**False Negative:**

IF [Is Flagged Fraud] = 0 AND [Is Fraud] = 1 THEN 1 ELSE 0 END

**False Positive**

IF [Is Fraud] = 0 AND [Is Flagged Fraud] = 1 THEN 1 ELSE 0 END

**False Positive Rate**

SUM([False Positive ]) / (SUM([False Positive ]) + SUM([True Negative]))

**True Negative**

IF [Is Flagged Fraud] = 0 AND [Is Fraud] = 0 THEN 1 ELSE 0 END

**True Positive**

IF [Is Fraud] = 1 AND [Is Flagged Fraud] = 1 THEN 1 ELSE 0 END

**True Positive Rate**

SUM([True Positive]) / (SUM([True Positive]) + SUM([False Negative]))

**Accuracy**

(SUM([True Positive]) + SUM([True Negative])) / (SUM([True Positive]) + SUM([False Positive ]) + SUM([True Negative]) + SUM([False Negative]))

**F1 Score**

2 \* ( [Precision ] \* [Recall] ) / ( [Precision ] + [Recall] )

**Fraud Rate (%)**

SUM([Is Fraud]) / COUNT([Is Fraud]) \* 100

**Precision**

SUM([True Positive]) / (SUM([True Positive]) + SUM([False Positive ]))

**Recall**

SUM(IF [Is Fraud] = 1 AND [Is Flagged Fraud] = 1 THEN 1 ELSE 0 END) / SUM(IF [Is Fraud] = 1 THEN 1 ELSE 0 END)

**Transaction Count**

COUNT([Name Orig])

**Transaction Volume**

COUNT([Amount])

1)Frauds Occuring Transaction Volume:

A screenshot of a computer

Description automatically generated

Cash\_Out transactions recorded the highest volume, followed by Payments, Cash\_In, Transfers, and Debit transactions with the lowest activity.

2)Frauds based on Fraud percentage:

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Transfer transactions had the highest fraud rate, followed by Cash Out, while Cash In, Payments, and Debit transactions reported no fraud.

3)Step Versus Fraud:

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4)Fraud Vs Non-Fraud:

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5)Fraud Patterns:

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6)Precision-Recall Curve:

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7)ROC Curve

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8)Confusion Matrix:

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9)Transaction Volumes and Trends

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10)Trend Overtime:

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11)**Dash Boards**:

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Dash Board 1:

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Dash Board 2:

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