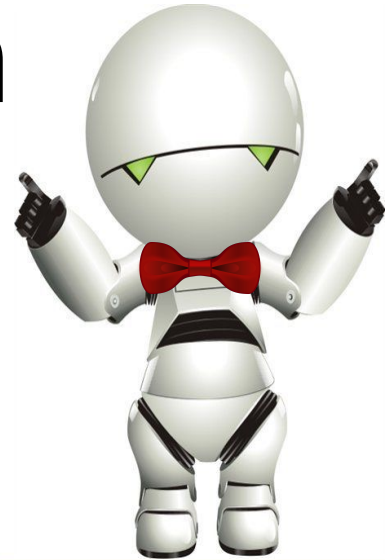


Professor Marvin

AI study tool chatbot.



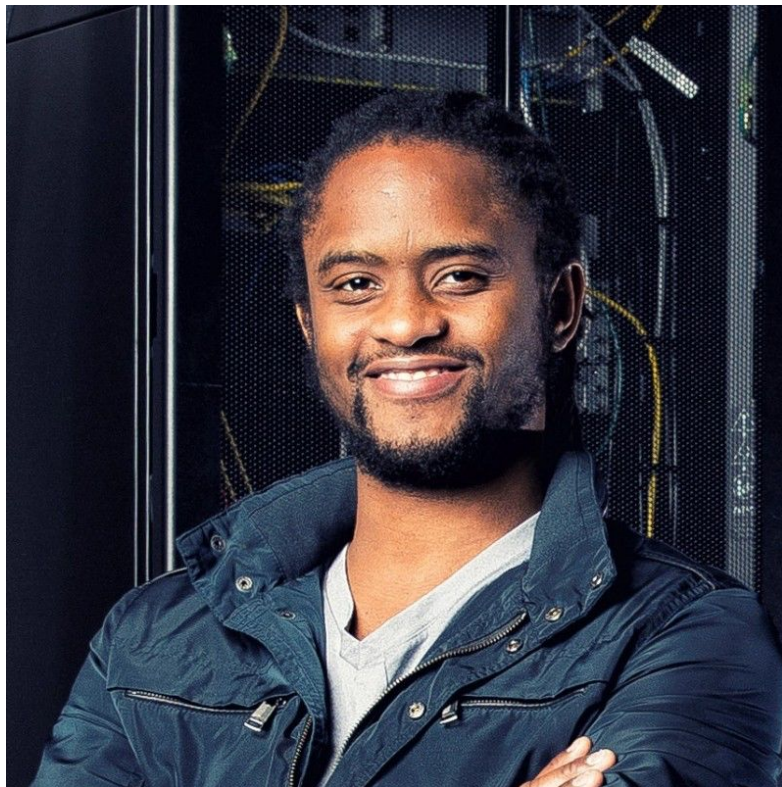


Meet the Martians



Why are we here?

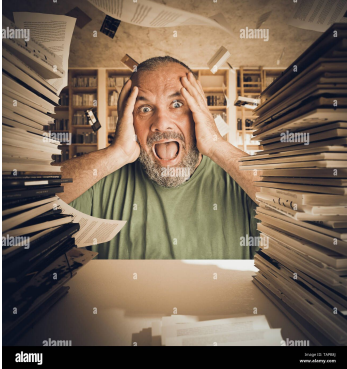




It's all about the grock -Jason Mars

Who Likes studying?

- Studying...
 - Sucks
 - Is inefficient
 - Is too time consuming
- Classes have so much info to shuffle through
- You spend too long finding the info you need

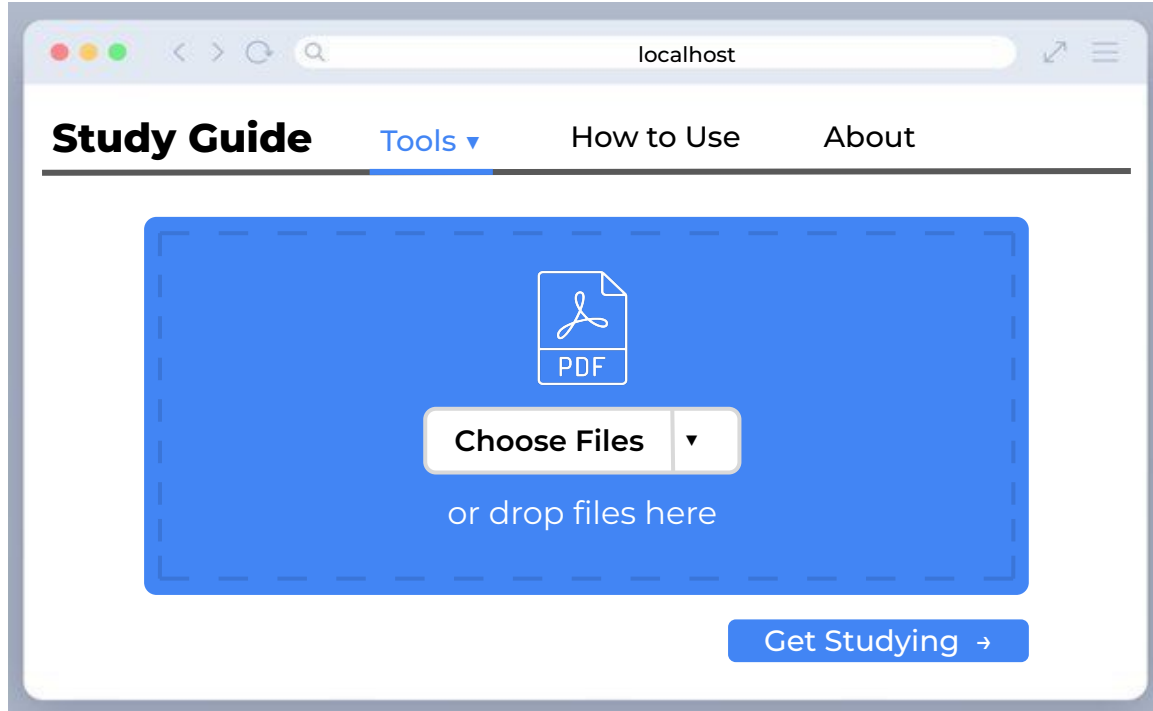


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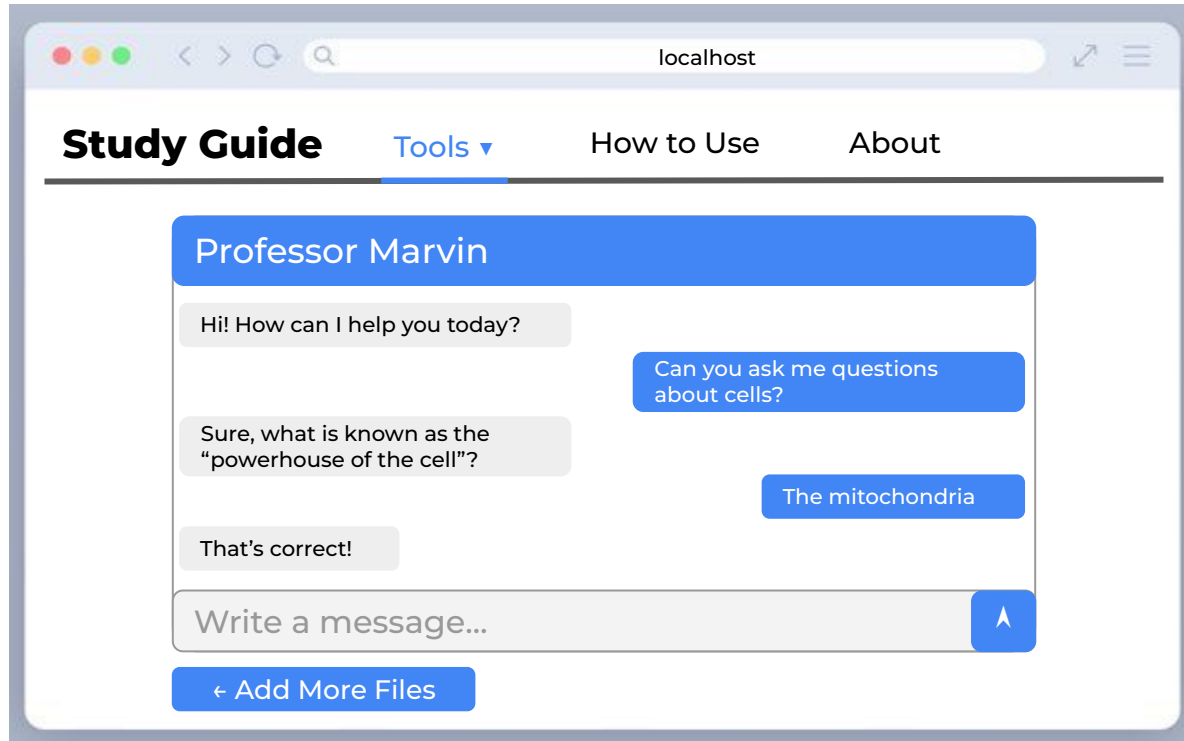
- Good for students who want to maximize efficiency
 - Easier than to slug through the textbook
-
- Upload all your relevant texts to Prof. Marvin
 - Automatically summarize the most important parts
 - Get asked questions to test your understanding



Mock Interface



Mock Interface cont...



Features and Reach Goals

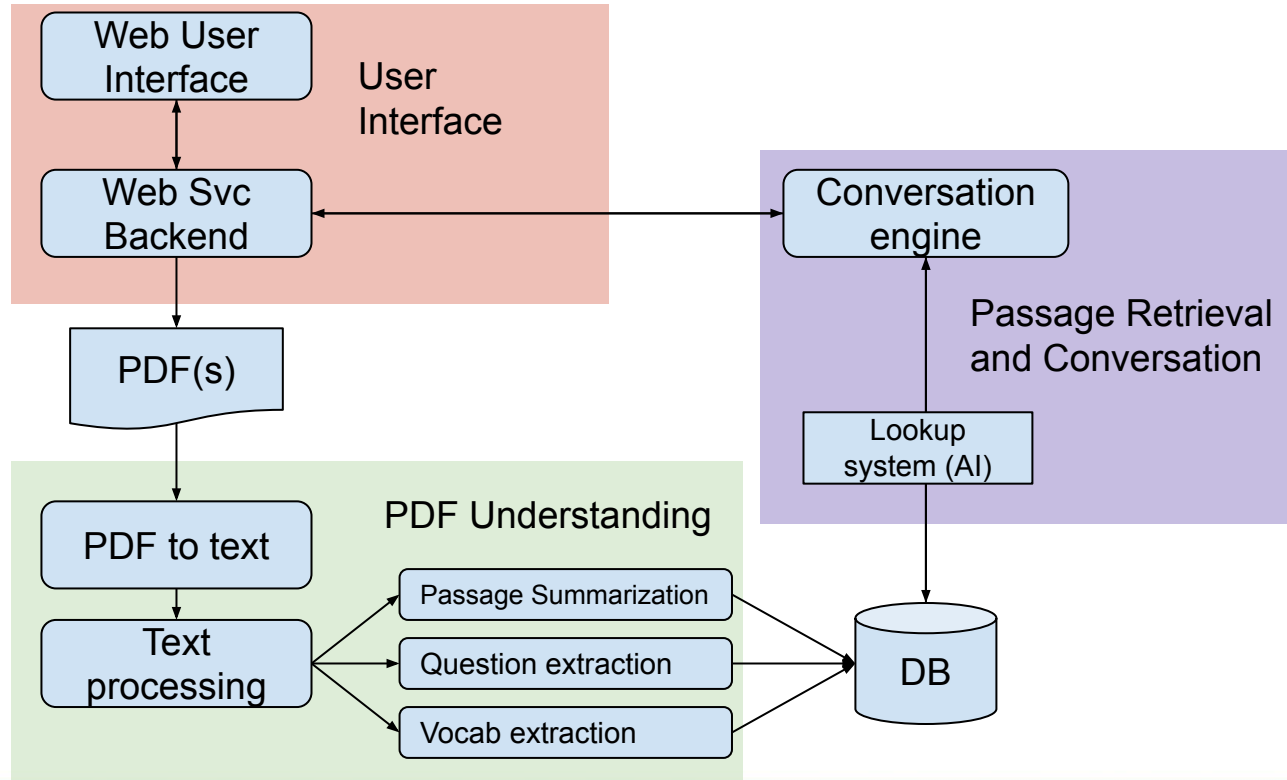
- Multiple documents
- Retrieve useful information
- Collect and organize questions
- User can answer questions from the AI and get feedback

Later...

- Question Generation *and* Question Retrieval
- Additional study features
- Host on a cloud platform
- General fine-tuning



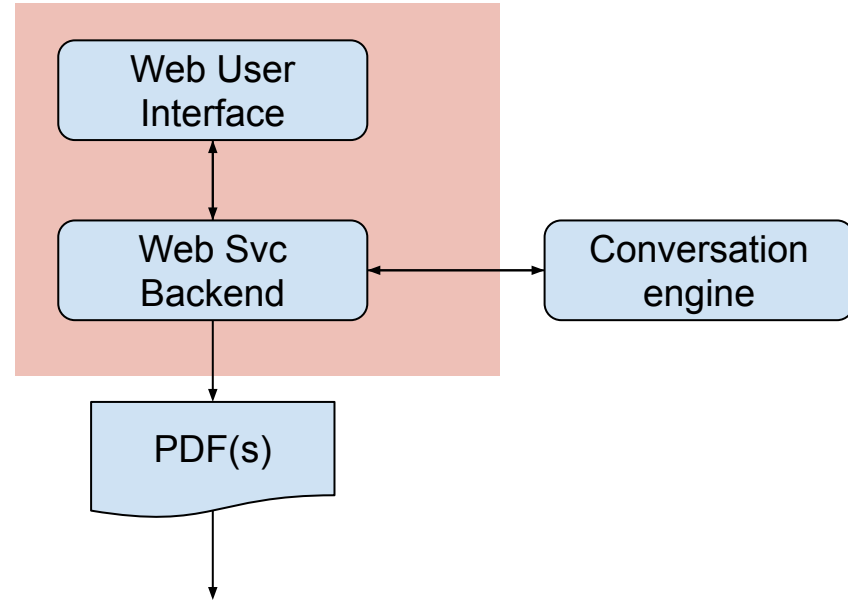
Program Structure: Subsystems



Program structure: User Interface

Goal: Handles UI, Data in and out paths

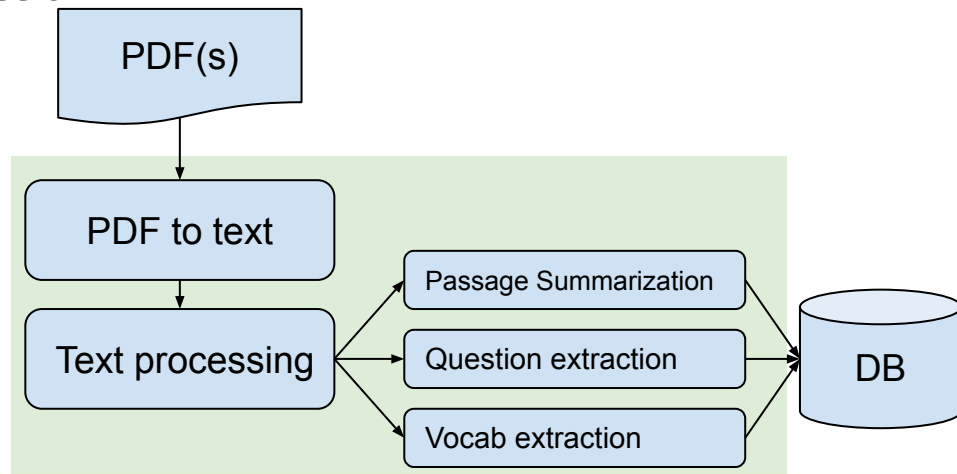
- Ingest PDF, document handling
- Conversation via text UI
- Passage display



Program structure: PDF Understanding

Goal: Pull out useful information from PDF documents

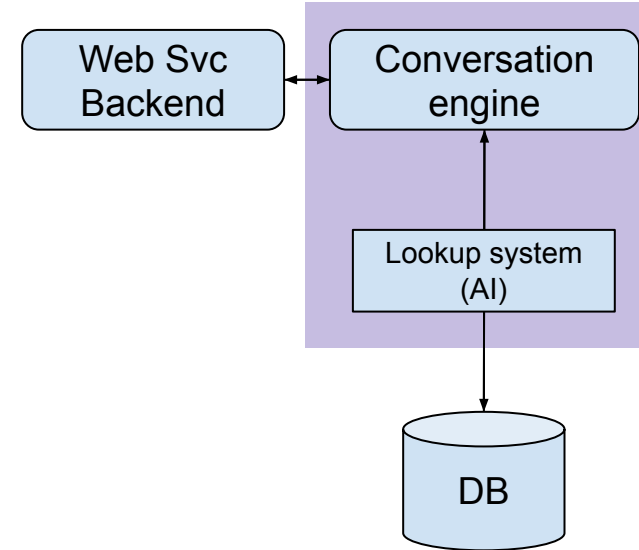
- Find text information from PDF document
- Segment text into passages
- Extract summaries, exercises and vocab



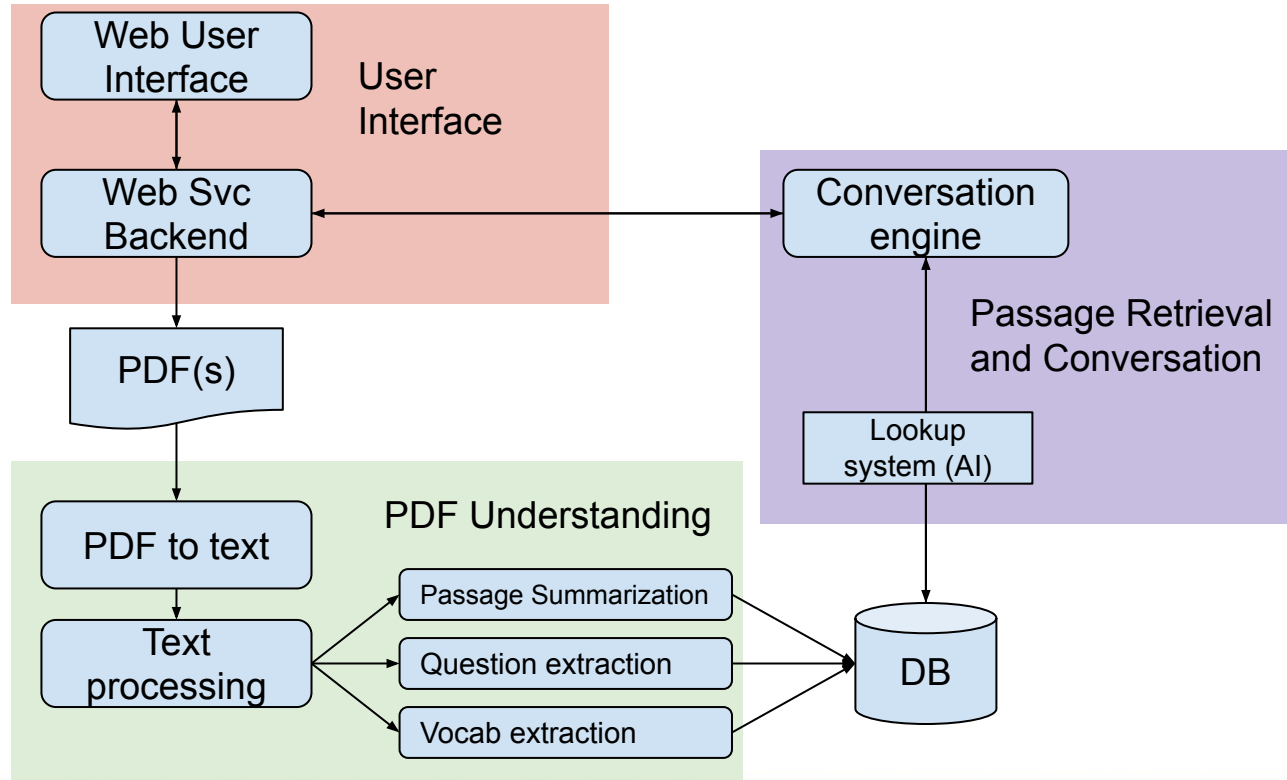
Program structure: Information Retrieval

Goal: Provide text interface that finds informational segments

- Provide conversational interface for passage database
- Use lookup system to find requested passages
- Determine important Info from passages to display



Program Structure:



Tools/APIs



JASECI

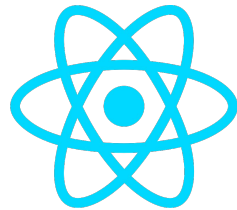


Hugging Face



SQLite

PyPDF2



React

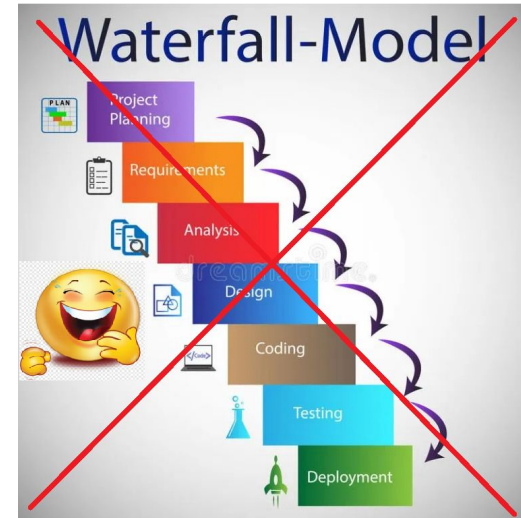
Key Milestones

- Decide on specific language models
- Individual components are working separately
- Key features functioning
 - Text summarization
 - Question Extraction
 - Vocab extraction
- Command line interface
- Front end user interface
- Further development of functionality



Organization

- Agile-style development practices
- Small subgroups for focused development
- “Pair Programming” for...
 - Backend, fitting models etc
 - UI/UX, web application for the user
 - QC, tying systems together



Spirit of Collaboration

- Weekly meetings
 - Updates on progress and timeline
 - Group brainstorming
 - Review features, stretch goals
- Share advice, research
- Rotate subgroups
 - Reduce fatigue
 - Improve quality
 - Ensure cohesive individual knowledge

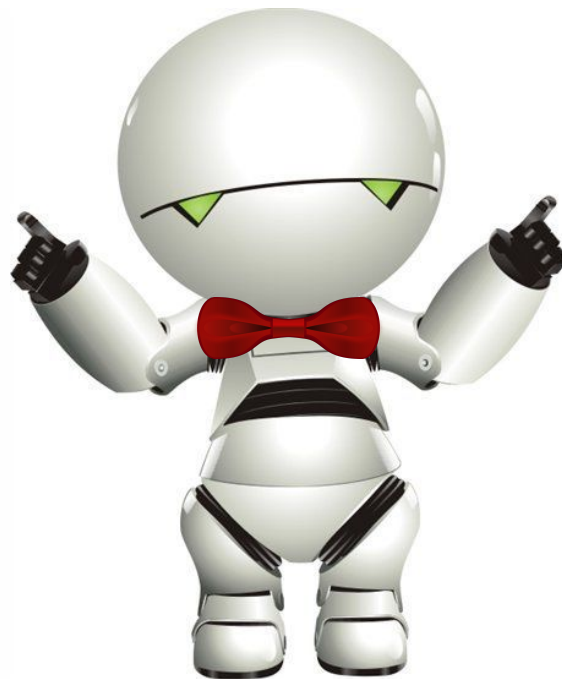


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Professor Marvin

- Studying is hard and revising and testing knowledge is tedious
- Study tool
 - Chatbot UX
 - Text summarization
 - Question extraction
- Architecture
 - Jaseci, React for UX
 - Huggingface, GPT3, SQLite backend



Thank You

Any Questions?