📄 **Project Report – Daily Household Transactions**

Title:

💳 *Daily Household Transactions – Finance Analytics*

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GitHub Link:
https://github.com/saurabh-badhani/Daily-Household-Transactions

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Objective:
The goal of this project is to analyze household financial transactions to understand spending behavior, identify major categories of expenses, track income and expenses over time, and support better budgeting strategies using data visualization and Python-based analysis.

Tools & Technologies Used:

- **Python 3**
- **Pandas** (for data manipulation)
- **Matplotlib** and **Seaborn** (for visualization)
- **VS Code** (development environment)

Dataset Overview:

- **File Used**: Daily Household Transactions.csv
- **Columns**:
    - Date: Transaction date
    - Amount: Amount spent or received (INR)
    - Transaction Type: Debit (Expense) or Credit (Income)
    - Category: Purpose (e.g., Grocery, Salary, Rent)

The dataset is a mock/dummy dataset resembling real-world personal finance logs.

Process Summary:

1. **Data Cleaning**:
    - Converted date to proper datetime format
    - Removed duplicates
    - Verified data types
    - Created new columns like Month for trend analysis
2. **Exploratory Data Analysis (EDA)**:
    - Visualized total debit and credit per category
    - Identified top spending areas
    - Analyzed monthly trends
    - Compared income vs expenses over time
3. **Visualizations**:
    - Bar charts for top categories
    - Line charts for monthly totals
    - Histograms for transaction distribution
    - Box plots for comparing transaction types

Key Insights:

- Highest expenses were recorded under categories like **Food**, **Transport**, and **Shopping**.
- Most income entries (like Salary) occur at the beginning of each month.
- Spending patterns showed spikes mid-month.
- Debit transactions were significantly higher in count compared to credit entries.

Conclusion:

This project provided valuable insights into daily financial behavior. It shows how Python can help track spending, identify trends, and improve budgeting strategies. Such analysis can easily be adapted to personal finance apps or used by individuals for financial planning.

Future Enhancements:

- Add income/expense forecasting using machine learning
- Build a dashboard in Power BI or Streamlit
- Detect anomalies in large or irregular transactions
- Automatically categorize transactions using NLP