**Influencer Campaign Performance Dashboard**

**Introduction :**

The Influencer Campaign Performance Dashboard is an interactive web application built using Streamlit. It enables marketers and analysts to monitor and evaluate the performance of influencer marketing campaigns through dynamic KPIs, data visualizations, and flexible data filtering. This dashboard helps make data-driven decisions by providing insightful metrics and downloadable reports.

**Objectives :**

* Develop an intuitive dashboard for tracking influencer marketing campaign performance.
* Allow filtering of campaigns by platform, product, and influencer.
* Disp lay key performance indicators such as Total Revenue, Total Payout, and Return on Ad Spend (ROAS).
* Visualize campaign revenue distribution and top influencer contributions.
* Support uploading of custom CSV datasets for flexibility.

**Technology Stack :**

* Programming Language: Python 3.x
* Web Framework: Streamlit
* Libraries:
  + pandas (Data manipulation)
  + plotly.express (Data visualization)
  + PIL (Image handling)
* Data Formats: CSV for input/output data
* Styling: Custom CSS for enhanced user interface

**Dataset Description :**

The dashboard utilizes the following datasets:

| Dataset | Description | Key Columns |
| --- | --- | --- |
| influencers.csv | Information about influencers | id, name, followers |
| posts.csv | Posts published by influencers | post\_id, influencer\_id, date |
| tracking\_data.csv | Campaign tracking including revenue and product | influencer\_id, source, revenue, product |
| payouts.csv | Payments made to influencers | influencer\_id, total\_payout |
|  |  |  |

**Features and Functionality:**

5.1 Sidebar Filters

* Multi-select options to filter campaign data by platform, product, and influencer.

5.2 Key Performance Indicators

* Displays Total Revenue, Total Payout, and calculated ROAS dynamically based on selected filters.

5.3 Visualizations

* Revenue breakdown by platform (bar chart).
* ROAS distribution among influencers with follower count as bubble size (scatter plot).

5.4 Data Upload

* Ability to upload custom CSV files for influencers, posts, tracking data, and payouts.
* Uploaded datasets override default data.

5.5 Data Preview

* Interactive tables preview current datasets.

**User Guide :**

Running the Application

1. Install required libraries from requirements.txt.
2. Run the app using the command:

**streamlit run app.py**

1. Use the sidebar to filter data according to your needs.

Navigating the Dashboard

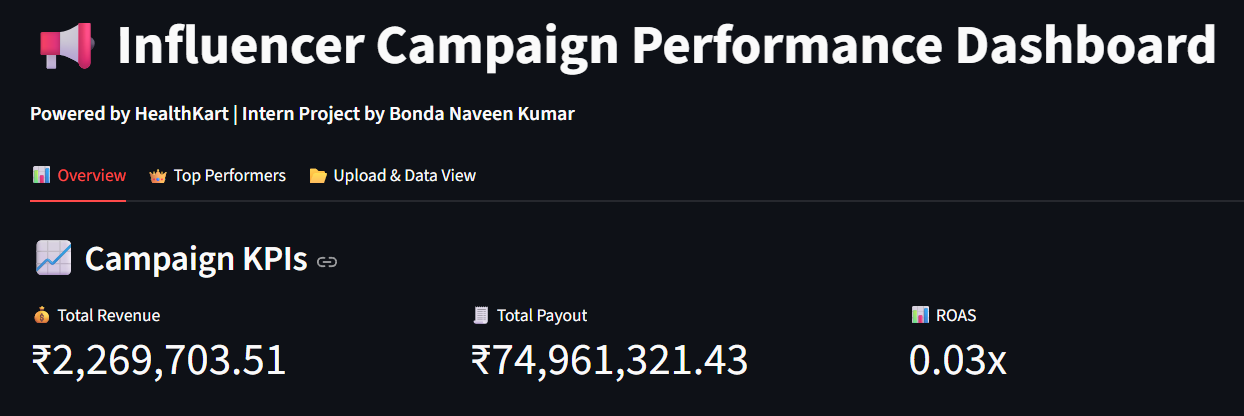
* Overview Tab: View KPIs and revenue visualizations.
* Top Performers Tab: Analyze top influencers and ROAS distributions.
* Upload & Data View Tab: Upload custom datasets and preview loaded data.

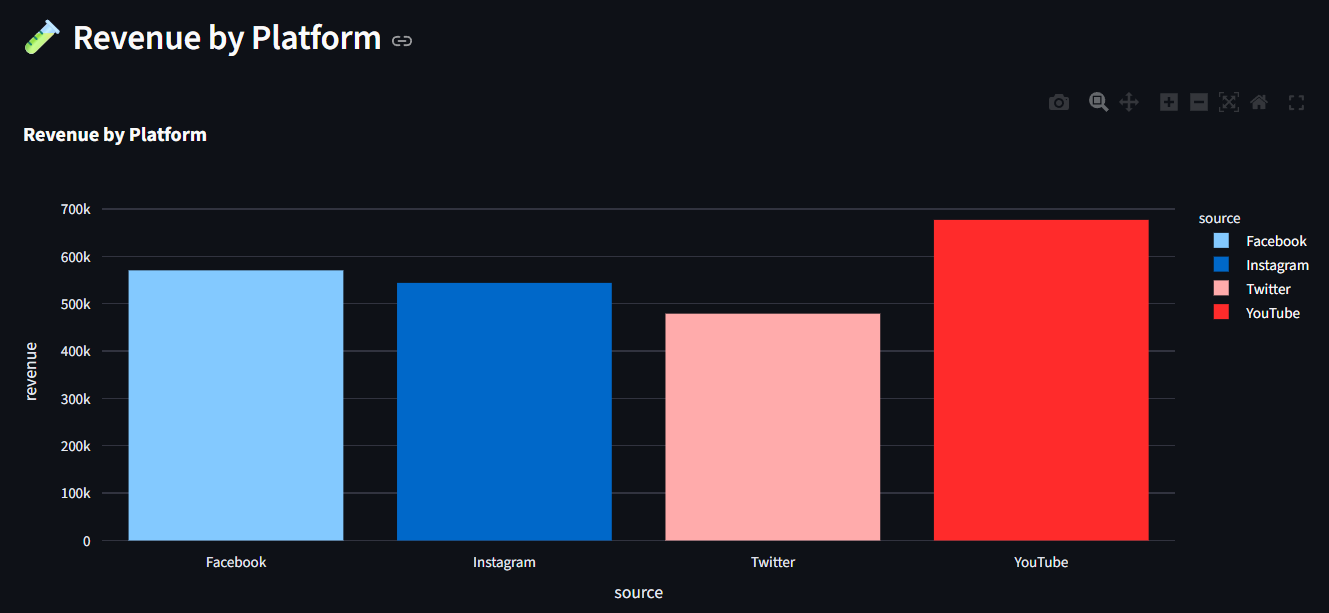
**Code Structure :**

| Module / Section | Description |
| --- | --- |
| Data Loading & Caching | Loads CSV data with caching for performance |
| Filters & Sidebar UI | User input controls for platform, product, influencer filtering |
| Visualizations | Plotly charts for KPI and influencer metrics |
| File Upload Handling | Upload and replace default datasets |
| Custom Styling | CSS for improved user experience |

**Challenges and Future Improvements :**

* Table Interactivity: Adding AgGrid or similar components for searchable, sortable tables.
* User Authentication: Secure login to protect sensitive data.
* Extended Analytics: Incorporate engagement metrics, time series, and conversion analysis.
* Support for More Data Formats: Allow JSON, Excel uploads and exports.





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