

Anomaly Detection in Credit Card Transactions



Total Transactions

631K

Total Fraud Trns.

383

Avg Normal Trns. Amt.

161.5K

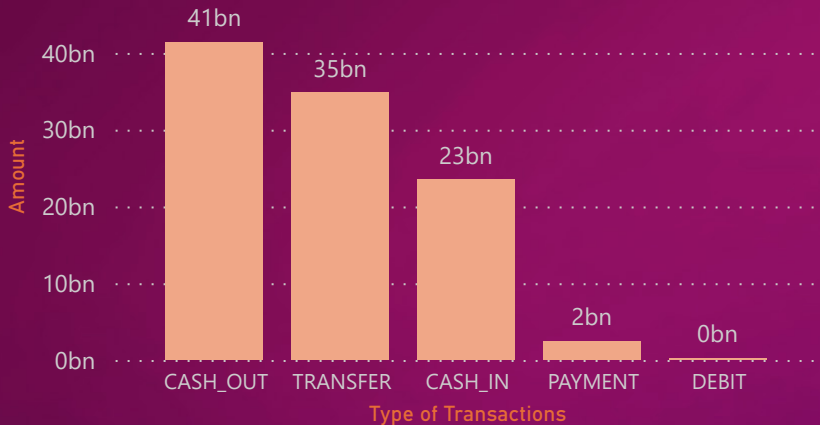
Avg Fraud Trns. Amt.

882K

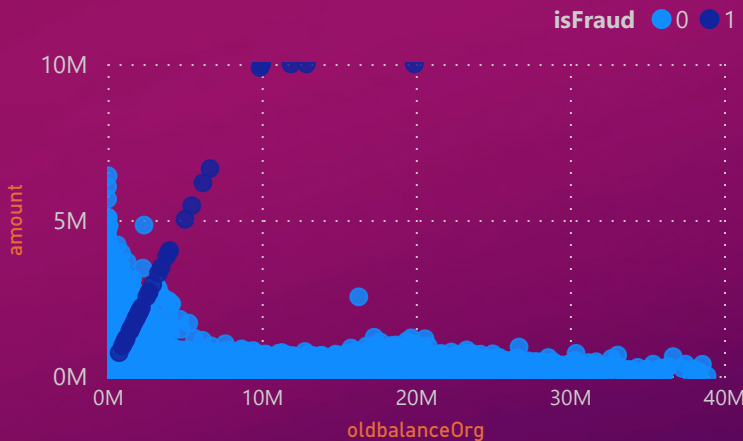
%age Fraud Trns.

0.06%

Transctions Amt. by type



OldbalanceDest and amount



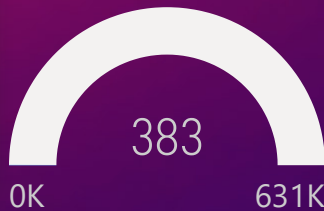
Highest Fraud Trns. Amt.

10.00M

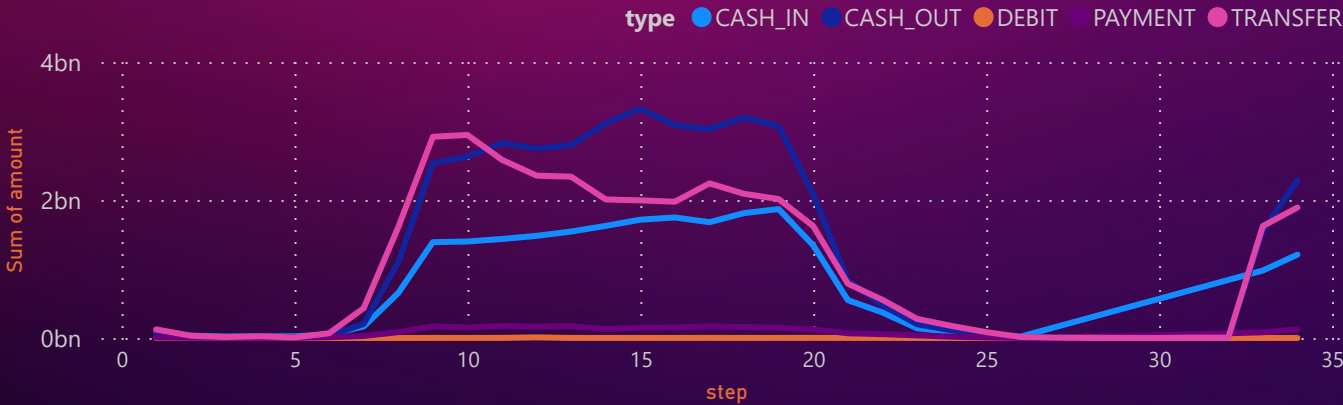
Diff in Fraud/Normal Trns Amt

3.58M

Fraud/Total Trns



Sum of amount by step and type



High Occurence of Fraud Trns.

nameDest	Count of amount
C185805228	2
C200064275	2
C410033330	2
Total	6

Top 10 Trns by Merchant

nameDest	Count of amount
C985934102	95
C97730845	74
C665576141	85
C451111351	76
C248609774	87
C2083562754	85
C1883840933	60
C1590550415	83
C1360767589	79
C1286084959	89
Total	813

ANALYSIS

- As per the provided dataset, It was analyzed that there are multiple fraudulent transactions present.
- In the given dataset, there are 631K (6,30,895) transactions in total, out of which 383 transactions are fraudulent transactions, making it 0.06% of total. This indicates the proportion of fraud transactions in the dataset.
- Insights into the typical transaction amounts for normal and fraudulent transactions. The average Normal transactions amount is 161K, however if we look into the fraudulent transactions it was 882K as can be visualized which is substantial and hence, concerning.
- Additionally, the maximum amount identified for fraudulent is 10.00M which is very high. Moreover, the difference between the fraud transactions and normal transactions is observed as 3.58M which also is high indicating fraud transactions are of very high amounts.
- Most of the fraudulent transactions were either done as Cash_outs and Transfers indicating that this two transaction types requires more vigilance to ensure proper safety measures against fraud.
- By analyzing the line chart and clustered column chart, it can be observed that the most used type of transactions are cash_out and transfers and the least used transactions type is debits. The line chart can also help identify unusual spikes or drops in transaction amounts at specific times.
- Top 10 Merchants identified as conducting highest number of transactions with their count of transactions are visualized in the dashboard.
- Also, top 3 Identified Merchants with high occurrence of fraudulent transactions are C185805228, C200064275 and C41003330 with the count as 2 (twice) making these potential anomalies.
- Visualizing the distribution of transaction amounts helps to identify common patterns and potential anomalies. Further the dashboard can be visualized for any more information on the provided dataset.