Title: Documentation for Targeted Analysis Application using Streamlit

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Introduction

The provided script is a Streamlit application designed for conducting a targeted analysis on Cash Transaction Report Data. The script allows users to upload a CSV file, filter the data based on selected criteria, and perform exploratory data analysis (EDA) through univariate, bivariate, and multivariate analysis. The script employs various libraries such as Pandas, Matplotlib, Seaborn, and Plotly to perform data manipulation and visualization.

Dependencies

- streamlit
- pandas
- numpy
- matplotlib
- seaborn
- plotly.express
- base64
- io

Functions

1. `save_plot_to_png(figure)`

This function accepts a Matplotlib figure object and saves it as a PNG image, returning the byte data of the image.

2. `create_download_link_png(buffer, filename, text)`

Generates a download link for a PNG image, given a buffer containing the image data, a filename, and text for the link.

3. `download_link(dataframe, filename, text)`

Generates a download link for a CSV file, given a DataFrame, a filename, and text for the link.

Main Application Flow

1. Data Upload
- Users can upload a CSV file which will be read into a Pandas DataFrame.

2. Filter Data
- Users can filter the data based on a selected column and a provided value, using the sidebar for input.

3. Display Filtered Data and Download Option
- The filtered data is displayed and a download link for the filtered data in CSV format is provided.

4. Exploratory Data Analysis (EDA)

- Users can select an analysis section (Univariate, Bivariate, Multivariate Analysis) from the sidebar.

Univariate Analysis:

- Numerical Distributions: Users can select a numerical column and view its distribution as a histogram.
- Categorical Distributions: Users can select a categorical column and view its distribution as a bar plot.

Bivariate Analysis:

- Numerical vs. Numerical: Scatter plot of two numerical variables.
- Categorical vs. Numerical: Box plot of a categorical and a numerical variable.
- Categorical vs. Categorical: Cross-tabulation of two categorical variables.
- Jointplot, Violin Plot: Various plots illustrating relationships between two variables.

Multivariate Analysis:

- Pair Plot, Correlation Heatmap, 3D Scatter Plot, Pair Grid, Heatmap of Pivot Table, Facet Grid, and Bubble Plot: Various plots and analysis methods to visualize and analyze interactions among multiple variables.

Execution

Run the script in a Streamlit environment using the command:

```
streamlit run <script_name.py>
```

Replace `<script_name.py>` with the name of the script file. The Streamlit app will open in a new web browser tab, where you can interact with the UI to upload data and perform analysis.

Download Options

The script provides various download options allowing users to download the visualizations and filtered data for further use or examination.

This documentation provides an overview of the script structure, the functionality it provides, and how to interact with the Streamlit application to perform a targeted analysis on Cash Transaction Report Data.