**PERSONAL EXPENSES ANALYSIS PROJECT**

**Overview:**

The "Personal Expenses Analysis" project simulates an expense tracker for individuals using the Faker library to generate realistic monthly expense data. It processes and stores this data in a SQL database, allowing for insightful analysis and visualization through a Streamlit application.

**Objective of the Project:**

* The primary objective is to analyze simulated personal expense data to derive insights into spending behavior and trends.
* This analysis aims to help users understand their financial habits and make informed decisions regarding their expenditures.

**ELT Approach:**

This project follows an Extract, Load, Transform (ELT) approach. Data is first extracted using the Faker library, then loaded into a SQL database for storage. Finally, SQL queries are used to transform the data into meaningful insights, allowing for efficient analysis of spending patterns.

**EDA (Exploratory Data Analysis):**

Exploratory Data Analysis (EDA) was conducted to uncover insights and patterns within the personal expenses dataset. The analysis involved various techniques, including summary statistics, visualizations, and statistical analysis.

**Feature Engineering:**

Feature engineering was applied to enhance the dataset and provide additional context for analysis.

Eg. **Monthly Spending Average**: A new column was added to calculate the average spending per month, allowing for easier comparison of spending habits over time.

**Insights and Recommendations**

Based on the findings from the EDA, several actionable insights and recommendations can be made:

* **Focus on High-Expenditure Categories:**

Since **Entertainment** and **Personal** categories emerged as the highest spending areas, individuals should consider setting specific budgets for these categories. Implementing cost-saving strategies, such as limiting entertainment outings or finding free activities, could lead to significant savings.

* **Monitor Monthly Spending Trends:**

The identification of months with higher spending can help individuals prepare for upcoming expenses. For instance, if spending tends to increase during holiday seasons or special events, users should plan their budgets accordingly to avoid financial strain.

* **Leveraging cashback Opportunities:**

The analysis indicated that cashback received was relatively low compared to total spending. Users should explore credit cards or payment methods that offer higher cashback rates, particularly in categories where they spend the most. This could enhance savings over time.

* **Prioritize the Expenses:**

The non prioritize expenditure is higher than prioritize expenditure. So plan the expenditure according to the wants and needs for effective budgeting.

**Conclusion:**

The "Personal Expenses Analysis" project successfully identified key spending trends and provided actionable insights into personal finance management. By analyzing the simulated data, users can better understand their financial habits, recognize high-expenditure categories, and make informed decisions to optimize their expenses. The findings highlight the importance of tracking spending and utilizing cashback opportunities effectively.