Google Review Analyzer

1. **Approach:**

My approach was to fetch the 50 most recent Google reviews about the business and then utilize frontier LLMs to analyze and derive meaningful insights from the data. It provides sentiment analysis, identifies key themes, detects complaints, and visualizes review trends for any business listed on Google.

2. **Tools Used:**

(i) SerpApi: Used to fetch the 50 most recent Google reviews about the business.
(ii) Groq: Used to access the LLaMA 3 via API.
(iii) Matplotlib and Seaborn: Used for visualization.
(iv) Streamlit: Used for creating the frontend and the web app.

3. **Challenges I faced**

The major challenge I faced was fetching the 50 most recent Google reviews about the business. Initially, I used various simple tools like Selenium but couldn't fetch the reviews. Then, after doing a lot of research, I found the Google Places API, one of the services of GCP. After using it, I realized it can only fetch the 5 most recent reviews — that was its limitation. I then continued my research and found SerpApi, which works well and is able to fetch Google reviews.

4. **Future Enhancements**

(i) If I had more time, I could have implemented the other two features: weekly review summary report generation and review classification.
(ii) I can implement a feature that sends alert messages to the owner of the business in case of any negative review or complaint, so they can take action as soon as possible.
(iii) Currently, the drawback of this project is that I failed to extract information related to the date and time of the review. If I had more time, I could have done that.
(iv) I can also implement comparison tools that allow users to compare the reviews of their business with those of their competitors.
(v) A better UI — currently, I am using Streamlit for the frontend, which provides very limited features for UI designing.
(vi) Optimization: Currently, the speed of sentiment analysis is too slow. I have to work on optimization.