AI Meme Generator Project

Goals:

* Be the backbone for a really funny YT video
* Be something that may could generate income eventually (distant chance tho)

Summary:

The AI meme generator will take user-entered text as a topic and generate a meme image based on that topic. After this, the user can download the image, generate another image based on the topic, or change the topic and regenerate the image. That’s it.

Implementation:

The text for the memes will come from ChatGPT and the meme images will come from a meme API. Each image will have meta-data stating which lines there are on the image and how many characters each line can have for a certain font size and face. Then ChatGPT will be told to generate text for each of those lines and that it should keep its output within the character limits for each line.

Once we have the image, the image meta-data, and the text for the image, we will likely put all of that together onto an HTML canvas object then allow the user to print that canvas onto his computer.

Also, there will likely be rate-limiting <https://vercel.com/guides/securing-ai-app-rate-limiting> to reduce costs.

Prompt Toolchain to Generate the Memes

So to get all of this working, we will need to follow several steps. The first step is to generate a description for each meme that describes the context for each line of text individually.

For instance, for the meme that portrays two buttons and the man sweating trying to decide, you might have a prompt that looks like this:

“There is a meme where there are two frames positioned vertically. The frame on top portrays two buttons with text above each one. The frame on the bottom portrays a man sweating as if he is having a lot of trouble deciding which button he wants to push. As I said, in the top frame, there are two buttons with a line of text above each one. The line of text above the left button should be a tempting choice that leads to bad consequences. The line of text above the right button should be a hard choice that leads to good rewards. Generate each of the lines of text described above and make them very funny and related to <topic input from the user if applicable>. Present each line of text as an item in a numbered list and order them in the same way as I described them.”

This prompt needs to be associated with each meme image you want to generate, then when you generate a meme, you will simply pick a random image from your database, feed the prompt for that image to ChatGPT and add the additional context of which topic the user chose for the meme. You’ll then need to read the lines that it picks and put each one onto the image, probably using extra info about the text size, max number of characters, and positioning from what’s in the database. So here's an overall JSON view of what your data may look like.

**“image”:** **{**

**“prompt”: “lorem ipsum”,**

**“src”:** [**https://yomama.com**](https://yomama.com)**,**

**“textLines”: [**

**“0”: {**

**“size”: 20, // in px**

**“maxChars”: 100,**

**“x”: 100,**

**“y”: 150**

**},**

**“1”: {**

**“size”: 24,**

**“maxChars”: 150,**

**“x”: 200,**

**“y”: 100**

**}**

**]**

**}**

As an overall template, your prompts should look like this:

“<Description of the meme>. <Description of each line and the maximum numbers of that line of text>. Generate each of the lines of text described above and make them very funny and related to <topic input from the user if applicable>. Present each line of text as an item in a numbered list and order them in the same way as I described them.”

Tech Stack:

* Langchain
* Python
* Streamlit