# UPI Transaction Analysis Dashboard

## Overview

This document provides a comprehensive analysis of UPI transactions using Power BI. The dashboard delivers insights into transaction trends, success and failure rates, transaction categories, distribution of transaction amounts, and monthly variations. It aims to assist businesses and financial analysts in making data-driven decisions regarding digital payment trends.

## Features

- **Total Transaction Analysis**: Overview of total transactions, success rate, and failures.
- **Bank-wise Analysis**: Filters transactions based on sender and receiver banks.
- **Transaction Categories**: Breakdown of payments into travel, shopping, bill payments, food, and other categories.
- **Amount Distribution**: Classification of transactions as small, medium, or large.
- **Monthly Trends**: Representation of transaction volumes over time.
- **Geospatial Insights**: Visualization of transaction hotspots on a map.

## Key Questions & Insights

### 1. What is the total transaction volume and success rate?

- **Total Amount Processed:** 19.87M
- **Total Transactions:** 20,000
- **Successful Transactions:** 16,000 (80%)
- **Failed Transactions:** 4,000 (20%)

### 2. What are the major transaction categories?

- **Top Categories by Amount:**
    - Travel: 4.0M
    - Shopping: 4.0M
    - Others: 4.0M
    - Bill Payment: 3.9M
    - Food: 3.9M

### 3. How is the transaction amount distributed?

- **Small Transactions:** 25.11%
- **Medium Transactions:** 25.65%
- **Large Transactions:** 49.25%

### 4. How do transactions vary by month?

- **Peak Months:** February (1.69M), October (1.69M)
- **Lowest Activity Month:** June (653K)
- **Overall Trend:** Monthly fluctuations with noticeable peaks in early and late months.

### 5. How are transactions distributed geographically?

- **High Activity Regions:** Major cities like Mumbai, Delhi, and Bangalore.
- **Low Activity Regions:** Rural areas with lower transaction activity.

## Technologies Used

- **Data Visualization**: Power BI
- **Database**: MySQL
- **Programming**: Python (Pandas, Matplotlib, Seaborn)

- **Dashboard Deployment**: Power BI Service

## How to Use

Clone the repository:

```
git clone https://github.com/gaurmayank781/PowerBI(UPI_Analysis).git
```

1.
2. Open the Power BI dashboard file (`upi_dashboard.pbix`).
3. Connect to your database and refresh the queries as required.
4. Explore the interactive dashboard and analyze transaction trends.

## Future Improvements

- Integration of live UPI transaction data using APIs.
- Implementation of fraud detection through predictive analytics.
- Enhanced customer segmentation for detailed insights.

## Contributors

- **Mayank Gour** - Data Analyst

For any inquiries or suggestions, feel free to open an issue on GitHub or contact me directly!