

SQL-Based Fintech & UPI Analytics Project

Project Overview

This project focuses on analyzing user behavior in a simulated Fintech/UPI application. Using advanced SQL queries, we aim to identify key business insights such as churn rate, active users, campaign effectiveness, transaction trends, and customer support impact. The analysis helps understand user engagement, retention, and areas for business growth.

Dataset Summary

- **Records analyzed:** Over 100,000 rows
 - **Key Tables:**
 - users (user_id, signup_date, uninstall_date)
 - logins (user_id, login_date)
 - transactions (user_id, txn_date, txn_type, status)
 - uninstalls (user_id, uninstall_date)
 - campaigns (campaign_type, sent_count, success_count)
 - tickets (user_id, ticket_type, ticket_status)
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Business Questions Solved

1. How many total and active users logged in over the last 30 days?
 2. How many users have been inactive for over 60 days?
 3. How many users uninstalled the app within 7 days (early churn)?
 4. What is the churn rate on a monthly basis?
 5. How many users didn't place a transaction in the last 90 days?
 6. Which users returned after receiving campaign offers?
 7. Which campaign had the highest conversion rate?
 8. What are the most used transaction types?
 9. Which users faced more than 4 failed transactions?
 10. What are the most common ticket types in support complaints?
 11. How many uninstalls occurred after unresolved tickets?
 12. How many users re-engaged post marketing campaigns?
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Insights & Findings

- **User Logins (Last 30 Days):**
 - Total Logins: **3,238**
 - Active Users: **2,772**
 - **User Inactivity:**
 - Users inactive since 60 days: **5,189**
 - Users with no transactions in last 90 days: **4,872**
 - **Early Churn:**
 - Early uninstalls (within 7 days): **189**
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Campaign Performance

| Campaign Type | Requests Sent | Success Count | Success Rate (%) |
|---------------------|---------------|---------------|------------------|
| Cashback Offers | 996 | 523 | 52.51% |
| Refer & Earn | 995 | 487 | 48.94% |
| Personalized Offers | 1000 | 485 | 48.50% |
| Win-back Offers | 1000 | 480 | 48.07% |

- **Total Users Returned Post-Campaign: 1,244**
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Transaction Insights

- Most commonly used transaction types:
 1. UPI QR
 2. Bill Payments
 3. Recharges
 - **High-Risk Users:**
 - **191** users had **4+ failed transactions**, indicating potential frustration or technical issues.
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Customer Support Analysis

- **Top Ticket Complaints:**
 - Slow App Performance

- KYC Verification Issues
 - Cashback Not Received
 - Payment Failed
 - **Critical Insight:**
 - **277** unresolved tickets were directly followed by app uninstalls.
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Recommendations

- Implement loyalty rewards or personalized win-back campaigns focused on users inactive for over 60–90 days.
 - Prioritize app speed and KYC automation, as they are top complaint categories.
 - Investigate and reduce failed transaction rates through better API handling and UI feedback.
 - Enhance referral systems and reward tiers to improve Refer & Earn conversion rates.
 - Develop a separate support system to follow up with users who raised tickets but haven't interacted since.
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Conclusion

This intermediate SQL project bridges real-world UPI/Fintech challenges and practical analytics. It offers quantifiable ways to:

- Detect user churn,
- Improve retention through campaigns,
- Understand pain points using SQL logic and aggregate functions.