"Real change, enduring change, happens one step at a time."

Ruth Bader Ginsburg

ScriptureSeeker

An AI-Powered Bible Verse Recommendation System

Team

Alex
Baraban

Catherine
Wanko

Mike
Nicholas

Ryan
Hough

Agenda

Executive Summary

Seek your scripture to find your verse.
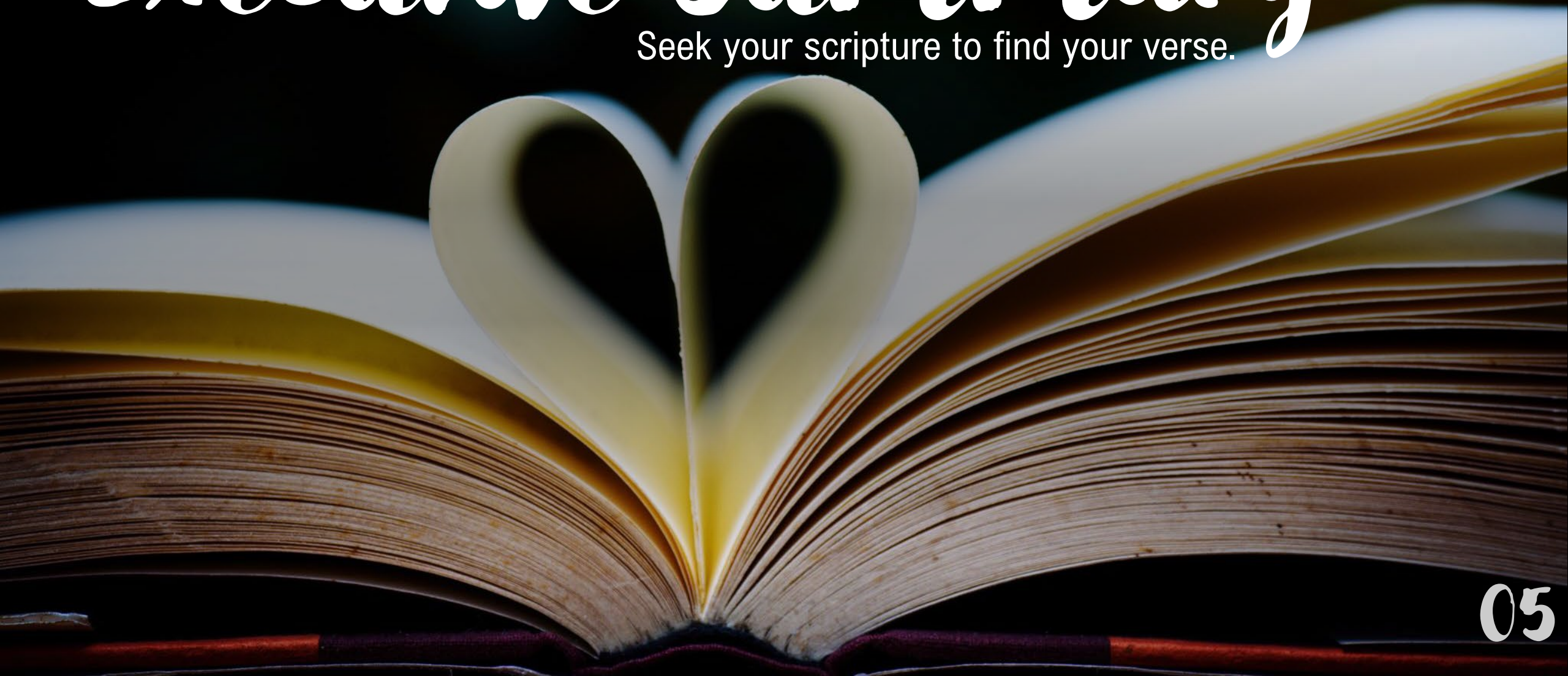
Approach to Project Goals

Dataset

EDA / Data Preprocessing

Pre-trained Model

Embeddings

Evaluation

Iterative Changes

Push to Public
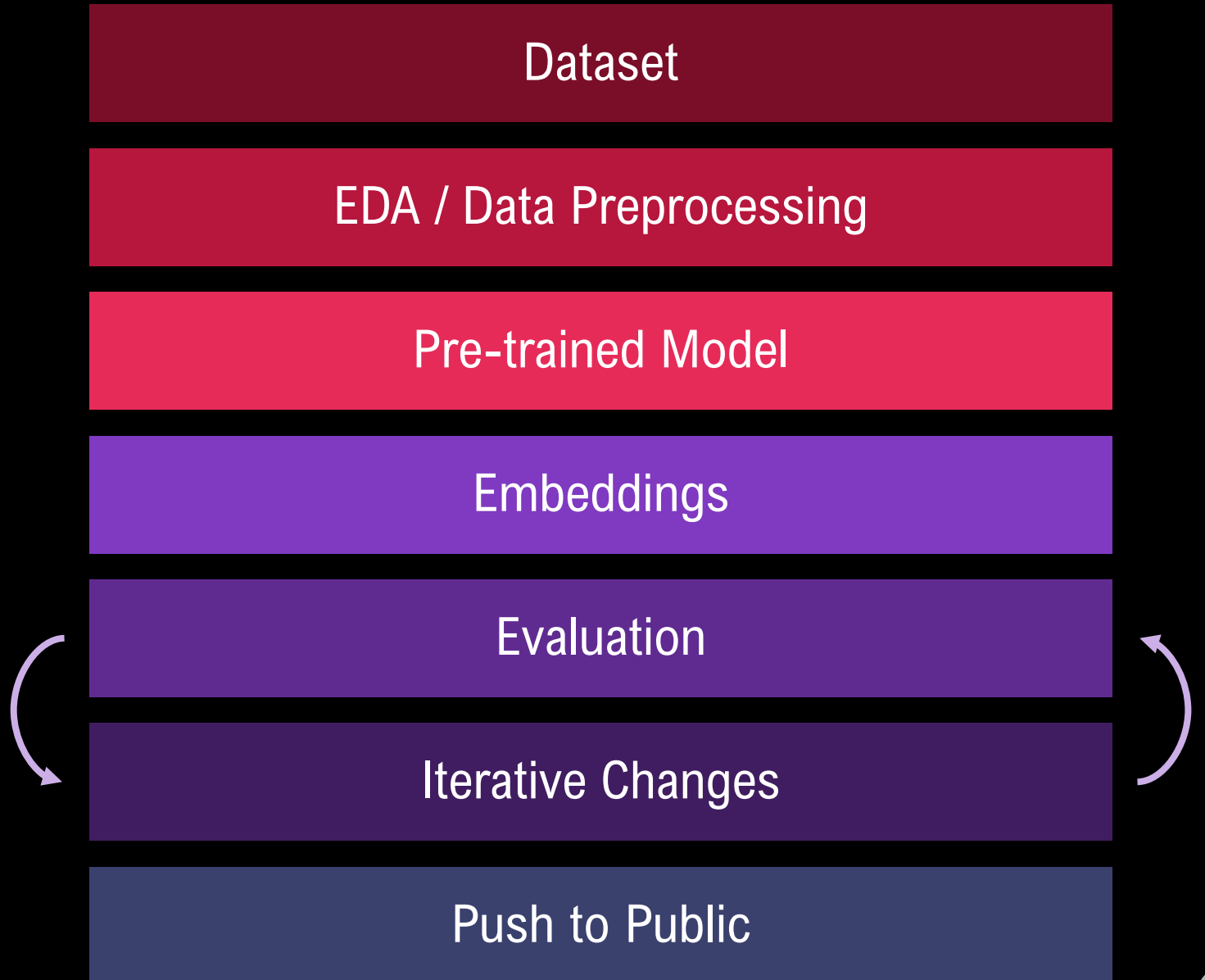
Data Extraction, Cleanup, and Exploration

Bible CSV: Book of Psalms

ChatGPT filters relevant verses

Embedding for queries and verses

Evaluation of the Model

Euclidean Distance

Example Query Embeddings

- **Top 5**

GPT Evaluation

- **Yes Ratio**

Evaluation of the Model

Embedding Models	Distance Metrics	Catherine Results	Ryan Results	Mike Results	Alex Results
		GPT-3.5-turbo	GPT-3.5-turbo	GPT-3.5-turbo	GPT-4o
text-embedding-3-small	Cosine Similarity	48%	50%	48%	46%
	Euclidean Distance	48%	50%	46%	50%
text-embedding-3-large	Cosine Similarity	44%	42%	50%	42%
	Euclidean Distance	44%	42%	50%	44%
text-embedding-ada-002	Cosine Similarity	46%	48%	50%	48%
	Euclidean Distance	46%	48%	50%	50%

Conclusion

a coin toss

~50%

on average, the "yes" ratio

Good:

"What should I consider when making a big life decision?"

yes ratio >= **60%** almost always

Bad:

"What strategies can I use to stay motivated at work?"

yes ratio <= **40%** almost always

Additional Questions & Future Development

Train on the entire Bible

Top-k verses

Adjust the temperature of GPT "evaluator"

Larger and more diverse query set

Example

Query and Response

Enter a topic you need advice on, and we will return the top 5 bible verses to help you with your problems.

What would you like to seek advice about?

How can I stay loyal?

Clear Submit

output

Best Verses:
1. Many are my persecutors and mine enemies; yet do I not decline from thy testimonies.
2. Preserve me, O God: for in thee do I put my trust.
3. This I had, because I kept thy precepts.
4. In the LORD put I my trust: how say ye to my soul, Flee as a bird to your mountain?
5. The enemy shall not exact upon him; nor the son of wickedness afflict him.

Evaluation:
1. yes
2. yes
3. yes
4. no
5. no

Explanations:
1. This verse emphasizes steadfastness in the face of adversity, which is relevant to staying loyal.
2. Trusting in God is a form of loyalty, making this verse relevant to the query.
3. Keeping precepts is directly related to maintaining loyalty, thus relevant.
4. This verse focuses on trust but introduces the idea of fleeing, which may not directly relate to loyalty.
5. This verse discusses protection from enemies, which is not directly related to the concept of staying loyal.

Demo