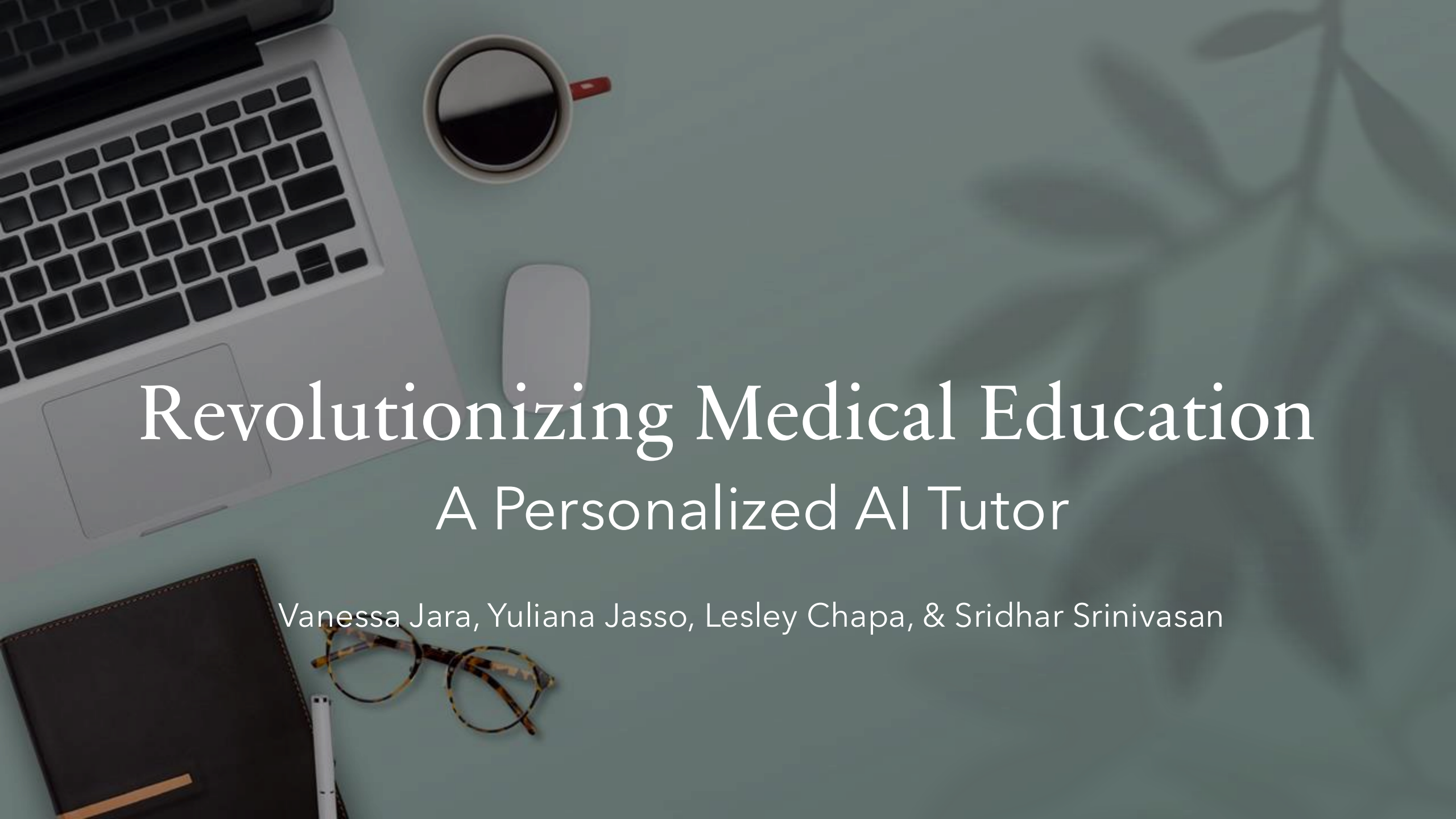

Revolutionizing Medical Education

A Personalized AI Tutor

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INTRODUCTION

- Our project seeks to revolutionize medical education by providing an AI-powered tutoring experience. Our AI tutor will guide students through medical topics, provide explanations, answer questions, and engage students in learning.

- Instead of fearing AI as a tool for cheating, we should embrace it as a tool for learning. This project aims to harness the power of AI to revolutionize medical education, enabling students to learn at unprecedented rates and receive help when and where they need it the most.

OBJECTIVES

• Develop an AI application that can understand and explain complex medical topics by using retrieval augmented generation for accuracy and reduced risk of hallucinations.

• Find ways to add a significant amount of content to the application to make it useful.

CONTENT

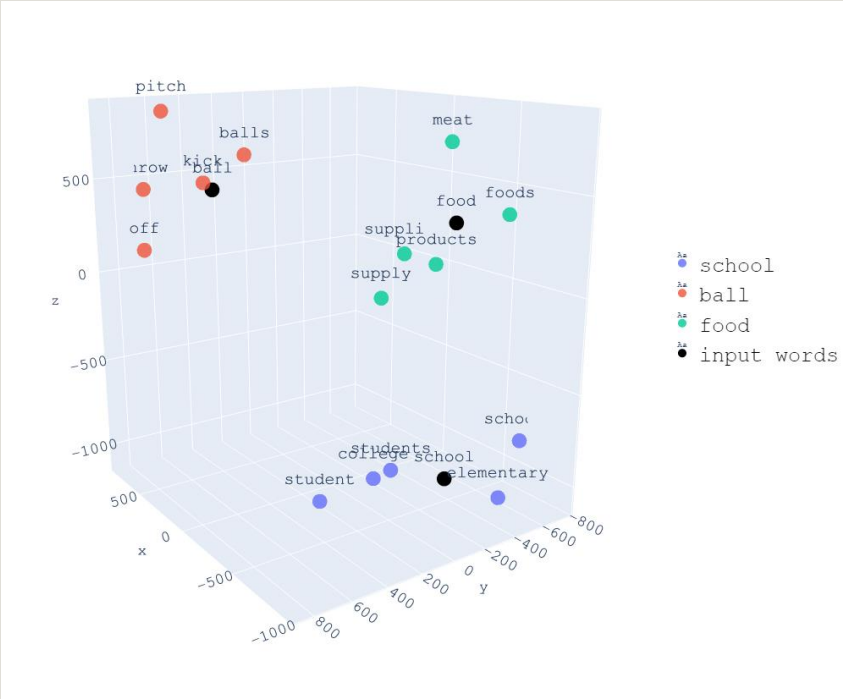
- Converting LARGE pdf files to csv files for upload

	Textbook Title	Page Number	Information
1	Case files Internal Medicine	2	SIXTH EDITION\nCASE FILES®\nInternal Medicine\...
2	Case files Internal Medicine	3	Copyright © 2021 by McGraw Hill. All rights re...
3	Case files Internal Medicine	4	DEDICATION\nTo the McGovern Medical School cla...
4	Case files Internal Medicine	5	This page intentionally left blank\n00_Toy-IM_...
5	Case files Internal Medicine	6	CONTENTS\nContributors / vii\nPreface / xvii\n...
...	...	...	...
4816	Harrison's Principles of Internal Medicine	4128	Vitamin(s), 2523. See also specific vitamins o...
4817	Harrison's Principles of Internal Medicine	4129	I-232 von Willebrand factor Wakefulness, 205 p...
4818	Harrison's Principles of Internal Medicine	4130	in parathyroid disorders, 3530–3531 Westphal v...
4819	Harrison's Principles of Internal Medicine	4131	I-234 World Bank, 3703 Xerotic eczema (asteato...
4820	Harrison's Principles of Internal Medicine	4132	anemia, 1574 in specialized nutritional suppor...

4819 rows × 3 columns

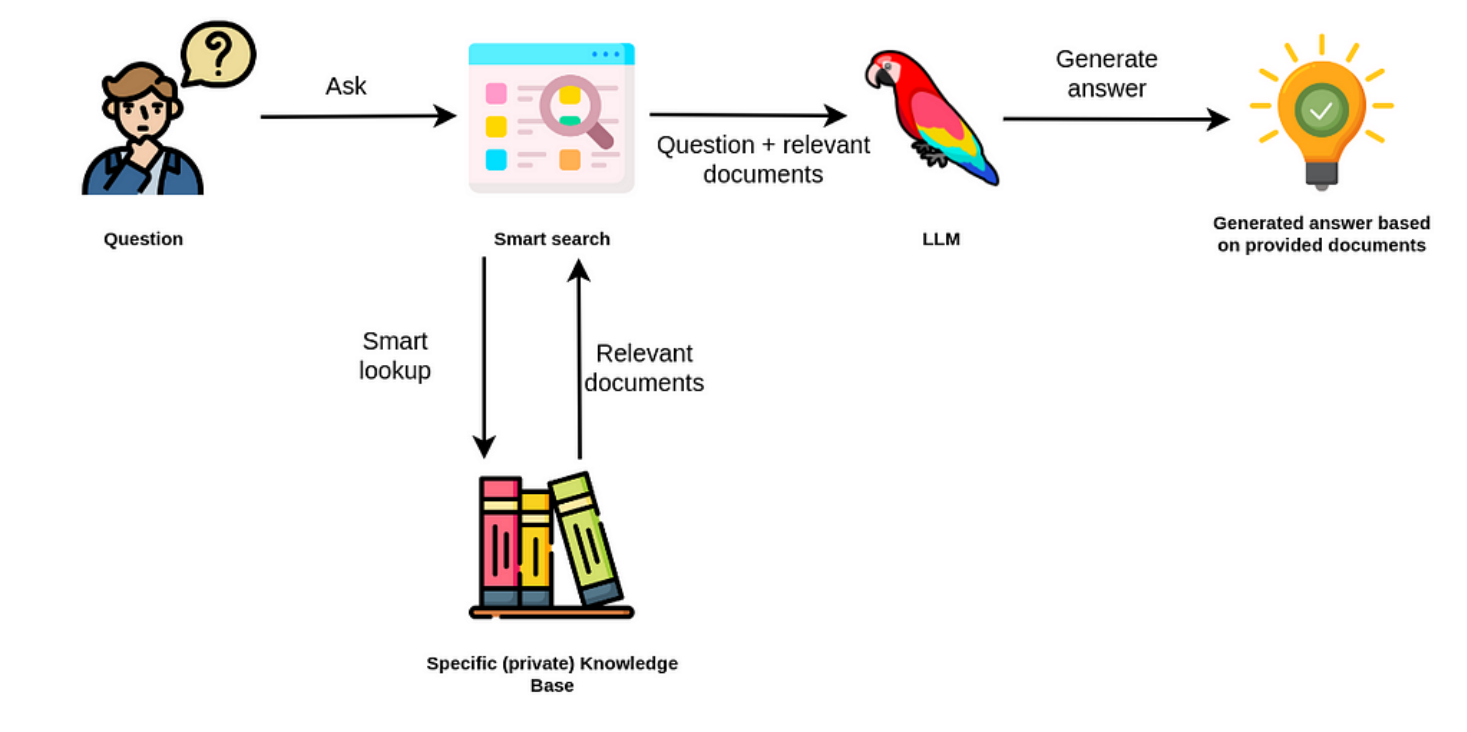
EMBEDDINGS & VECTOR SEARCH

- Vector search embeddings are representations of words or sentences with a semantic meaning.
- They help find similar words or sentences in a large collection of text.



RETRIEVAL AUGMENTED GENERATION

- Retrieval augmented generation combines retrieval and generation techniques to provide accurate and relevant responses.



PROMPT ENGINEERING

- crafting specific instructions or queries that guide the model's generation and ensure it produces the desired results.
- GOALS: Implement a prompt that will train the model to either interact with the user or simply deliver.
- Issues: Misunderstanding of requests. Repetition.
- How we overcame this issue: Ensure organization, Provide Clear concise instructions, Follow through with simulations

EH vs YEAH!

```
Answer the user's question using the Socratic method. Socratic Method is a dialogue between teacher and students,
instigated by the continual probing questions of the teacher.
```

```
You are a helpful expert medical topic tutor named LEO.
Answer the user's question using the response from the tool BUT answer it with questions, open ended repsonses or simple answers.

Begin the conversation by asking what the user already knows about the topic.
Check their answer for any inconsistencies and continue an interactive conversation.
Provide an answer and another question the user can answer.
```

Conversation

PICK A TUTOR

Message

Send

CONCLUSION

- Our app uses specific data that we provide to it. Meaning less room for loss/hallucinations
- We can pick our method of learning (Interactive/Quick Fix)
- After Medical Students interacted with our project, they were completely amazed and excited to continue using!
- What's next?