Daily Transactions Analysis

Project Overview

This project analyzes daily household financial transactions to uncover spending habits, trends, and patterns. It involves data cleaning, visualization, time series analysis, and a final summary report. The aim is to support better budgeting and financial decision-making.

Dataset Description

The dataset contains daily transaction records including:

- Date: Date and time of transaction
- Mode: Payment method (Cash, Bank, Card, etc.)
- Category: Type of transaction (Food, Transport, etc.)
- Subcategory: More specific breakdown
- Note: Description of the transaction
- Amount: Transaction amount
- Income/Expense: Indicates if the transaction is income or expense
- Currency: Currency used (INR)

Tools and Technologies

- Python
- Jupyter Notebook
- Pandas
- Matplotlib
- Seaborn

Folder Structure

```
dailytransaction/
├── dataset/
│   └── daily_household_transactions.csv
├── notebooks/
│   └── 01_data_cleaning.ipynb
│   └── 02_exploratory_data_analysis.ipynb
│   └── 03_time_series_analysis.ipynb
│   └── 04_correlation_analysis.ipynb
│   └── 05_summary_report.ipynb
└── README.pdf
```

Project Steps

1. **Data Cleaning**
   Handle missing values, fix data types, and remove duplicates.

2. **Exploratory Data Analysis (EDA)**
   Visualize top categories, transaction types, and amount distributions.

3. **Time Series Analysis**
   Study monthly and daily transaction trends.

4. **Correlation Analysis**
   Identify relationships between different spending categories.

5. **Summary Report**
   Highlight key insights and recommendations for financial planning.

Key Findings

- Most transactions are expenses
- Food and Transportation are the top spending categories
- Monthly spending shows noticeable variations
- Some categories show strong correlations in spending behavior

Conclusion

This project provides meaningful insights into daily financial behavior and demonstrates how Python can be used to analyze personal or household spending patterns. The analysis helps identify areas for potential savings and better money management.