Scrapping Data From Real World

G.J. Rahul
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1.0 Problem Statement

The goal is to scrape data from real-world websites, which includes bypassing captcha to gather valuable information.

2.0 Requirements

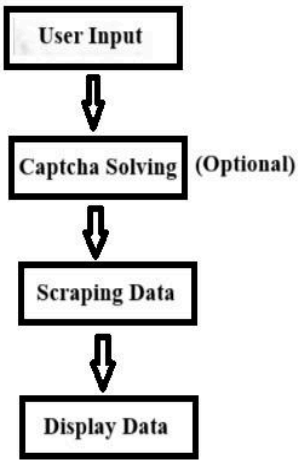
2.1 Technical Requirements

- **Python:** Programming language
- **Streamlit:** Hosting
- **Selenium:** Scrape data from website

2.2 Service Requirements

BigData: Service that provides selenium (deployed) which could be used to scrape data from the website.

3.0 Flow Diagram



- **User Input:** The user inputs the website's address.
- **Captcha Solving:** BigData service checks if any captcha needs to be solved.
- **Scraping Data:** Selenium scraps the data from the website.
- **Display Data:** Streamlit displays the user data in an expander.

4.0 Implementation Details

4.1 Setting Up the Environment

1. Installing Streamlit

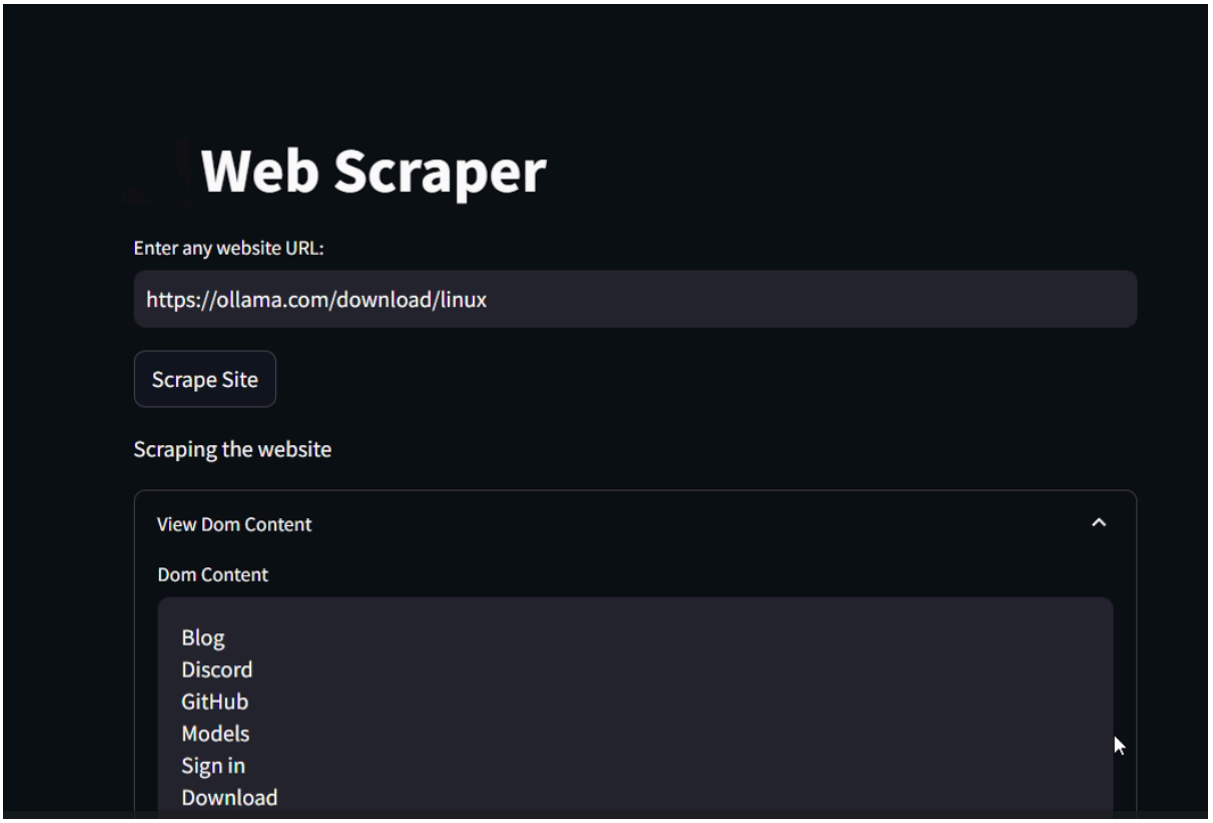
```
pip install streamlit
```

2. Create a folder named '.streamlit'
3. Create a file named secrets inside the .streamlit secrets.toml
4. The code inside secrets.toml should be as follows:

```
[proxy]
url = "big-data-url"
```

Replace big-data-url with the url generated using big-data.

5.0 Screenshots



5.1 Presentation of Data

The image shows shows a Streamlit interface where users can enter a URL to scrape data from. After clicking the "Scrape Site" button, the website's content is displayed in a user-friendly format. For instance, the interface successfully displays the DOM content of "https://ollama.com/download/linux," showing various links and sections of the page.

6.0 Challenges Faced

Integrating BigData with Streamlit using streamlit secrets.

7.0 Project Summary

- The project uses **Streamlit** for creating a user-friendly interface and **Selenium** for scraping data from websites.
- **BigData** service is integrated to deploy Selenium instances for efficient data scraping.
- **Streamlit Secrets**: A secure way to manage and access sensitive information like API keys, ensuring that the application can safely interact with external services.

Final Notes: The project successfully addresses the challenge of scraping real-world data and handling captchas, presenting the information in an accessible format. By leveraging Streamlit and Selenium, and securely managing credentials with Streamlit secrets, the project provides a robust solution for data scraping needs.