Documentation for Social Media Campaign Analysis Dashboard

Overview:

This Streamlit application enables users to analyze social media campaign data. Users can upload a CSV file, apply various filters, and visualize the data through different types of charts. The application also allows users to download both the original and filtered datasets.

Key Components:

1. Page Configuration and Title:
- Sets the page title, icon, and layout for the Streamlit app.
- Displays the main title and a brief introduction.

2. File Uploader:
- Allows users to upload a CSV file.
- Displays an error message if no file is uploaded.
- Loads the uploaded file into a Pandas DataFrame.
- Saves the data into a SQLite database.

3. Data Preprocessing:
- Converts the "Order Date" column to a datetime format.
- Adds a "month_year" column for timebased analysis.

4. Sidebar Filters:
- Provides options to filter data by region, state, city, and date range.
- Ensures the end date is not earlier than the start date.

5. Data Filtering:
- Applies the selected filters to the dataset.

6. Data Overview:
- Displays basic statistics of the filtered dataset.

7. Visualizations:
- Categorywise Sales: Bar chart showing sales by category.
- Regionwise Sales: Pie chart showing sales by region.
- Time Series Analysis: Line chart showing sales over time.
- Treemap: Hierarchical view of sales by region, category, and subcategory.
- Segmentwise Sales: Pie chart showing sales by segment.
- Scatter Plot: Scatter plot showing the relationship between sales and profit.

8. Data Download Buttons:

- Provides options to download the filtered and original datasets as CSV files.

9. User Instructions:

- Displays instructions for using the app in the sidebar.

10. Database Connection Closure:

- Ensures the database connection is properly closed.

11. Contact Information:

- Displays a thank you message and contact information for support.

How to Use the Dashboard

1. Upload Data:

Upload a CSV file containing social media campaign data.

2. Filter Data:

Use the sidebar filters to narrow down the data by region, state, city, and date range.

3. ViewVisualizations:

Interact with various charts to gain insights into the data.

4. Download Data:

Download the filtered or original dataset for further analysis.

Error Handling:

Displays warnings and error messages to guide users through proper usage.
Handles invalid data inputs and ensures robust data loading and processing.

Dependencies:

Streamlit: For creating the web interface.
Plotly: For interactive visualizations.
Pandas: For data manipulation and analysis.
SQLite3: For database operations.
Warnings: To suppress irrelevant warnings.
Datetime: For date operations.

Contact

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