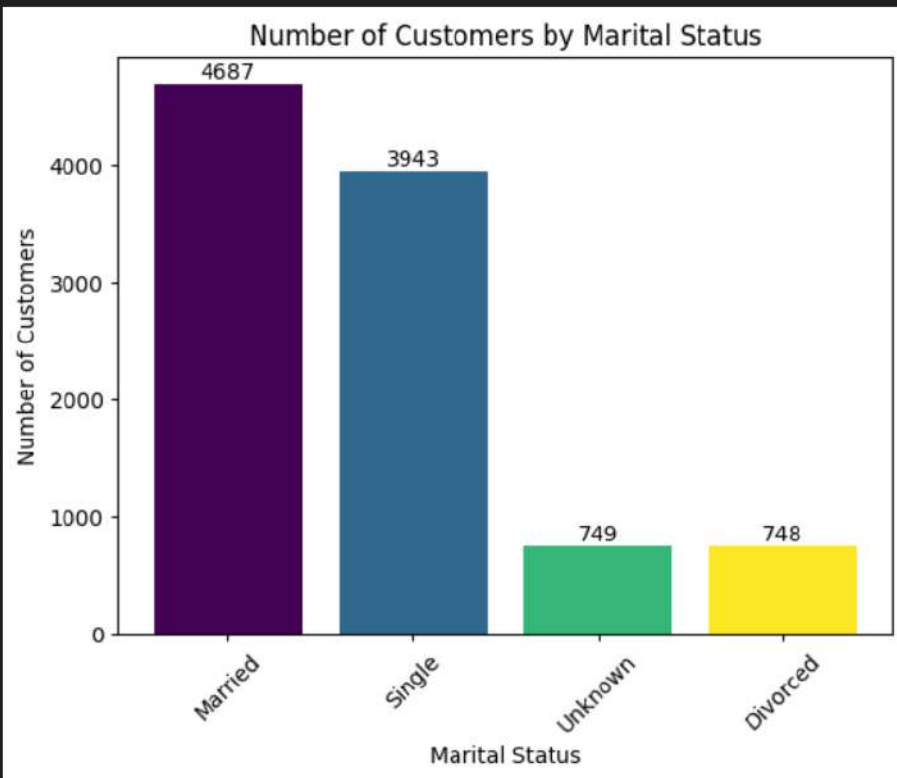


Most customers are highly educated: The largest group of customers are graduates, followed by those with a high school education.

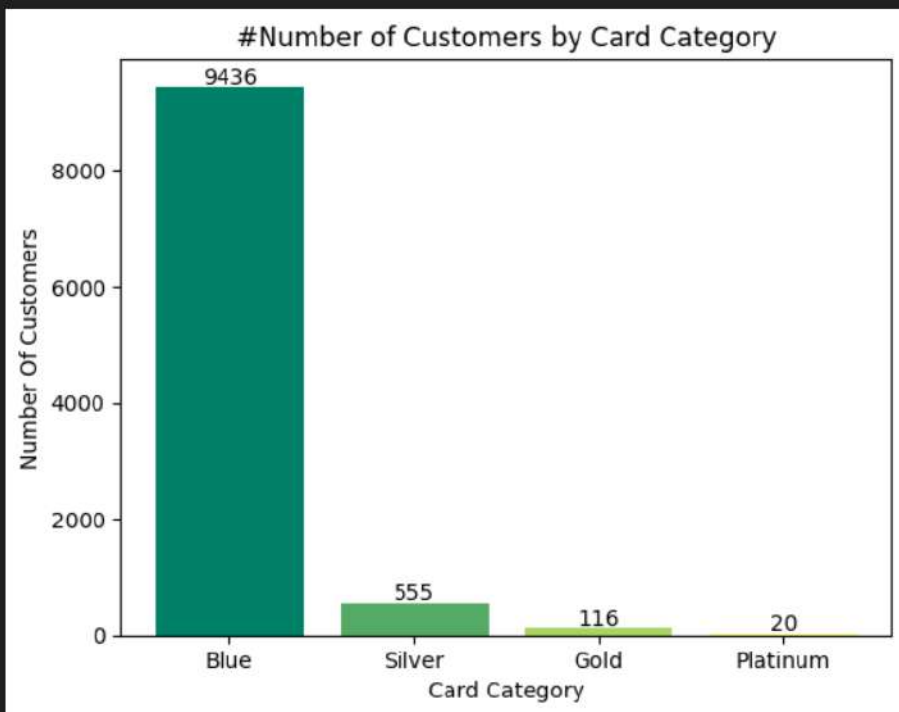
Customer numbers decrease with higher education: Generally, as the education level increases (beyond a graduate degree), the number of customers declines. The smallest group of customers holds a doctorate.



The majority of customers fall into the lowest income bracket of less than \$40K, and the number of customers decreases significantly as income rises. This highlights income as a primary factor defining the main customer base.



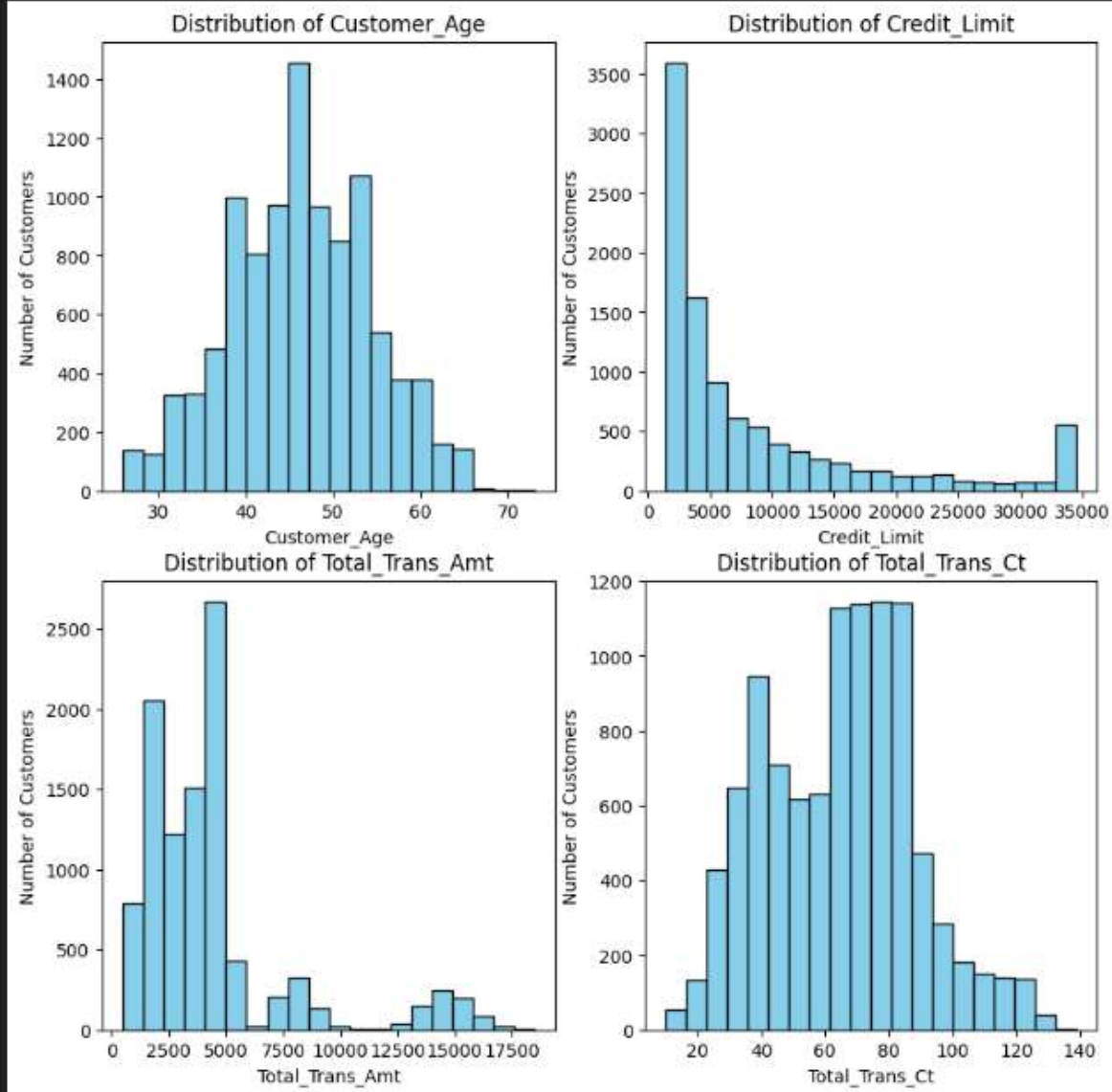
The customer base is overwhelmingly made up of married and single individuals. These two groups account for the vast majority of customers, while the number of divorced customers and those with an unknown marital status is very low.



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The customer base is heavily dominated by Blue cardholders, who make up the vast majority of users. All other card types—Silver, Gold, and Platinum—are used by a very small fraction of customers.

Distribution of Numeric Columns



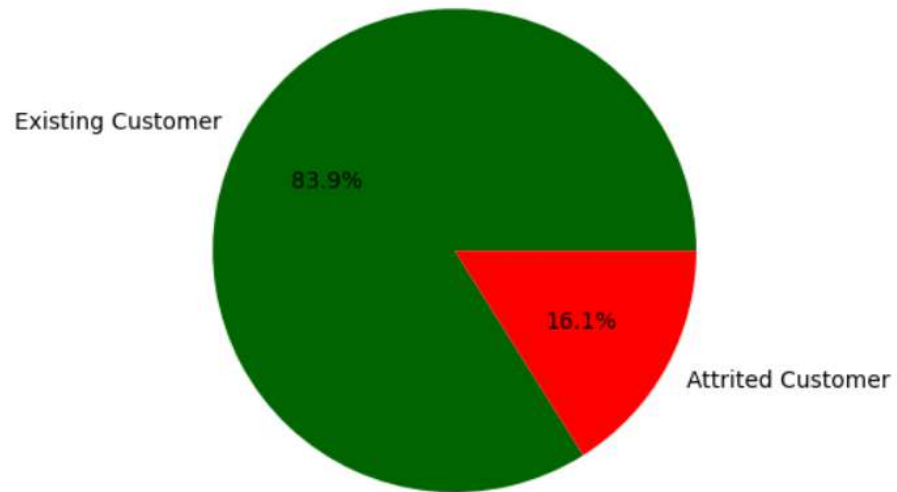
Age: Most customers are between 40 and 50 years old.

Credit Limit: A large majority of customers have a low credit limit, typically less than \$5,000.

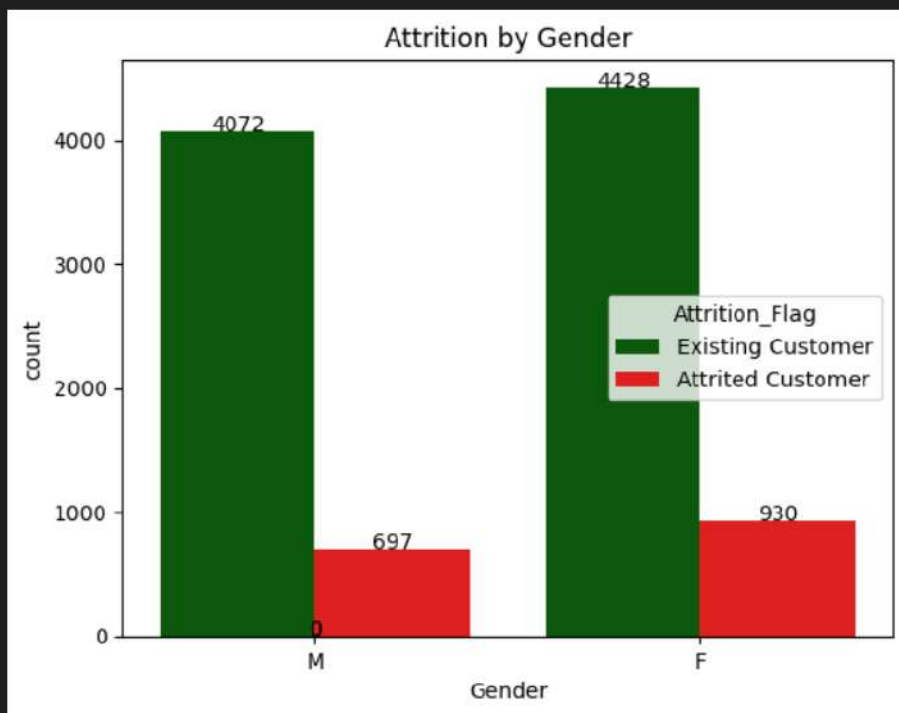
Total Transaction Amount: The total transaction amount for most customers is also low, generally under \$5,000.

Total Transaction Count: The number of transactions per customer is highest between 70 and 90, with fewer customers making a very high or very low number of transactions.

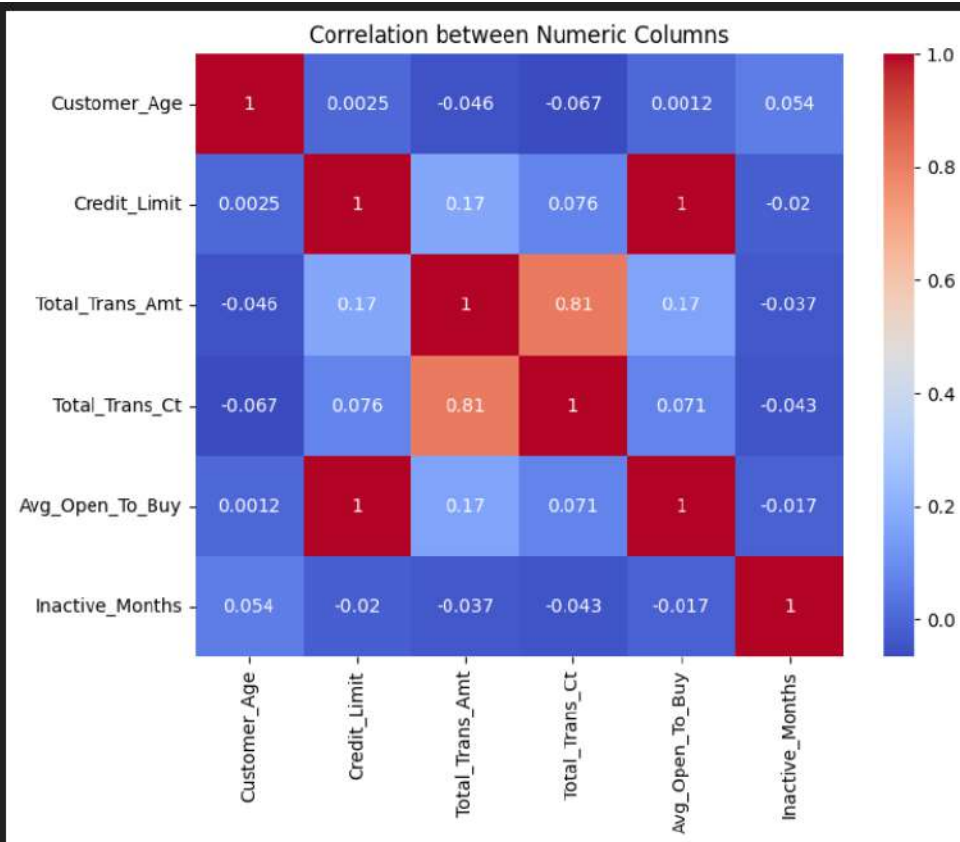
Customer Attrition Distribution



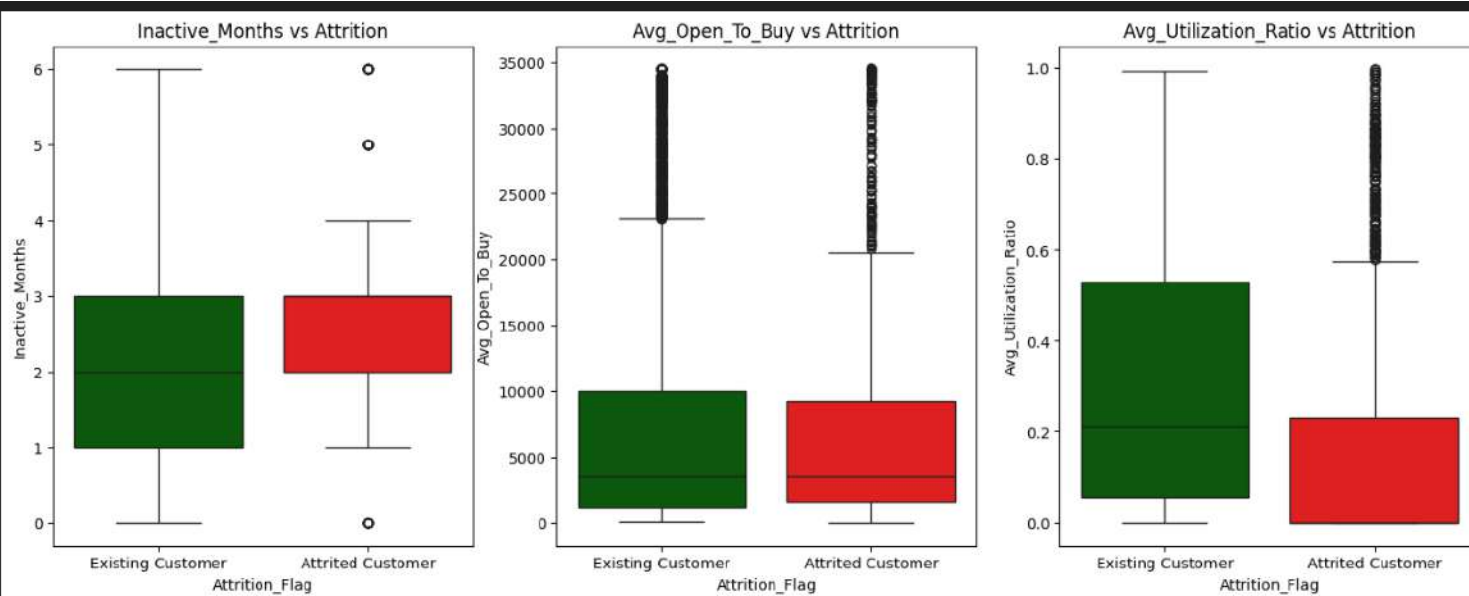
The vast majority of the customer base, 83.9%, are existing customers. This means that only a small portion, 16.1%, of customers have left the service.



Female customers have a slightly higher number of churned accounts than male customers, but gender does not appear to be a major factor in customer attrition since both genders have a similar proportion of existing and attrited customers.



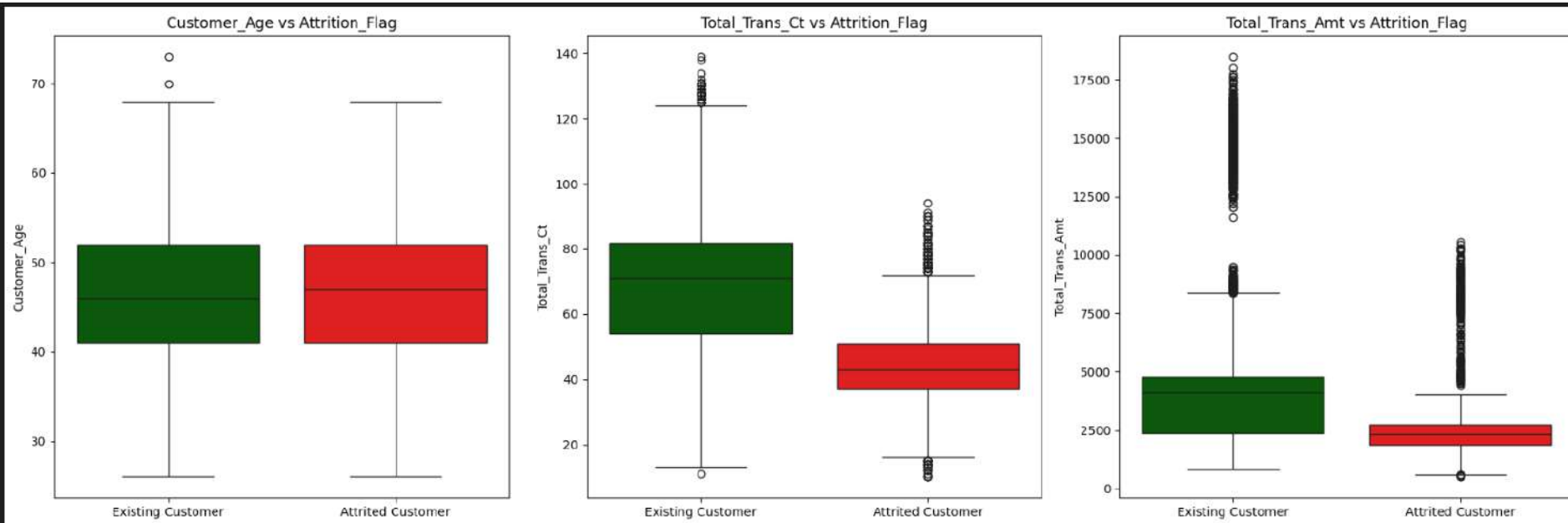
The chart shows that Total Transaction Amount and Total Transaction Count are strongly and positively correlated, meaning that as the number of transactions increases, the total value of those transactions also tends to increase. All other correlations between the variables (Customer Age, Credit Limit) are very weak.



Inactive Months: Customers who leave tend to have a higher average number of inactive months than existing customers. This suggests inactivity could be a sign of future attrition.

Credit Utilization: Attrited customers have a lower average credit utilization ratio, meaning they use a smaller portion of their available credit limit. This indicates that low engagement with the credit card is linked to higher churn.

Open to Buy: Existing customers have a higher average "open to buy" amount (available credit) compared to those who have left. This may be because existing customers tend to have higher credit limits.



The analysis showed that customers who leave the company tend to have significantly lower transaction counts and spending. Therefore, it is important to focus on engaging them with offers or monitoring low-usage customers before they churn

Recommendations

- The bank can focus on engaging customers with low activity (high Inactive_Months) to retain them.
- Monitoring customers with low card utilization (low Avg_Utilization_Ratio) may help reduce attrition.
- Analyzing the financial behavior of customers with low Total_Trans_Amt can assist in offering personalized promotions to retain them.