

RAG-BOT

In documenting my approach to the project, I aimed to provide a detailed summary of the decisions I made, the obstacles I faced, and the solutions I adopted.

Approach

1. Project Planning:

I began by outlining the project requirements and objectives. Understanding the need for text processing with PDFs and integrating Google's Generative AI model was crucial. I also identified that using Chroma as a vector database would facilitate effective information retrieval.

2. Development Process:

The development process was broken down into distinct phases, including:

Frontend Development: I aimed to create a user-friendly interface in Streamlit. A key decision was to implement a single file uploader for multiple files, which would streamline the user experience.

Backend Integration: Integrating Google's Generative AI required careful planning to ensure compatibility with the existing framework. I prioritized modularity and scalability in my code, enabling future enhancements without major overhauls.

Text Cleaning: I recognized that text cleaning was a necessary step before processing the data. This involved removing any extraneous characters, normalizing whitespace, and ensuring consistent formatting to improve the accuracy of the AI model's outputs.

Challenges Faced

1. Integration Issues:

One of the significant challenges was integrating Google's Generative AI model smoothly with the Streamlit app. There were compatibility issues regarding data formats and API responses.

Solution: To address this, I spent time reviewing the documentation and experimenting with different input/output configurations until I found a setup that worked seamlessly.

2. User Experience Design:

Designing an intuitive interface posed another challenge. I wanted to ensure that the default questions were arranged neatly and that the app displayed in wide mode for better usability.

Solution: I conducted usability testing with a small group of users, gathered feedback, and iteratively improved the layout based on their suggestions.

Conclusion

By documenting each step, I not only clarified my thought process but also provided a clear path for future reference. I made sure to include a detailed ReadMe file in the GitHub repository, covering the source code, deployment instructions, and insights on the pipeline. This documentation will be valuable for anyone looking to understand or build upon my work in the future.