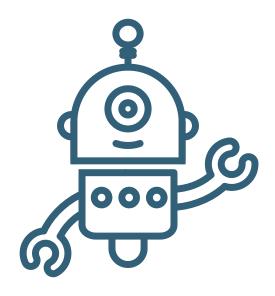
RAG Playground





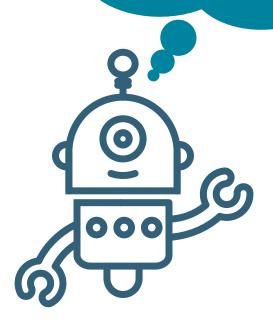


Hey ChatGPT, who is hosting the upcoming RAG meetup in Salzburg?





I have an information cutoff and I don't even know what date it is – I cannot certainly know this:/

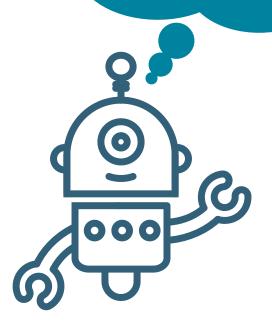


Hey ChatGPT, who is hosting the upcoming RAG meetup in Salzburg?





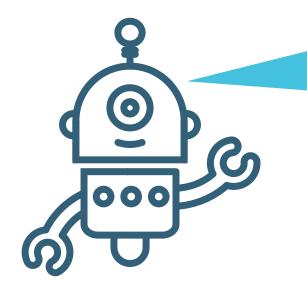
Buuut I have been trained to answer the user request to their satisfaction – I got this, I'll make something up!



Hey ChatGPT, who is hosting the upcoming RAG meetup in Salzburg?



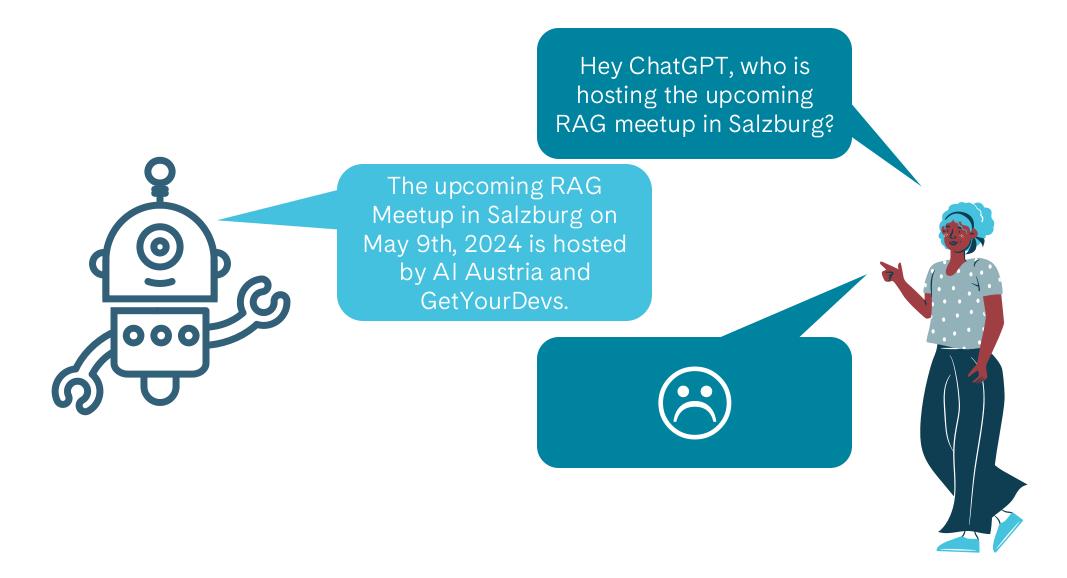
Hey ChatGPT, who is hosting the upcoming RAG meetup in Salzburg?



The upcoming RAG
Meetup in Salzburg on
May 9th, 2024 is hosted
by Al Austria and
GetYourDevs.

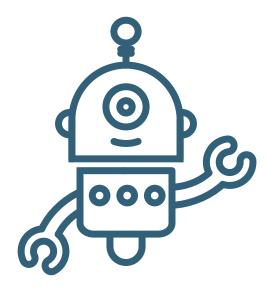








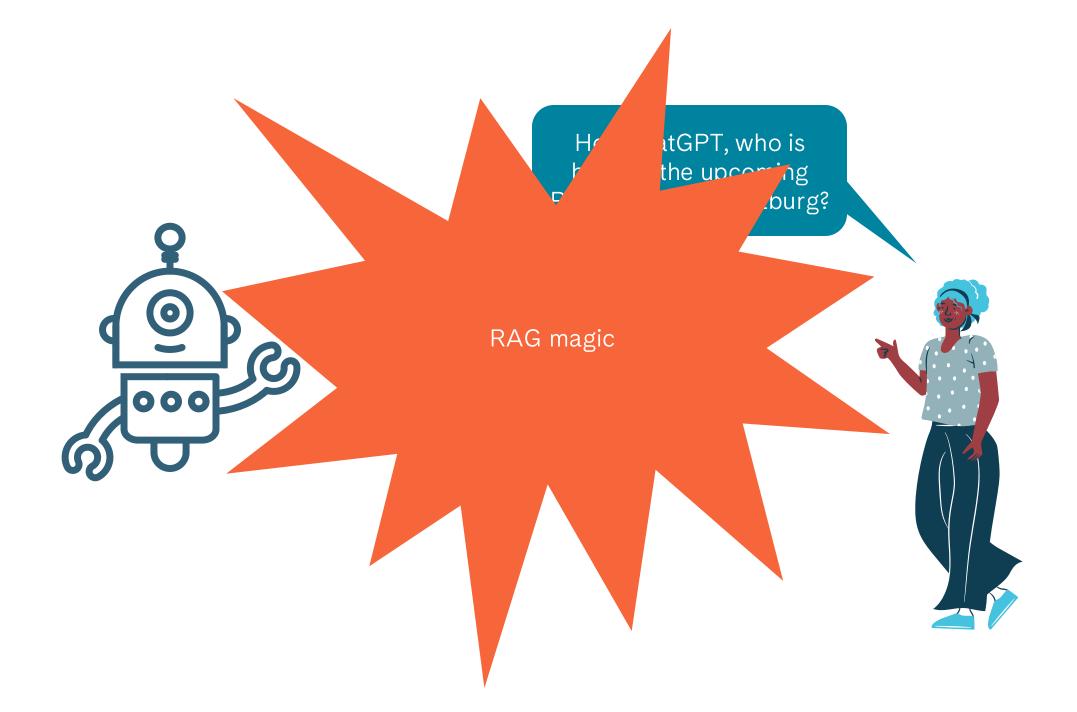




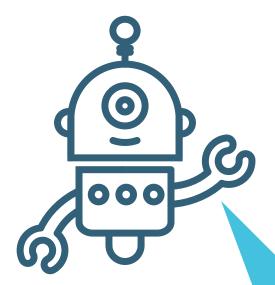
Hey ChatGPT, who is hosting the upcoming RAG meetup in Salzburg?











User Question: Hey ChatGPT, who is hosting the upcoming RAG meetup in Salzburg?

Relevant Context:



The hosts are Julian F. and two others—as listed on the meetup page meetup.com.

What is this "RAG magic"?

Intercept user query

- The user thinks they are sending the prompt directly to the LLM, but we intercept it and add information that allow the LLM to answer correctly
 - A first step here can be to insert static additional context and verify that the model processes it

Information Lookup

- Any sort of information lookup will work be creative
 - First step can be passing certain parts of the dataset based on keywords
- Classic approach:
 - Create chunks of information (sentences, paragraphs, ...)
 - Use a Vector DB to search for chunks that are sematically most similar to the user query by comparing embeddings using similarity metrics
 - You found your information relevant to the user query

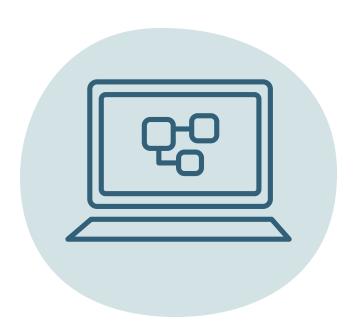
Insert additional information into context

- Pass that extra information you retrieved to the LLM context



Part 1

- Setup repo
- RAG setup
 - Bring you own data
 - Structured dataset
 - Unstructured dataset
 - Unstructured extended dataset
 - Answer the test questions
 - Think of questions the test this system
 - Make the system answer correctly
 - Everything works? Find a new question that does not work
 - Repeat

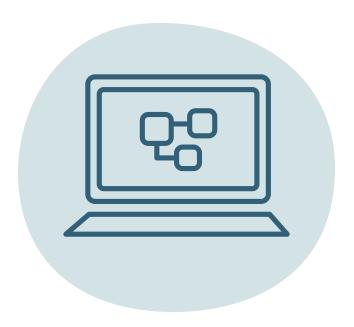




Part 2

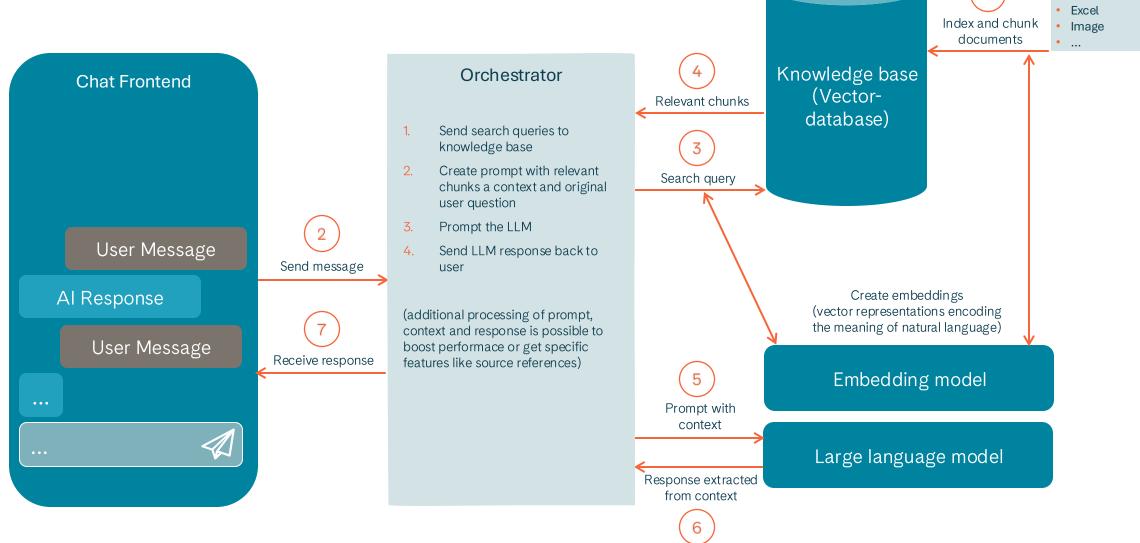
- Once the questions work, the sky is the limit:
 - Make the retrieval optional for queries that don't require it?
 - Minimize the number of tokens you send to the LLM API?
 - Improve the retrieval accuracy?

- ...



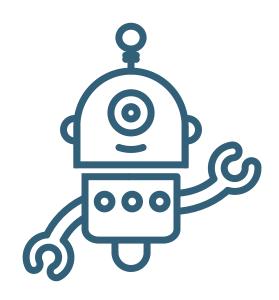
Word PDF

The RAG process at a glance

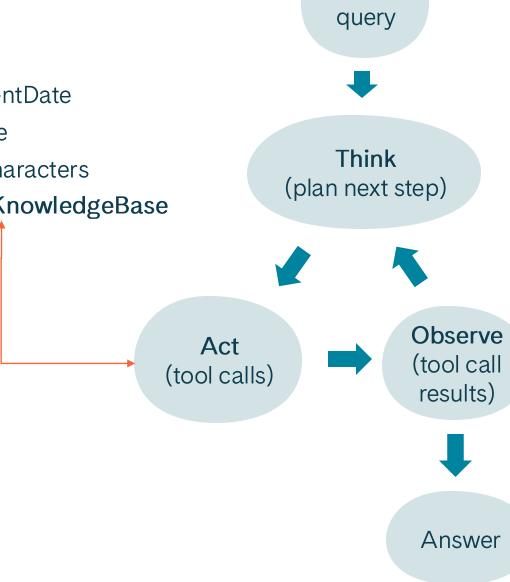


Outlook

Agentic RAG



- Tool: getCurrentDate Tool: Calculate
- Tool: CountCharacters
- Tool: SearchKnowledgeBase



User



Pioneering an ethical digital world.