**LIBRARIES USED**

!pip install -q streamlit

!pip install streamlit-authenticator

!npm install localtunnel

!pip install googlesearch-python

!pip install beautifulsoup4

**1. Streamlit**

* makes it easy to create web applications for data science and machine learning
* turn data scripts into shareable web apps quickly
* can create interactive and visually appealing data applications

**2. Streamlit Authenticator**

* It is related to authentication in Streamlit apps
* Authentication is the process of verifying the identity of a user
* Adding authentication to a Streamlit app can help control access to certain features or data, ensuring that only authorized users can interact with the application

**3. LocalTunnel**

* It is a tool that allows you to expose your locally hosted web server to the internet
* It creates a temporary public URL that redirects to your local server
* can be useful when you want to share a locally hosted web application with others during development without deploying it to a public server

**4. Google search Python**

* used to automate the process of searching Google and retrieving search results in a program or script

**5. Beautiful Soup 4**

* It is a Python library for pulling data out of HTML and XML files
* It's commonly used for web scraping and parsing HTML or XML documents to extract information.

**INTRODUCTION**

**Objective:** Empower users—content creators, marketers, businesses—with profound insights into top articles.

In the digital landscape where online visibility is paramount, understanding the significance of specific keywords in search results is crucial for content creators, marketers, and businesses alike. The "Google Keyword Analyzer" is an innovative web application designed to streamline the process of keyword analysis by providing users with valuable insights into the top articles related to their chosen content.

At its core, this project facilitates a user-friendly interface that empowers individuals to input two key parameters: the content they wish to explore on Google and a specific keyword of interest. Upon activating the search function, the backend code establishes a connection with the Google search engine, retrieving the top 10 articles related to the provided content.

The user interface then visually represents these color-coded articles, presenting users with a clear and concise display.

**Project Overview:**

The Google Keyword Analyzer is a web application that allows users to input a search query and a keyword. Upon hitting the search button, the application connects to the Google search engine, retrieves the top 10 articles related to the query, and analyzes the presence of the specified keyword in each article. The project then assigns a color code to each article based on the frequency of the keyword.

**Workflow:**

1. **User Input:**

- Users provide two inputs:

- Content to Search: The topic or content they want to search on Google.

- Keyword: The specific keyword they want to analyze within the search results.

2. **Backend Processing:**

* The backend code connects to the Google search engine and fetches the top 10 articles related to the given content.
* For each article, it calculates the frequency of the specified keyword and computes the average keyword count across all articles.
* Based on the keyword count, it assigns a color code to each article:

Red: Count between 0 and average/2

Yellow: Count between average/2 and average

Green: Count greater than average

3. **User Interface (UI) Display:**

- The UI displays a set of color-coded boxes, each representing an article.

- Each box contains:

- Title: The title of the article.

- Link: The link to the article.

- Meta Description: A brief description of the article.

- Keyword Count: The number of times the keyword appears in the article.

- The color of the box corresponds to the assigned color code based on keyword count.

Each box corresponds to an article and includes essential information such as the title, link, meta description, and the count of the specified keyword. This visual representation allows users to quickly assess the relevance and prominence of their chosen keyword in the top search results.

The uniqueness of the "Google Keyword Analyzer" lies in its ability to delve deeper into these articles, meticulously calculating the frequency of the specified keyword within each. Through this analysis, the project derives an average keyword count across all articles, paving the way for a dynamic color-coding system.

**Use of the Project:**

The Google Keyword Analyzer project serves several purposes:

1. **SEO Analysis:** Users can assess the relevance of a keyword in the top search results for a given content, helping them understand the SEO impact of their chosen keyword.

2. **Content Optimization**: Content creators can use the tool to analyze how well their target keyword is represented in top articles, guiding them in optimizing their own content.

3. **Competitor Analysis**: Businesses and marketers can gain insights into how often specific keywords appear in articles related to their industry or niche, aiding in competitor analysis.

4. **Data Visualization**: The color-coded display provides a quick and visually intuitive way for users to identify the prominence of their chosen keyword in the search results.

**CONCLUSION:**

Whether for Search Engine Optimization (SEO) analysis, content optimization, competitor assessment, or data visualization, the "Google Keyword Analyzer" serves as a powerful tool, aiding users in making informed decisions to enhance their online presence and refine their content strategies. This project encapsulates the fusion of technology and user-centric design, contributing to a more efficient and insightful approach to keyword analysis in the ever-evolving digital landscape.

**SCREENSHOTS**

I WILL PROVIDE YOU THE SCREENSHOT AND VIDEO ONCE EVERYTHING IS FINE.