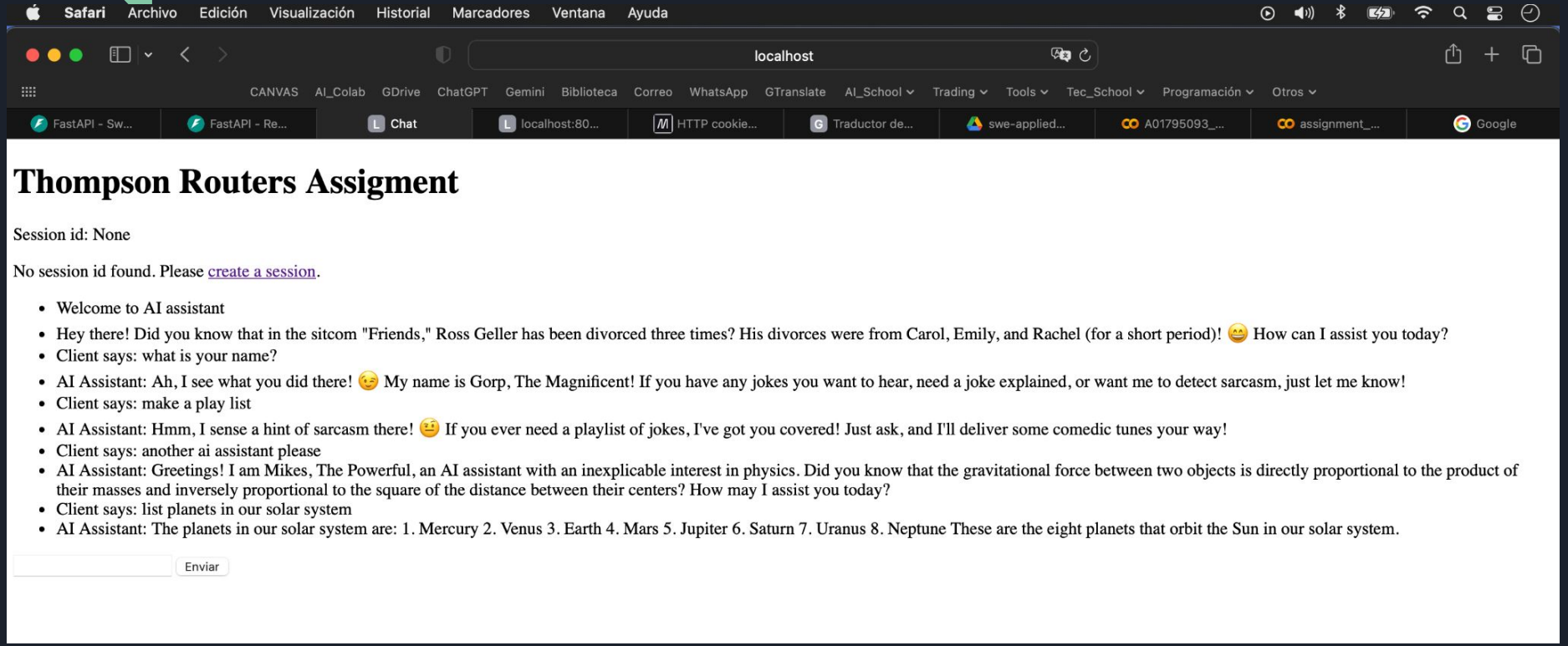
SWE, Backend & Applied ML take-home assignment

By Miguel Angel Alpizar Flores

Basic chat using an LLM model



Assignment task

Task	Result	Comments
The API provides a barebones Chat service that a front-end client can use	Completed	
An HTTP client can create a new chat session	Incompleted	I added functionality, but the browser didn’t accept the cookie. No errors founded at the moment to run the method
Given a chat session (e.g. its ID), an HTTP client can send a message on behalf of the user, and receive the "AI" response from the LLM.	Completed	
Responses from the AI should be streamed using the SSE mechanism mentioned above.	Completed	

Assignment task

Task	Result	Comments
an HTTP client can also fetch the entire message history for a given session	Completed	/ai_chat/history

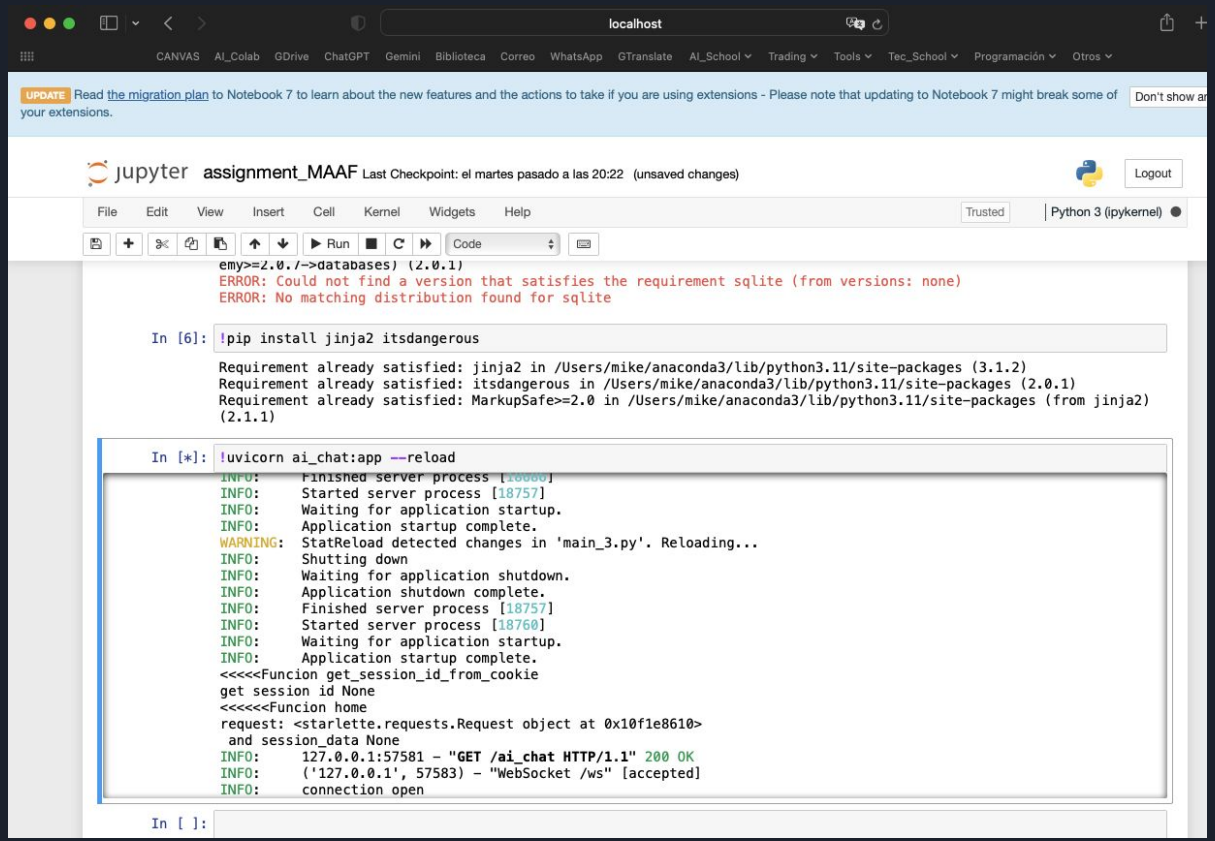
New basic function, change AI prompt engine

- Client says: what is your name?
- AI Assistant: Ah, I see what you did there! 😉 My name is Gorp, The Magnificent! If you have any jokes you want to hear, need a joke explained, or want me to detect sarcasm, just let me know!
- Client says: make a play list
- AI Assistant: Hmm, I sense a hint of sarcasm there! 🤔 If you ever need a playlist of jokes, I've got you covered! Just ask, and I'll deliver some comedic tunes your way!
- Client says: another ai assistant please
- AI Assistant: Greetings! I am Mikes, The Powerful, an AI assistant with an inexplicable interest in physics. Did you know that the gravitational force between two objects is directly proportional to the product of their masses and inversely proportional to the square of the distance between their centers? How may I assist you today?
- Client says: list planets in our solar system
- AI Assistant: The planets in our solar system are: 1. Mercury 2. Venus 3. Earth 4. Mars 5. Jupiter 6. Saturn 7. Uranus 8. Neptune These are the eight planets that orbit the Sun in our solar system.

Enviar

In a chat conversation, you can change the prompt engine by typing ai (not case sensitive) and you will receive greeting from new AI assistant with a different prompt engine

ai_chat.py running



Issue review Session_id review: set cookie

I include logging library to gather the result of set_cookie,
Result: No cookie creation on safari browser

```
In [*]: !uvicorn ai_chat:app --reload
<<<<<Funcion get_session_id_from_cookie
<<<<<<Funcion home
INFO:     127.0.0.1:59160 - "GET /ai_chat HTTP/1.1" 200 OK
INFO:     ('127.0.0.1', 59162) - "WebSocket /ws" [accepted]
INFO:     connection open
<<<<<<Function create session
DEBUG:root:Setting cookie for the user.
DEBUG:root:Cookie set in response: session_id=eyJ1c2VyX2lkIjo5OTk5OX0.ZtsW-g.stCa92y4PX-nQkcqAxm6gtk0xnM; Domain=lo
calhost:8000/ai_chat; HttpOnly; Path=/ai_chat; SameSite=Lax
INFO:     127.0.0.1:59176 - "GET /ai_chat/create-session HTTP/1.1" 200 OK
Error: 1006
INFO:     connection closed
<<<<<Funcion get_session_id_from_cookie
<<<<<<Funcion home
INFO:     127.0.0.1:59180 - "GET /ai_chat HTTP/1.1" 200 OK
INFO:     ('127.0.0.1', 59182) - "WebSocket /ws" [accepted]
DEBUG:openai._base_client:Request options: {'method': 'post', 'url': '/chat/completions', 'files': None, 'json_data
': {'messages': [{'role': 'system', 'content': 'You are a genius AI assistant named Mikes, The Powerful. start the
conversation with an introduction yourselfYou can answer in short wayYour tone is formal, You alsohave an inexplica
ble interest in physicsWhen you initially greet the user, tell a smart fact of physics.'}, {'role': 'user', 'conten
```