

Assignment-Analytics Intern Magicpin

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Here,I used Python for Analysis and Visualization. We can use SQL, Power BI, Tableau and Excel. But I opted for Python for effective reports.

Here, you can access my Python code which include the analysis and visualization: -

[Click here to Access,My Analysis and Visualization Code](#)

Graphs

Distribution of Transaction Types [Graph-1]

- The most common transaction type is CARD_PAYMENT, followed by TOPUP, ATM and BANK_TRANSFER.
- Other transaction type, such as EXCHANGE (P2P Transfers), are comparatively less frequent.

Number of Transactions per User [Graph-2]

- Most users have a low number of transactions, with a significant number of users having just 1 or 2 transactions.
- A smaller subset of users have a higher frequency of transactions, indicating a variation in user activity levels.

Transaction Volume by Currency [Graph-3]

- The most used currency for transactions is "GBP", with "EUR" being the second most used.
- This gives an indication of the geographic distribution of the users, suggesting that most users are likely from the Eurozone, followed by the UK.

Number of Transactions Over Time [Graph-4]

- There's a clear upward trend in the number of transactions over time. This indicates growing user activity or possibly an increasing user base.
- There are certain peaks in the transaction counts, suggesting specific days or periods when transaction activity was particularly high.

Total Transaction Amount per User [Graph-5]

- Most users have a low total transaction amount, with a significant peak around the 0-10,000 range.
- A smaller number of users have a higher total transaction amount, suggesting that while many users transact smaller amounts, there are "power users" who transact significantly larger sums.

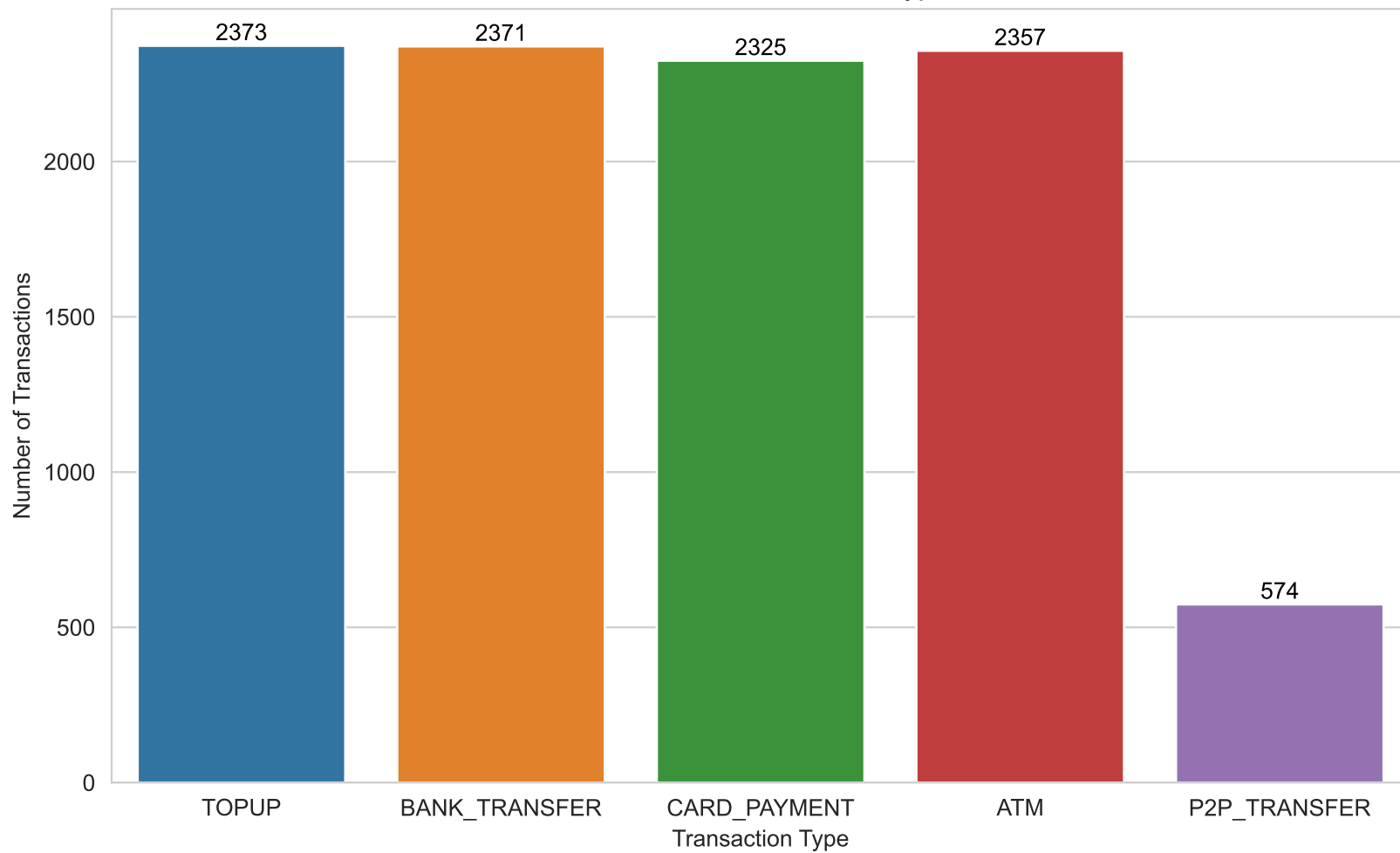
Monthly Transaction Count and Total Value[Graph-6]

- **Fluctuating Transaction Count:** The total number of transactions (in green) seems to fluctuate over time without a clear increasing or decreasing trend.
- **Steady Total Value:** The total value of transactions (in blue) appears to remain relatively steady, with minor fluctuations, indicating that while the number of transactions may vary, their combined value remains consistent.

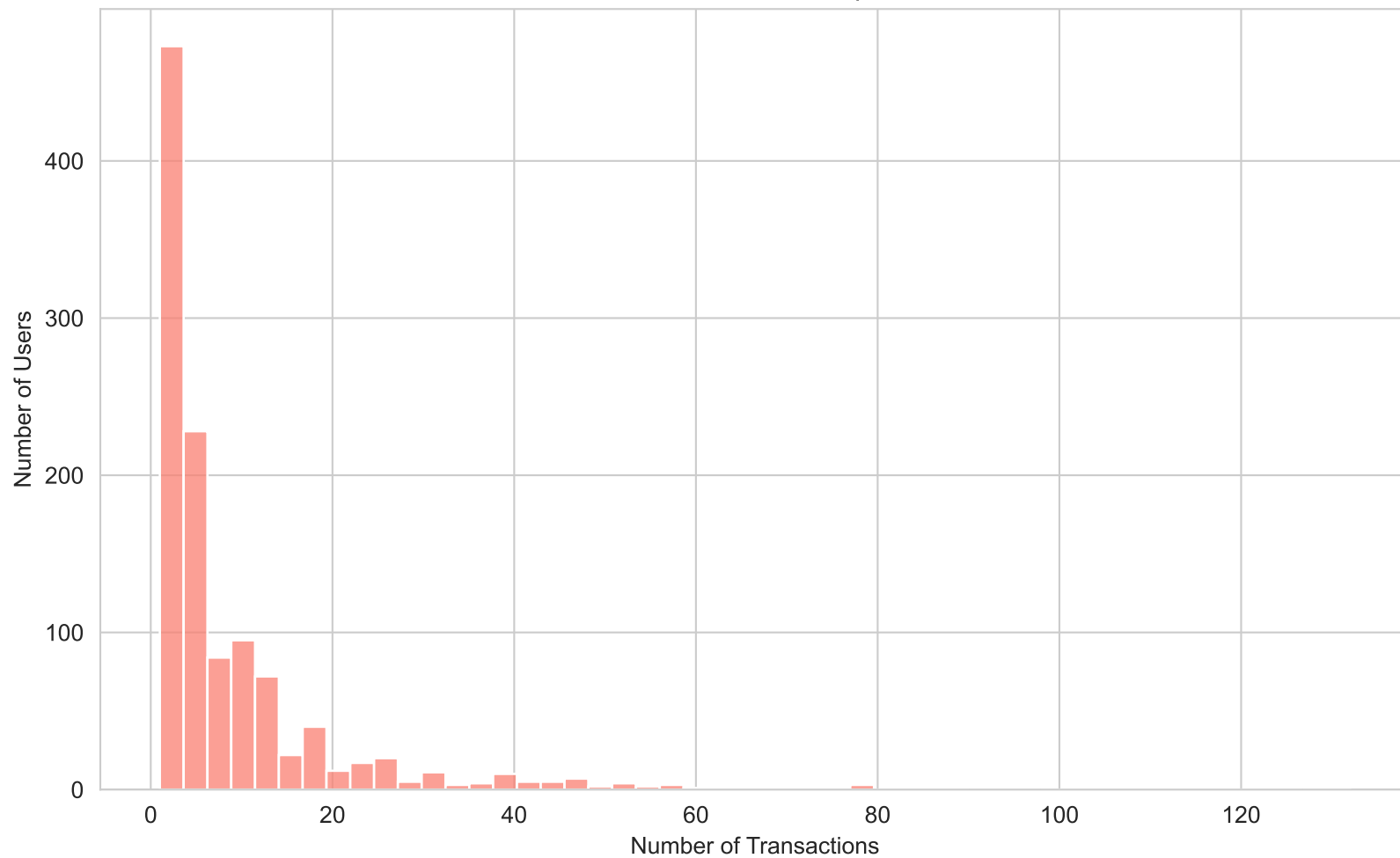
Daily Transaction Count and Total Value[Graph-7]

- **Weekend Drop:** Both the number of transactions and their total value seem to decrease on weekends, particularly on Sundays.
- **Midweek Peak:** There appears to be a slight peak in transaction activity around Wednesday.
- **Consistent Value Distribution:** While the number of transactions fluctuates throughout the week, the total value remains fairly consistent, with only minor changes.

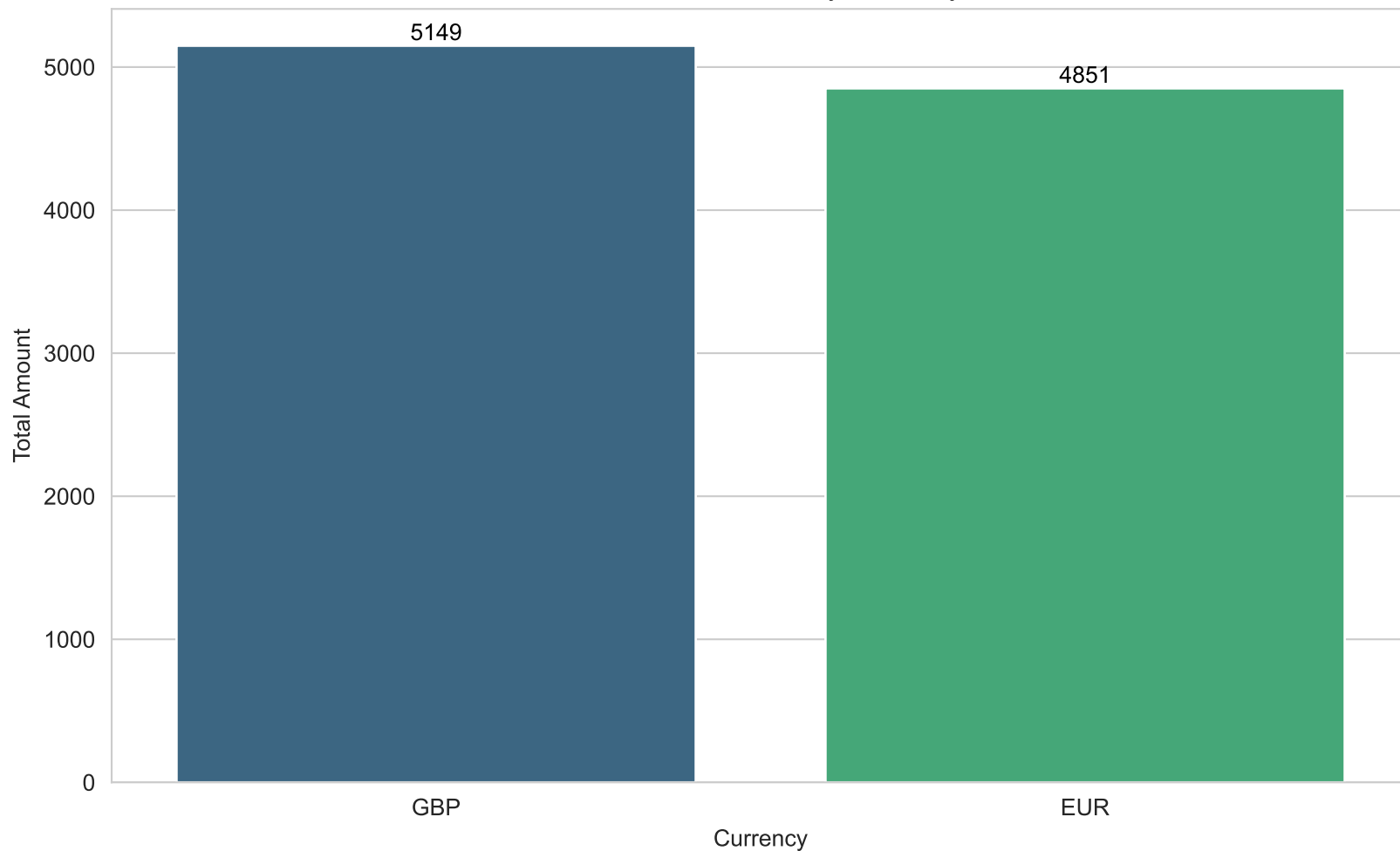
Distribution of Transaction Types



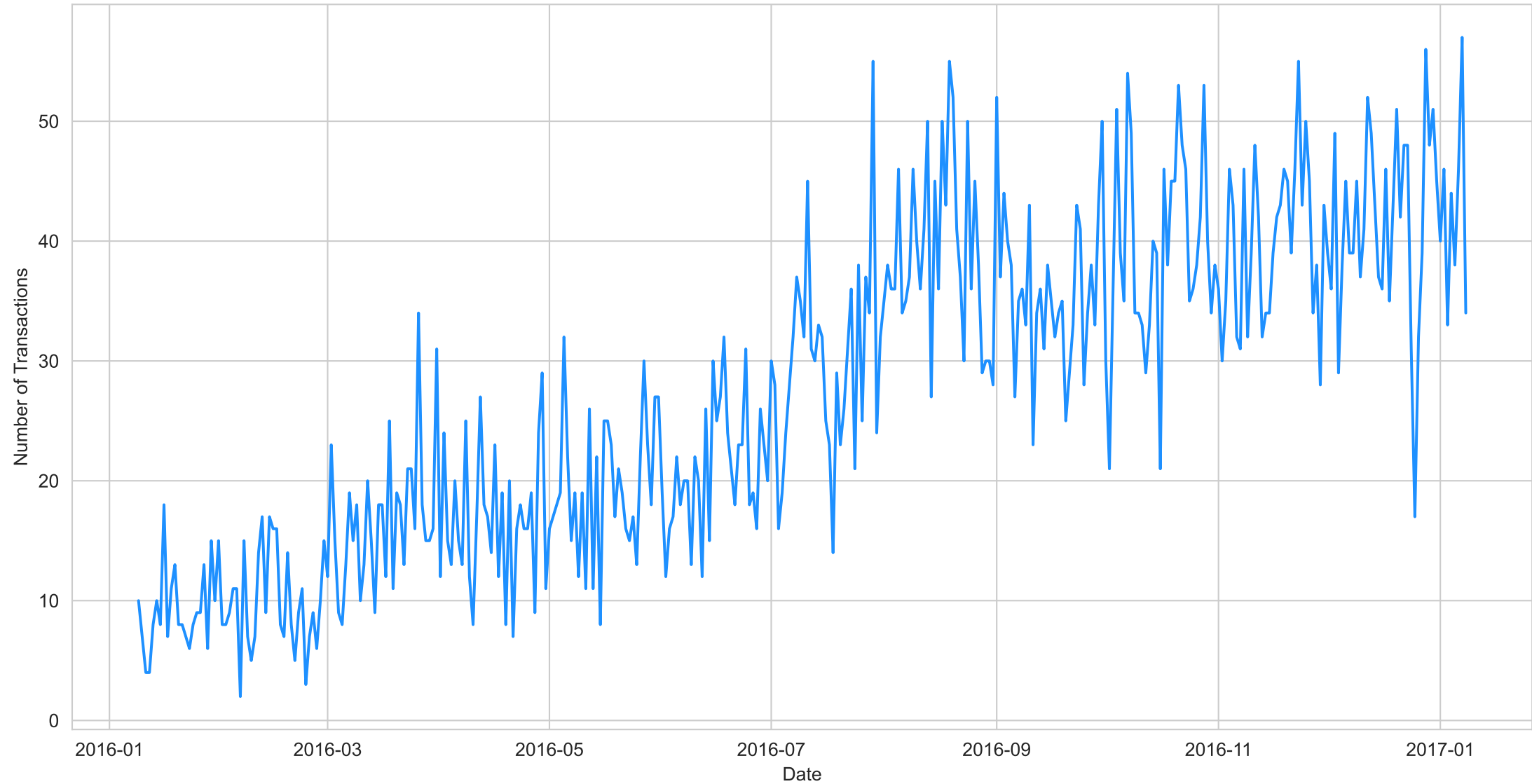
Number of Transactions per User



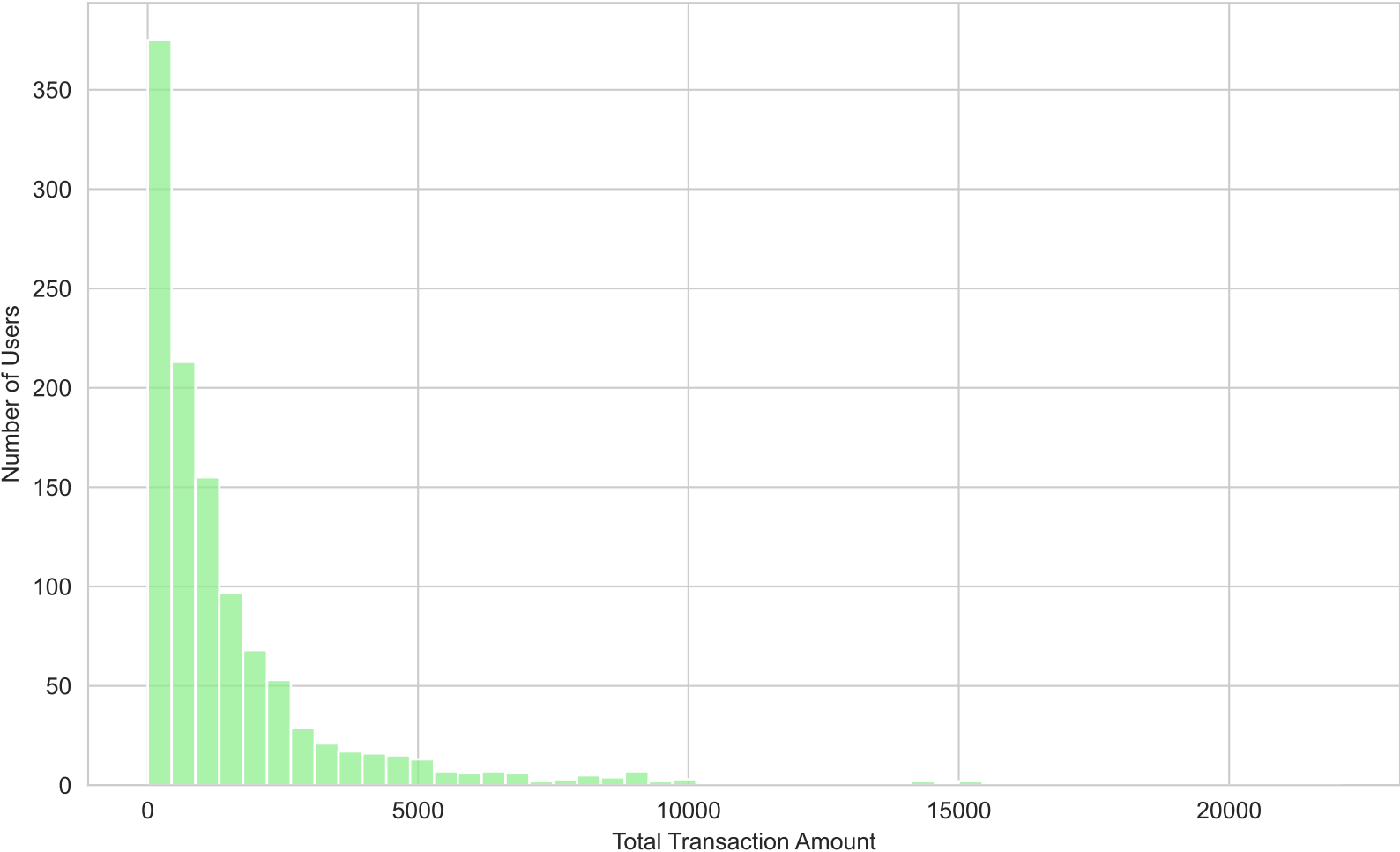
Transaction Volume by Currency



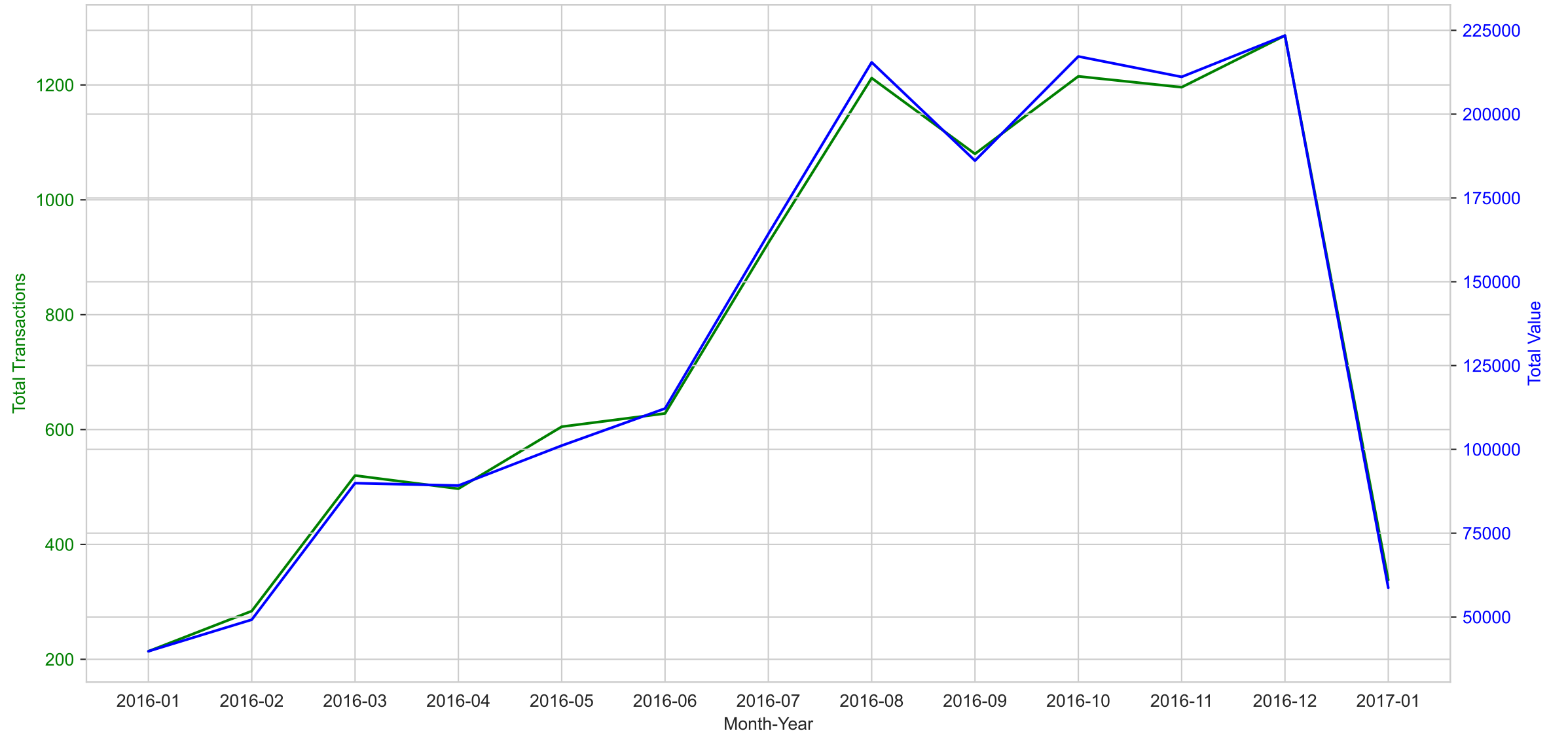
Number of Transactions Over Time



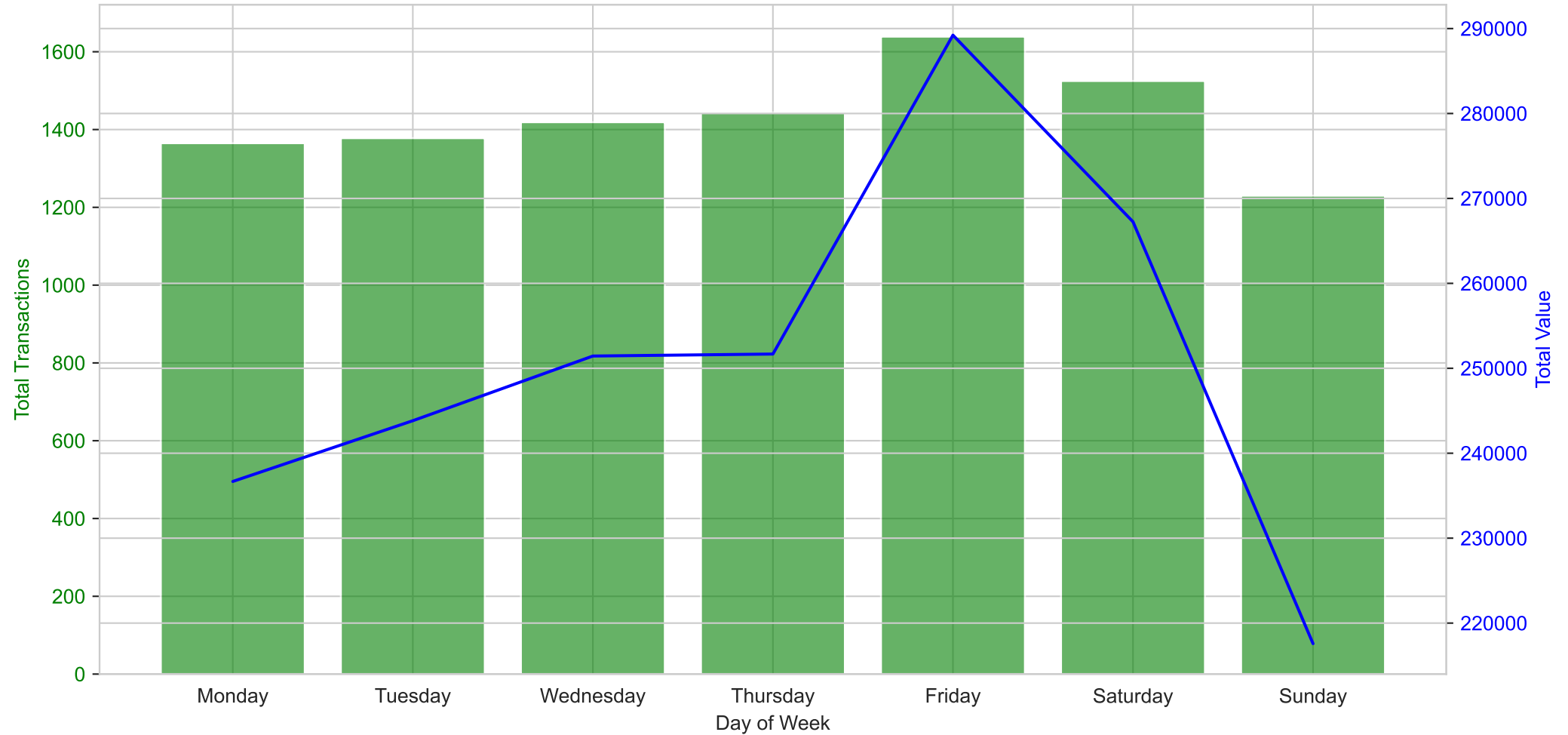
Total Transaction Amount per User



Monthly Transaction Count and Total Value



Daily Transaction Count and Total Value



1. Significant Number of Users with Only One Transaction [230 Numbers]- -(Graph-2)

Why is this a problem?

A considerable number of users trying the platform but not returning for subsequent transactions indicates potential issues with user retention.

Potential Root Causes:

- User experience might not be satisfactory.
- Lack of incentives for users to return.
- Users might be using the platform for a one-time need.

Assumptions:

- These users did not find enough value to return for a second transaction.

2. Dominance of Certain Users in Transaction Volume

Why is this a problem?

High dependency on a few users for transaction volume can be risky. If these users decide to switch platforms or reduce their transaction frequency, it can have a significant impact on the platform's transaction metrics.

Potential Root Causes:

- These users might be business entities or "power users" who have a higher need for transactions.

Assumptions:

- These users' behavior remains consistent over time.

Additional Data/Steps:

- Profile these top users to understand their transaction patterns and needs.

3. Total Users: 1,134(Unique)

Potential Problem:

If this number is significantly lower than the number of registered users or the platform's target, it indicates low user engagement or conversion.

Potential Root Causes:

- The platform's onboarding process might be cumbersome or not user-friendly.
- Marketing efforts might not be reaching the target audience.
- The platform might lack features or benefits that attract users to make transactions.

Assumptions:

- All registered users have the same likelihood of making transactions.
- The dataset captures all transactions made by users during the period.

4. Transaction Volume by Currency-(Graph-3)

Potential Problem:

A significant imbalance between currencies could indicate a market or demographic that's underserved or not actively using the platform.

Potential Root Causes:

- Marketing and outreach might be more effective in one region over another.
- The platform might offer better rates or features for one currency over the other.

Assumptions:

- The platform aims for a balanced transaction volume across different currencies.
- Users are equally distributed across regions or currencies.

5. Monthly Transaction Count and Total Value-(Graph-6)

Fluctuating Transaction Count: The total number of transactions (in green) seems to fluctuate over time without a clear increasing or decreasing trend.

Steady Total Value: The total value of transactions (in blue) appears to remain relatively steady, with minor fluctuations, indicating that while the number of transactions may vary, their combined value remains consistent.

Why is it a problem and potential root causes?

Inconsistent Growth: The fluctuating transaction count might indicate inconsistent growth, which can be concerning for business stability. A steadily rising trend would be more desirable.

Potential Root Causes:

- **Marketing Efforts:** Inconsistent marketing campaigns or promotions might lead to fluctuations in the number of transactions.
- **External Factors:** Economic factors, competitors' activities, or global events might influence transaction behavior.
- **Platform Stability:** Technical issues or downtimes might affect the transaction count during specific periods.

High-Level Solutions:

- **Consistent Marketing:** Ensure regular and consistent marketing campaigns to maintain a steady influx of transactions.
- **User Feedback:** Gather feedback from users to understand any barriers or challenges they face, which might be causing fluctuations.
- **Monitor External Factors:** Keep an eye on the external environment, including competitors' activities, to anticipate and respond to changes.
- **Ensure Platform Stability:** Regularly monitor and maintain the platform to ensure it's always accessible and functional for users.

6. Daily Transaction Count and Total Value-(Graph-7)

- **Weekend Drop:** Both the number of transactions and their total value seem to decrease on weekends, particularly on Sundays.
- **Midweek Peak:** There appears to be a slight peak in transaction activity around Wednesday.
- **Consistent Value Distribution:** While the number of transactions fluctuates throughout the week, the total value remains fairly consistent, with only minor changes.

Why is it a problem and potential root causes?

Operational Implications: The decrease in transaction activity over the weekend might have implications for staffing, marketing campaigns, or other operational decisions.

Potential Root Causes:

- **User Behavior:** Users might be more engaged with the platform during weekdays, perhaps due to work-related transactions or routines.
- **Marketing Activities:** Promotions or campaigns might be more active during weekdays, leading to a peak in midweek activity.

High Level Solutions

Weekend Campaigns: Consider launching weekend-specific campaigns or promotions to boost weekend transaction activity.

Operational Adjustments: If the weekend drop is consistent and expected, consider adjusting operational activities (like staffing or customer support) based on this trend.

User Engagement: Engage users with content, notifications, or features that might be more relevant to them during weekends.