MOVIE RECOMMENDER

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PROJECT 3

EXECUTIVE SUMMARY

Summary

The objective of our project was to create a sentiment-based Movie Recommendation app that utilized the power of OpenAI to suggest films and tv shows based on an arbitrary statement.

- Develop a movie review analysis system that utilizes RAG for generating answers based on user queries
- Sentiment analysis to provide insights into the sentiment expressed in movie reviews
- Gradio for creating an interactive web interface.

OVERVIEW OF DATA

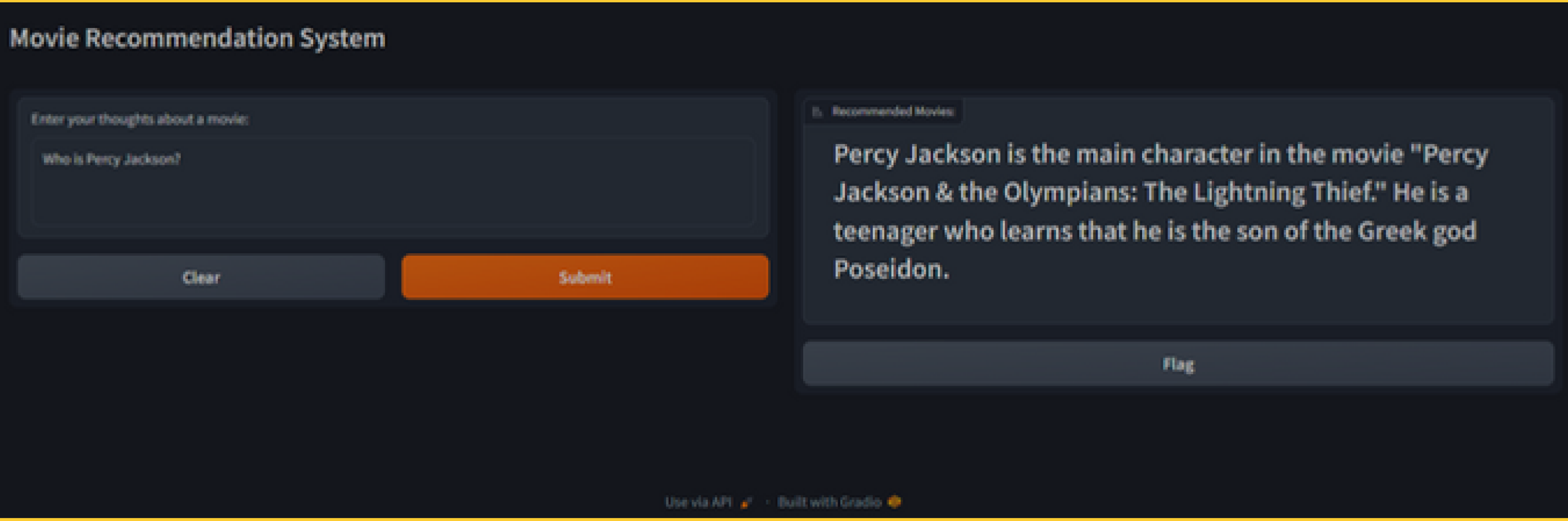
Overview of Data

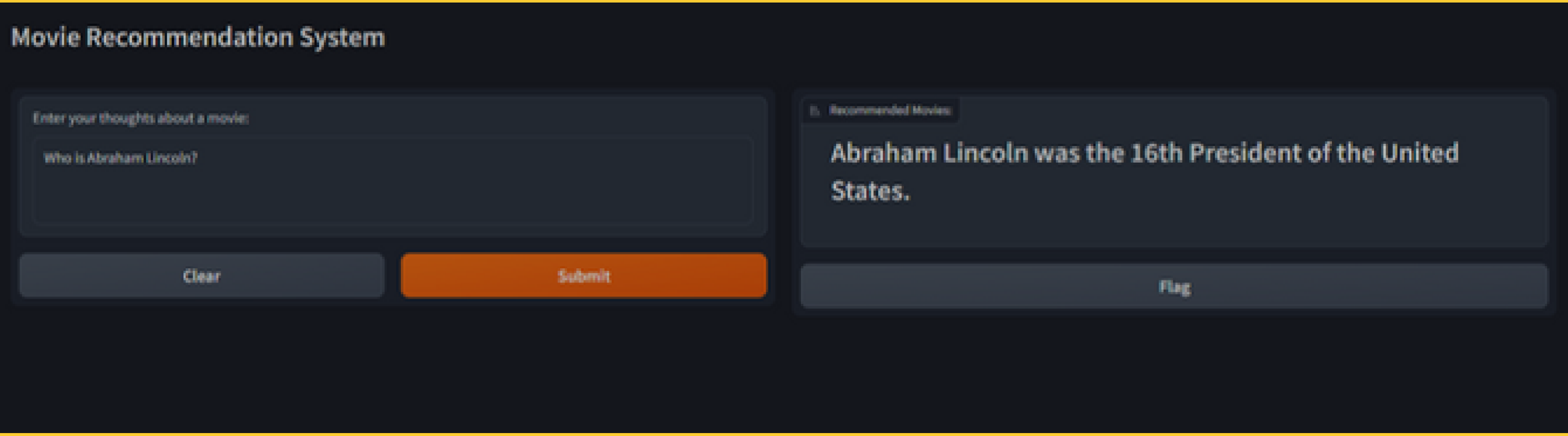
- Large dataset sourced from Kaggle (via Rotten Tomatoes) for project.
- Two .csv files with over a million rows.
- First file: 21 columns including movie details and review content.
- Second file: arbitrary film information like genre and tagline.
- Many categories used for sentiment analysis training.

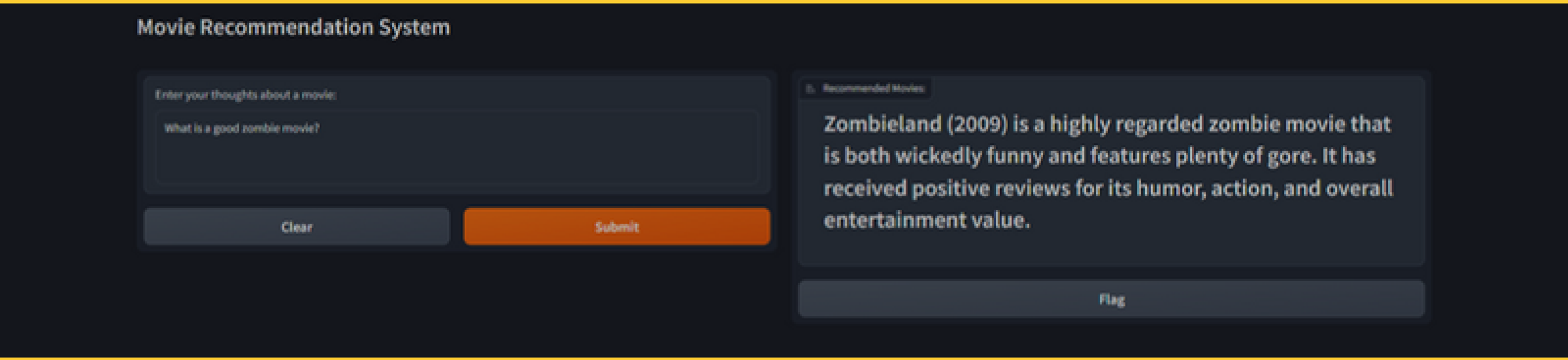
APPROACH

Approach

- Planned two models: BERT-based and RAG for recommendation.
- Intended BERT as fallback; RAG to leverage OpenAI for sentiment analysis.
- Ironically, BERT failed; dataset too large for vectorization.
- Shifted focus to RAG despite inexperience; faced vectorization and technical challenges.
- Time constraints due to API limits and technical limitations.
- Sentiment analysis integration failed; prioritized working model over concept.


Movie Recommendation System
Enter your thoughts about a movie:
Who is Percy Jackson?
Clear
Submit
Recommended Movies:
Percy Jackson is the main character in the movie "Percy Jackson & the Olympians: The Lightning Thief." He is a teenager who learns that he is the son of the Greek god Poseidon.
Flag
Use via API · Built with Gradio


Movie Recommendation System
Enter your thoughts about a movie:
Who is Abraham Lincoln?
Clear
Submit
Recommended Movies
Abraham Lincoln was the 16th President of the United States.
Flag


Movie Recommendation System
Enter your thoughts about a movie:
What is a good zombie movie?
Clear
Submit
Recommended Movies:
Zombieland (2009) is a highly regarded zombie movie that is both wickedly funny and features plenty of gore. It has received positive reviews for its humor, action, and overall entertainment value.
Flag

FUTURE CONSIDERATIONS AND CHANGES

Future Considerations

- Find a sentiment analysis model that suits our needs:
  - This feature was a primary motivation for creating a movie recommendation system.
- Update the dataset to include recent films:
  - Train the model on the expanded dataset for improved accuracy.

RESULT & CONCLUSIONS

Results & Conclusions

- Initial project: sentiment-based film recommender
- Realization: Ambitious idea
- Time constraints: Not feasible within allotted time
- Confidence: Given time, troubleshooting, and experience
- Possibility: Creation of sentiment-based movie recommender