
DocChatAI: Intelligent Document Assistant for Efficient Information Retrieval

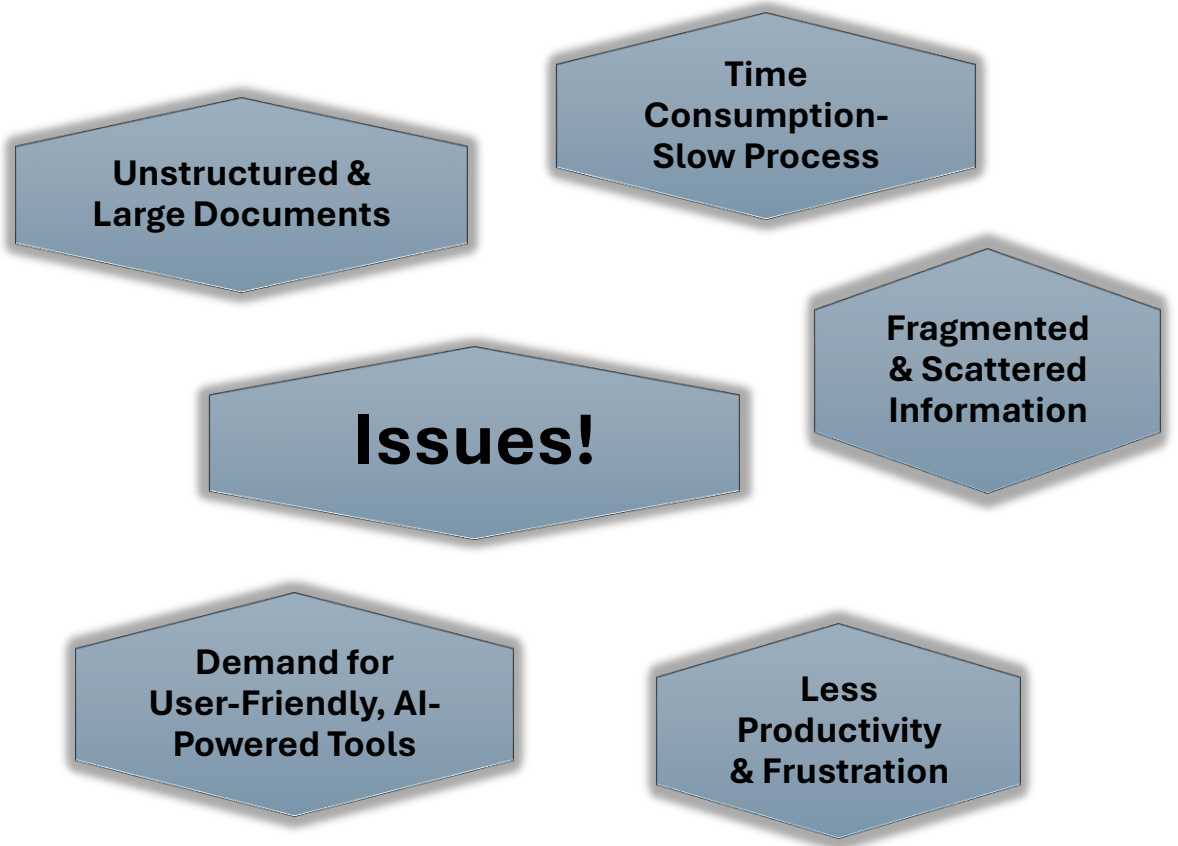
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01/10/24

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HOST INSTITUTIONS

FUNDED BY

Objective: Provide Solutions



DocChatAI 

Technology Stack Used

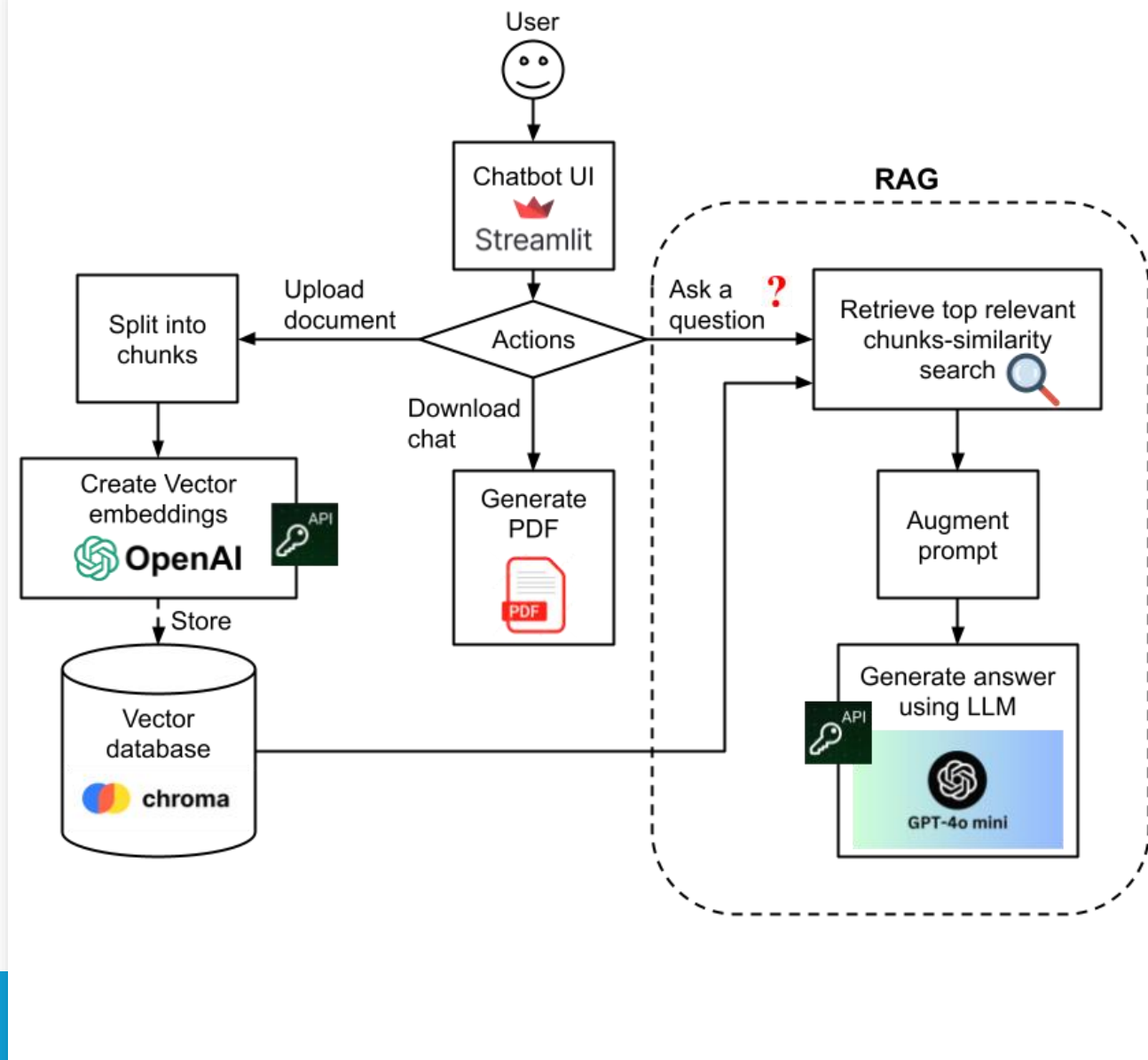
- Frontend Technology —————> Streamlit
- Backend Technologies —————> OpenAI Embeddings, Chroma Database, RAG, & GPT Model

Retrieval Augmented Generation (RAG)

It is an AI development technique where a large language model (LLM) is connected to an external knowledge base to improve the accuracy & quality of its responses.



Application Architecture





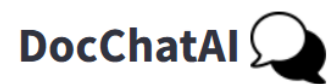
Demo...

Upload the Documents

Drag and drop files here

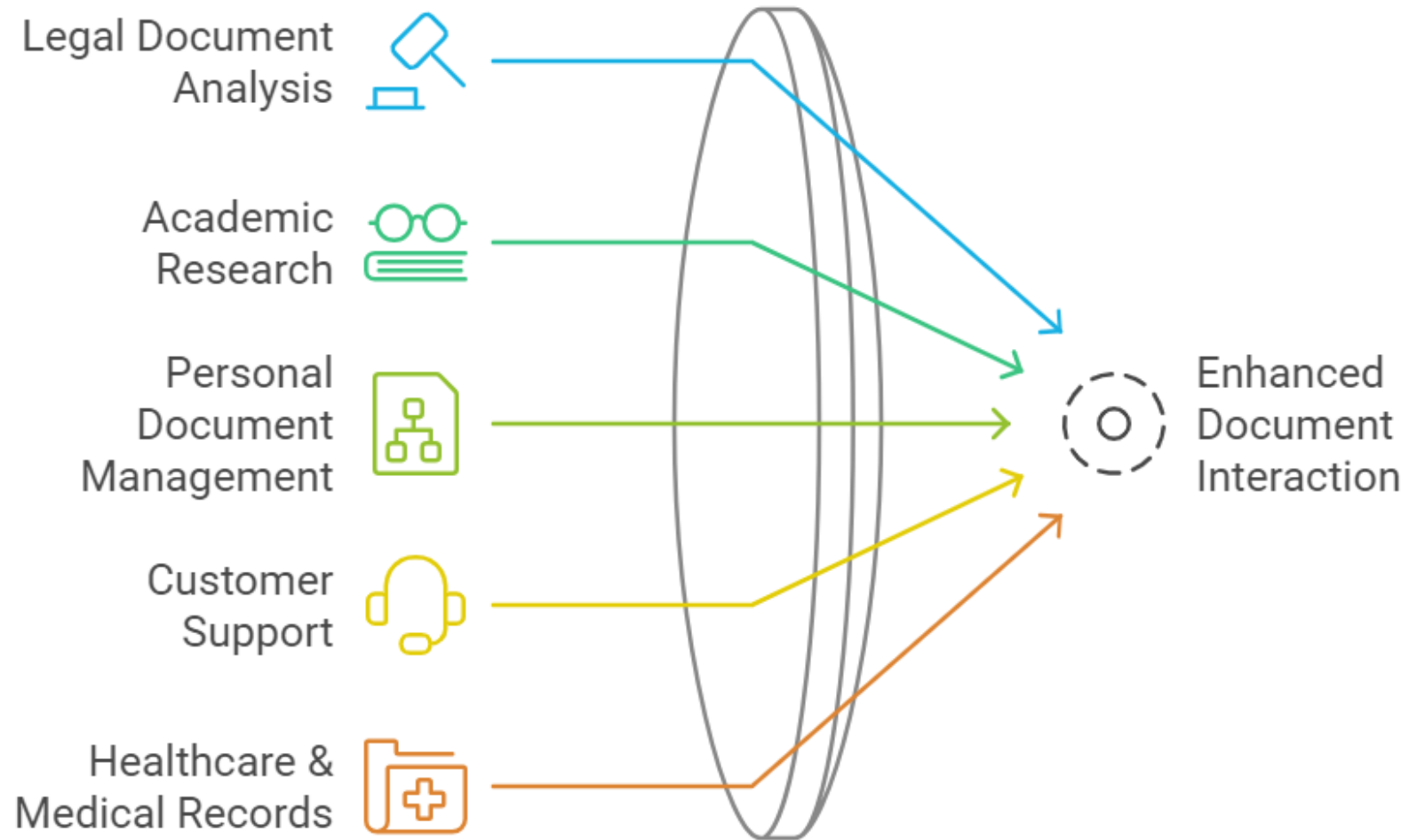
Limit 200MB per file • PDF

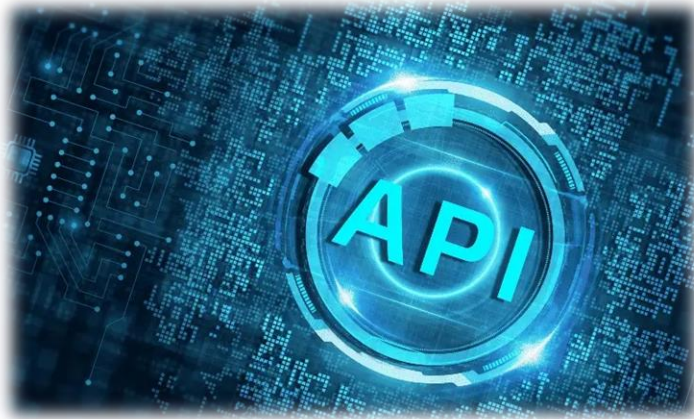
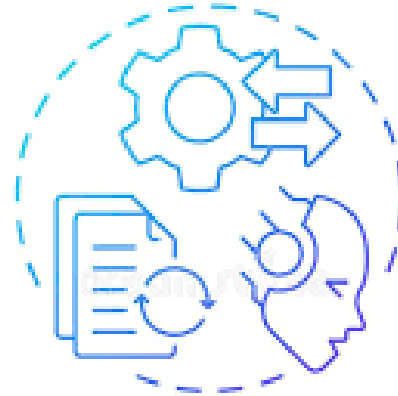
Browse files



Please upload the documents to start the conversation!

Use cases





Challenges & Limitations

- ☐ Prompt Engineering
- ☐ Response Completeness
- ☐ Scalability with document volume
- ☐ Dependency on external API's

Future Considerations



Improved and specialised prompts for better responses



Scaled Support for Larger Files (in GBs)



Voice input and output for advanced & natural conversational interaction



Session handling to allow users to store and access conversations and files seamlessly across devices



Accessible technical settings like text splitting configuration, embedding model, LLM model, & size of the stored files



Capability to modify and retry a query within the conversation for improved interaction

TCS Internship Experience (Overall Learnings)

- Learnt Generative AI, LLMs, & Prompt Engineering
- Learned different technologies including docker, REST API's, OpenAI API, AWS services like EC2 instance, ECR, S3, Amazon Sagemaker, & IAM, and setting virtual environments, directories, and configurations
- Improved project management in GitHub, & in Agile frameworks like Miroboard
- Developed product-oriented mindset
- Gained a sense of accomplishment
- Enhanced multi-tasking capability
- Improved work organization & communication
- Developed more consistency & efficiency
- Trained to meet timelines/deadlines for given tasks
- Boosted up confidence

Thank You
For Your Attention!

Any Questions

