

Assignment 2: Building a ChatGPT App with Retrieval Augmented Generation using Stream.io

Instructions

In this assignment, you will create a ChatGPT app using Streamlit following the guide provided. You will then add to the basic ChatGPT using retrieval augmented generation (RAG).

1. Follow the steps outlined in the guide to recreate the ChatGPT app.

Streamlit Guide to building conversational apps

2. Once you have successfully recreated the ChatGPT app, your task is to modify it to include a Retrieval Augmented Generation (RAG) component where answers are based on some document or documents stored in a vector database. You can choose to implement sentiment analysis, entity recognition, or any other specialized application.
3. Use LangChain or other orchestrators to incorporate the RAG component into your ChatGPT app.
4. Document your modifications thoroughly, explaining the rationale behind your choices and the implementation details.
5. Test your modified app to ensure that it functions correctly and that the RAG component enhances the conversational experience.

Submission

Submit the following items:

1. The modified ChatGPT app code.
2. Documentation explaining your modifications, including the purpose of the RAG component, the document(s) used for augmentation, and any challenges you encountered during the implementation.
3. A video recording demonstrating your app.

Grading Criteria

Your assignment will be graded based on the following criteria:

- Successful recreation of the ChatGPT app (20%)
- Implementation of the RAG component (30%)
- Video demonstration clearly explaining the setup (40%)
- Discretionary (10%)