Project Proposal: COVID-19 Vaccination Tracker

A combination of web scraping and Leaflet or Plotly.

Objective:

The objective of this project is to create a COVID-19 vaccination tracker that provides users with real-time information on vaccination rates across different countries. The tracker will help users make informed decisions and stay updated on the progress of vaccination efforts.

Dataset Source:

We will utilize the COVID-19 vaccination data provided by Our World in Data. This dataset includes information on the number of people vaccinated, vaccination rates, and vaccination coverage by country.

Technical Implementation:

Data Collection: We will use web scraping techniques to gather the latest COVID-19 vaccination data from the Our World in Data website. This data will be periodically fetched and updated in our database.

Database: The collected data will be stored in a database of our choice, such as MySQL or MongoDB, to ensure efficient data management.

Python Flask API: We will develop a Python Flask-powered API to retrieve the vaccination data from the database. This API will serve as the backend for our project, connecting the front end and the database.

Frontend Development: For the front end, we will create an interactive user interface using HTML, CSS, and JavaScript. We will use JavaScript libraries like D3.js or Chart.js to visualize the vaccination data in different formats, such as charts and graphs.

User-Driven Interaction: To enhance user experience, we will incorporate user-driven interactions such as dropdown menus to select specific countries, filters to view data by different vaccination metrics, and a zoom feature to focus on specific time periods.

Data Presentation: We will present the vaccination data in a clear and easy-to-understand manner, ensuring that users of all levels can interpret the information. We will provide insights and context around the data to highlight key trends and important information.