

Chat with Your PDF

**DEEPSEEK 7B POWERED
INTELLIGENT PDF Q&A SYSTEM**

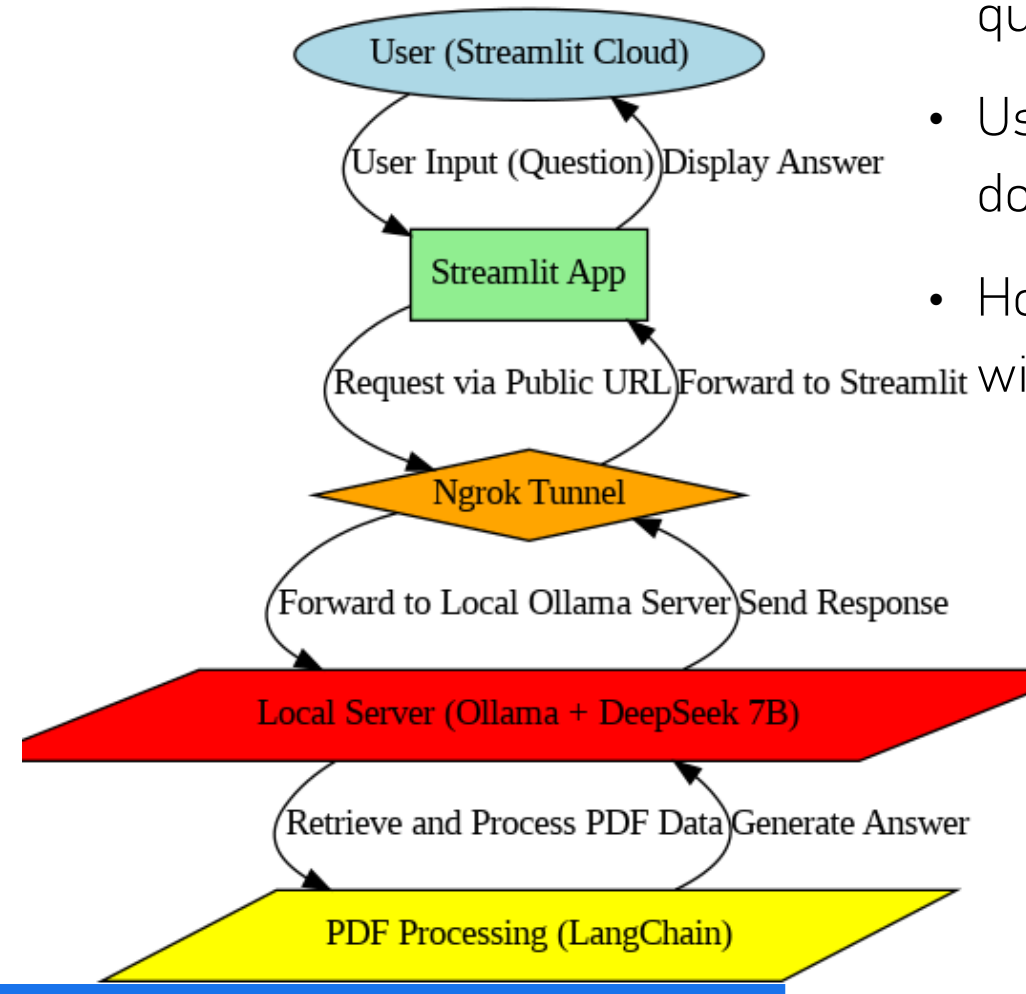
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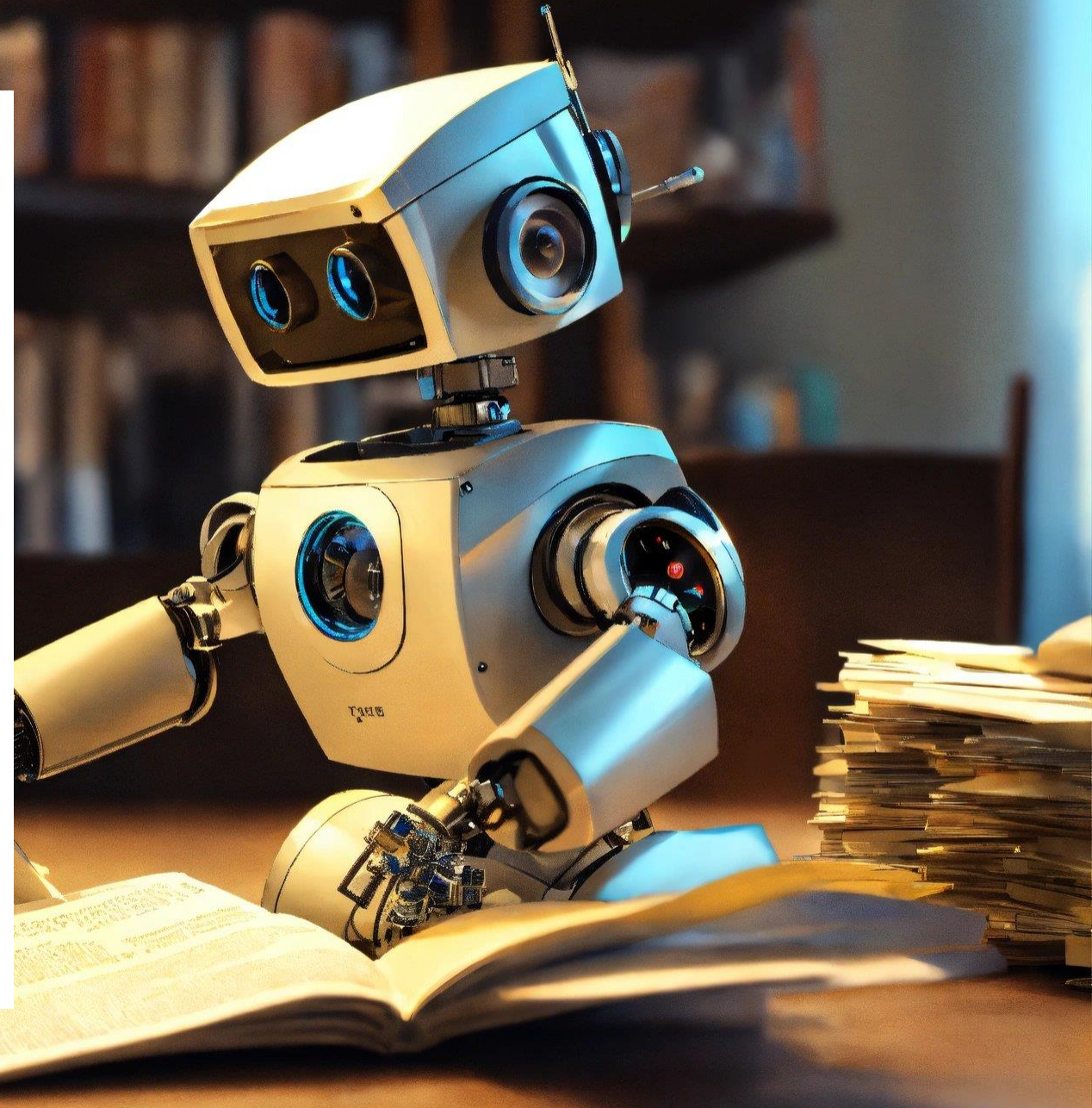
Introduction

- The project enables users to chat with PDFs by asking questions and receiving AI-generated responses.
- Uses Ollama's DeepSeek 7B for NLP and LangChain for document processing.
- Hosted on Streamlit Cloud with Ngrok tunneling to connect with a local Ollama server



Problem Statement

- PDFs contain valuable information but are not easily searchable.
- Manually searching for information in long documents is time-consuming.
- Need for an AI-powered solution that enables efficient document interaction.



Technology stack



Ollama: Runs DeepSeek 7B for generating responses.

LangChain: Manages document retrieval and processing.

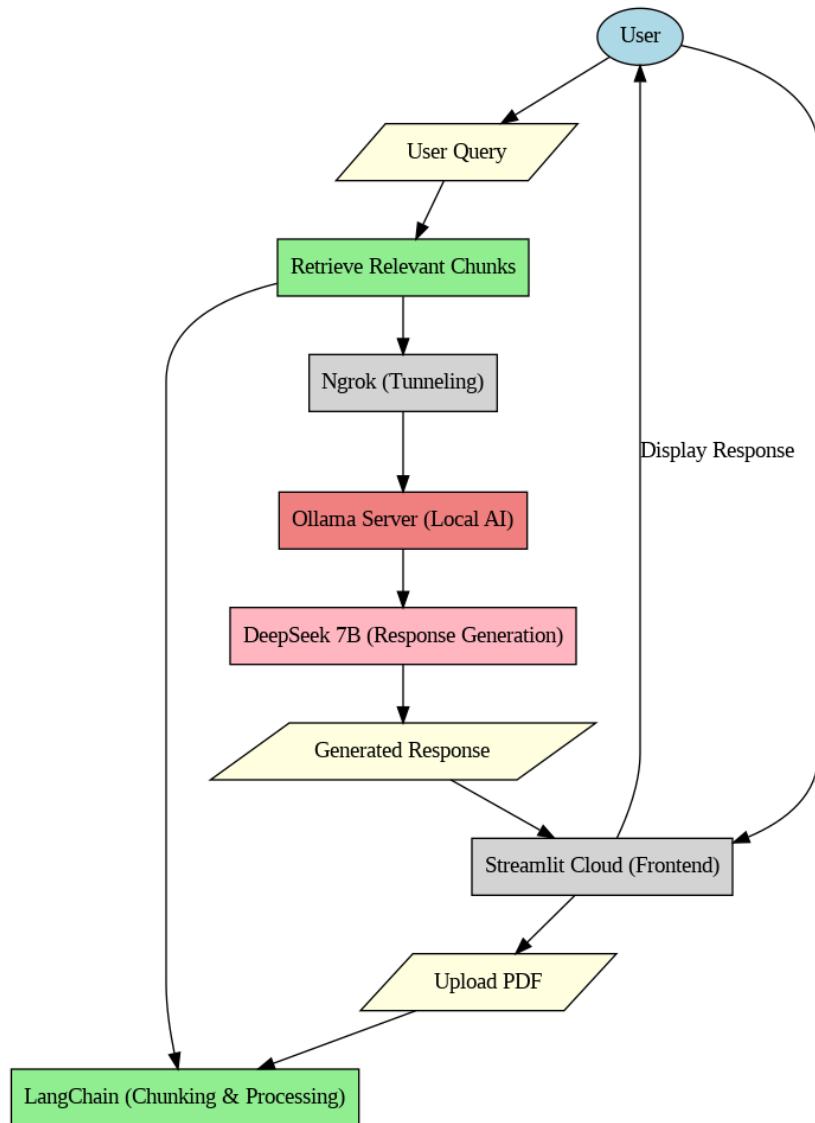


Streamlit: Provides an interactive cloud-based UI.

Ngrok: Exposes the local Ollama server to the cloud.



PyTorch & CUDA: Enables GPU acceleration for AI computations.



System Architecture

- User uploads a PDF via Streamlit Cloud.
- PDF is processed using LangChain and split into chunks.
- User asks a question; relevant PDF chunks are retrieved.
- The query is sent to the local Ollama server via Ngrok.
- DeepSeek 7B generates a response, which is sent back to Streamlit.

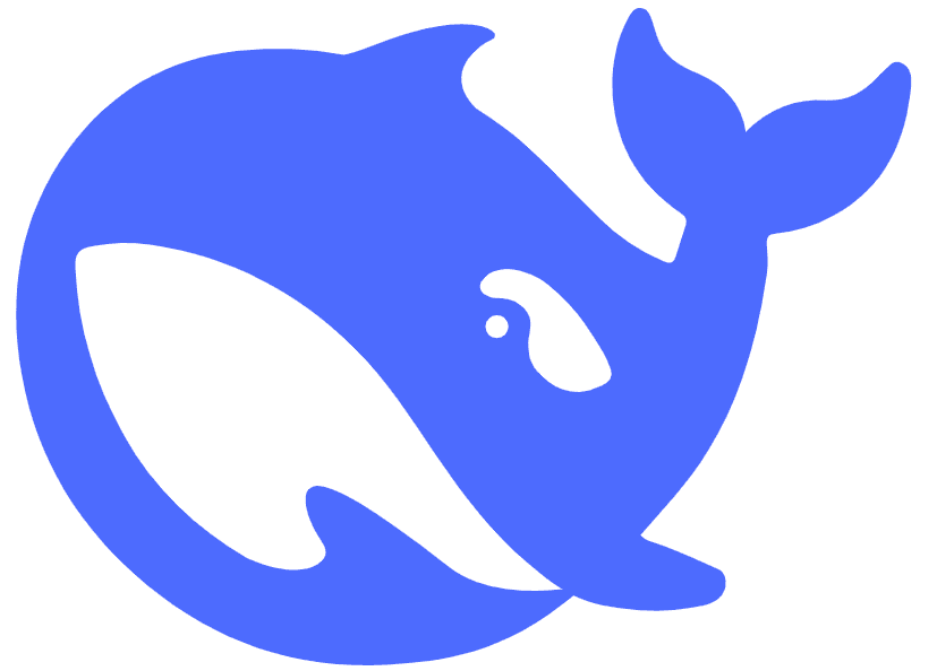


Ngrok Tunnel Explanation

- Streamlit Cloud cannot directly communicate with local servers.
- Ngrok provides a secure public URL that tunnels requests to the local machine.
- Ensures seamless communication between cloud and local resources.

DeepSeek 7b

- **What is DeepSeek 7B?** – A powerful open-source large language model (LLM) optimized for natural language understanding and generation.
- **Why DeepSeek 7B?** – It balances performance and efficiency, making it ideal for handling PDF-based queries.
- **How is it used?** – It processes questions and generates relevant answers using context from the document.
- **Runs on Your Local Machine** – The model is hosted locally and accessed via **Ngrok** to serve the



Implementation Details

- PDF Handling: Extracts text using PDFPlumber.
- Text Chunking: Splits content into manageable sections.
- Vector Store: Uses embeddings to index and retrieve relevant content.
- LLM Querying: Ollama processes the question and returns an AI-generated response.

Results & Benefits

Provides quick and accurate answers from PDF content.

Enhances accessibility of information in large documents.

Enables seamless cloud-to-local AI integration via Ngrok.

Future scope: Add multi-document support and fine-tune models for better accuracy.

Chat with Your PDF

Upload a PDF file



Drag and drop file here

Limit 200MB per file • PDF

Browse files



Sachin.pdf 3.4KB



when did he retire?



<think> Okay, so I need to figure out when Sachin Tendulkar retired based on the provided context. Let me read through the content carefully.

The first part talks about his rise to international Stardom with his debut at 16 in 1989 and mentions records he set throughout his career. Then there's a section titled "Legacy and Impact" which says he retired in 2013, but it also mentions that his legacy continues beyond that.

Wait, so does the retirement date come from Legacy and Impact or somewhere else? I see in the context: "In 2013, Tendulkar bid farewell to international cricket..." So that's one source. But before that, the question is when he retired, but in another part of the text, it says he made his debut at 16 and played until he was 48, as per his birth year on April 24, 1973.

Hmm, so two different timelines: one mentions retirement in 2013, and another mentions he is still active at age 48. So which one do I go with? The context directly states the retirement date in the "Retirement and Beyond" section as 2013. </think>

Sachin Tendulkar retired from international cricket in 2013.

Ask a question about the PDF...



Output:

- [Streamlit](#)



Conclusion

- Successfully implemented an AI chatbot for PDF interaction.
- Combined LangChain, DeepSeek 7B, and Streamlit for an efficient solution.
- Ngrok enables secure cloud-to-local communication.
- Can be extended with more powerful models and integrations.

THANK YOU!

