

CAPRAE CAPITAL ASSIGNMENT

Aim:

To build / replicate functionality of cohesive.ai google sheets scrapper.
It should function as an Intelligent & knowledgeable autocomplete.

Approach:

Possible options for Implementation are:

- 1) Web Scraping Information from the Google Sheet.
- 2) Using an Automated Web browser tool like Selenium.
- 3) Using Google Sheet API.

After exploring all of the options possible, A Hybrid approach utilising the Google API & a python script to set up the functionality is the best choice. It allows us to have a lightweight application with low latency & which is easy to use.

Workflow:

Google sheets has a bounded App Script which can be used to extend the original functionality. A python script is used to trigger api calls , which uploads the written Javascript code to the bounded App Script after which an 'AI Assistant' button is added to the sheet menu which can be used directly for auto completion.

After interacting with it -

The current active cell is read - If it contains text - it will be treated as prompt & the generated output will be stored in the cell . If it is empty then all the values in the current row as well as their corresponding headers are used for output generation , which serve as context. This context is used to search for the Column answer with the Search Engine . The web search results & the context are then all finally fed into the LLM to get a short, concise output.

Specifications:

Gemini flash 2.0 is used as the base model along with Google's Programmable Custom Search Engine. The google products have been chosen to match each other & reduce complexity. Other SOTA generation LLMs like gpt-4o, claude-sonnet-3.7 may also be used. Different search agents like Tavily.ai may also be used but I have opted for a more simpler, fast & reliable method.