Nepali PDF Chatbot - Working Flow

Introduction

The Nepali PDF Chatbot is a Streamlit-based application that enables users to upload a Nepali PDF, extract and process its content, and ask questions to retrieve relevant information in English or Nepali. This document outlines the working flow of the chatbot.

1. Starting the Application

- The application is launched using the following command:
 - Stremlit run chatbot.py
- After launching, the console displays a local URL and a network URL where the chatbot can be accessed.

```
(pdf_chatbot_env) bibeksapkota@Bibeks-MacBook-Air pdf_chatbot_env % streamlit run chatbot.py
You can now view your Streamlit app in your browser.
Local URL: ht
Follow link (cmd + click)
Network URL: http://192.168.100.113:8501
For better performance, install the Watchdog module:
$ xcode-select --install
$ pip install watchdog
```

Fig1- showing Streamlit running in the terminal with a URL

2. Uploading a Nepali PDF

- Users can drag and drop or browse to upload a PDF document.
- The application supports PDF files up to 200MB.
- Users can also select their preferred response language: English or Nepali.



Fig2- showing the file upload interface.

3. Processing the PDF

- Once a PDF is uploaded, the system processes the document.
- The application extracts text from the PDF pages and converts them into embeddings for efficient searching.
- The success message "PDF processed successfully" appears once the process is complete.

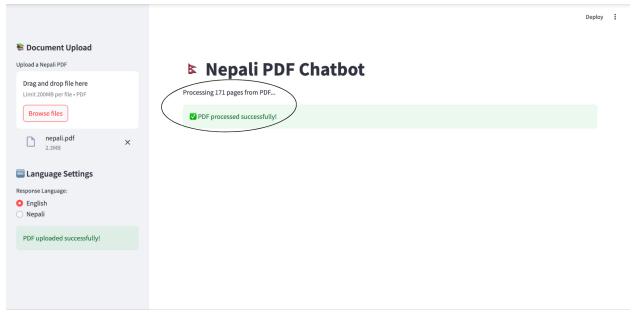
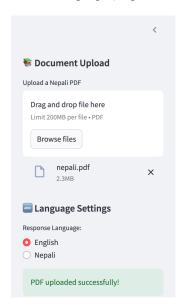


Fig3- showing the document processing screen.

4. Asking Questions

- Users can type their queries in the chat input field.
- The chatbot retrieves relevant answers based on the extracted text and displays the response in the selected language (English or Nepali).



You: What can i learn from this pdf ?? Bot: Based on the provided Nepali text, I can learn the following: The document discusses various procedures related to vehicle and transportation services in Nepal. It includes forms and templates for: Requesting cancellation of a vehicle registration certificate. Suspending and resuming transportation services. Transferring vehicle ownership (sale, auction, gift). Obtaining a temporary route permit. Issuing a operating permit. It references the "Vehicles and Transportation Management Rules, 2054" (सवारी तथा यातायात व्यवस्था नियमावली, २०५४). It mentions the Department of Transport Management, Kathmandu (यातायात व्यवस्था हिवाग काठमाडौं). The document contains mixed script, including Nepali and numbers.

Deploy

Fig4- showing a chatbot response in English.

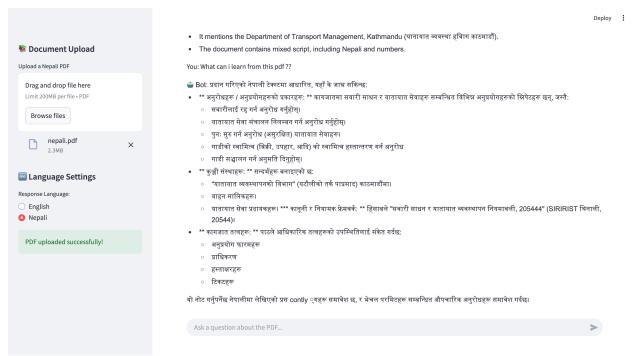


Fig5- showing a chatbot response in Nepali.

Conclusion

The Nepali PDF Chatbot provides an efficient way to process Nepali PDFs, extract information, and interact in both English and Nepali. The application uses FAISS for vector storage, Google Translator for multilingual support, and Gemini AI for intelligent responses.