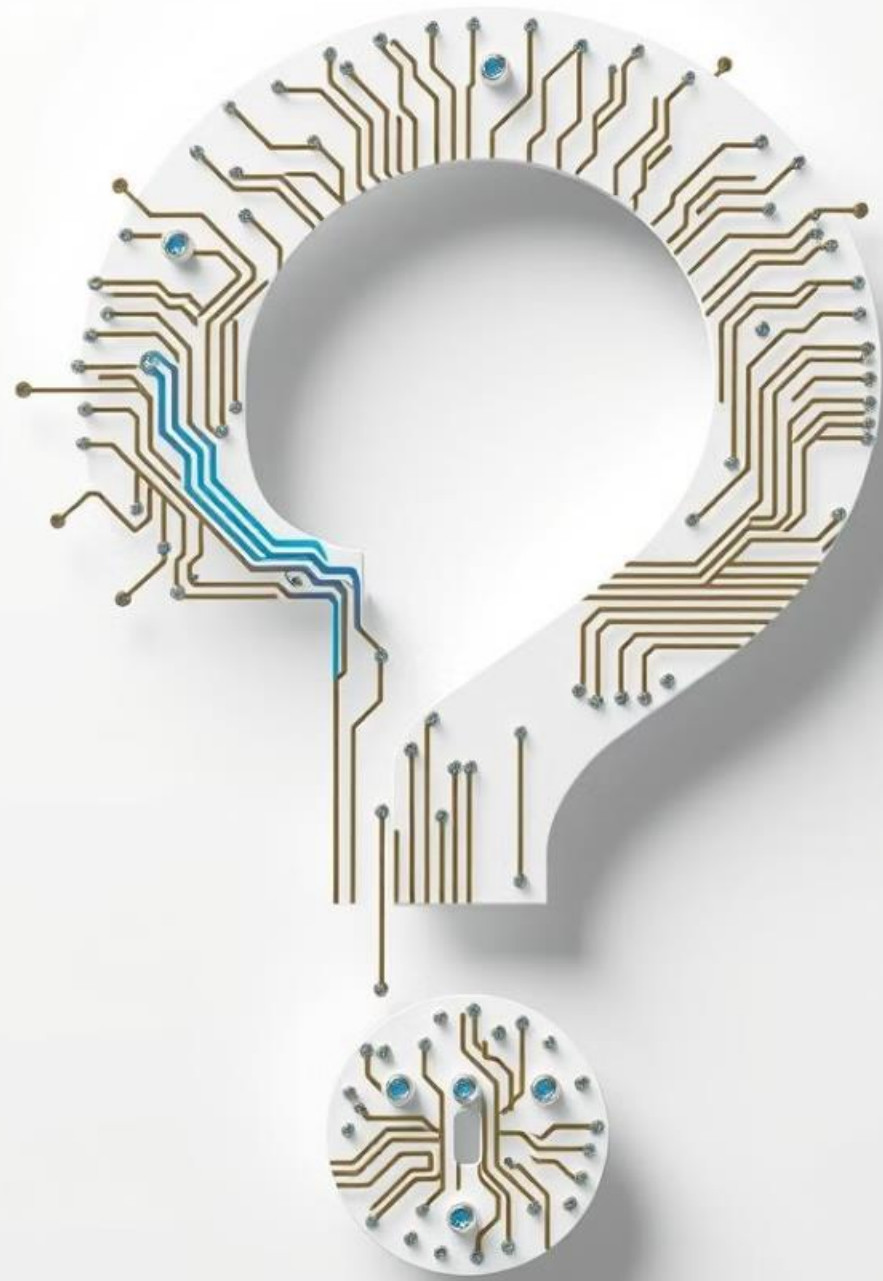


# Public Sentiment to the Federal Reserve's Rate Cuts in 2024



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# Research Questions

1

## Public Sentiment

What is the overall public sentiment?

How do people feel about the rate cuts?

2

## Online Discourse

How are people discussing this topic online?

What are their reactions?

3

## Dominant Themes

Are there any dominant themes or concerns?

What are people worried about?

# Data Overview

## Data Sources

- 1) Federal reserve cuts interest rates by 0.5%, *NBC news*
- 2) How Fed Rate Cuts Affect The Global Economy, *CNBC*
- 3) Powell speaks after Fed lowers interest rates by half point, *CNBC*

1 df.head()

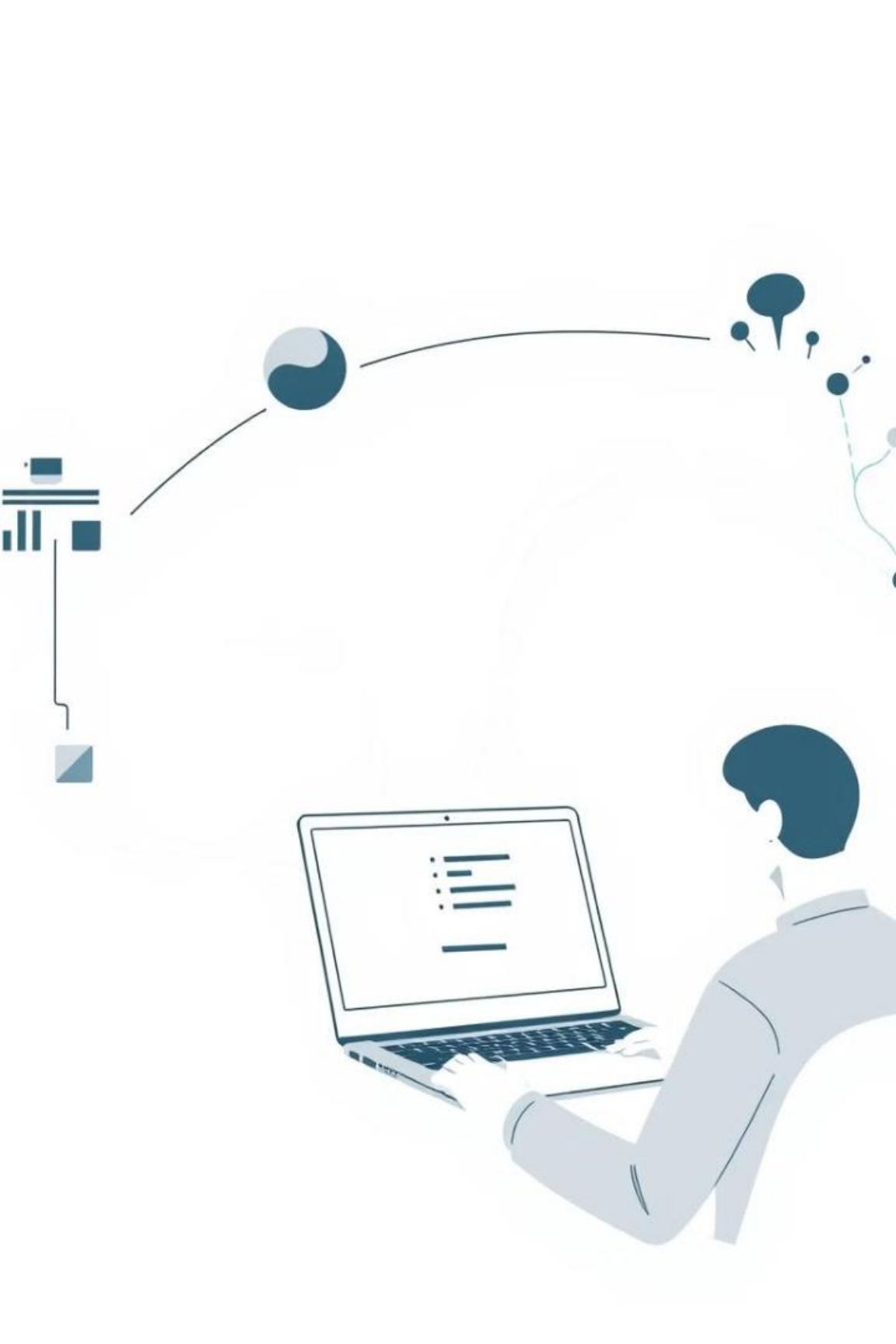
	video_id object	comment_id object	parent_id object	text object
0	pBOWeEyFYlw	UgxfnkjZUJwqTn...	None	Thanks for the br...
1	pBOWeEyFYlw	UgwknngLTMyem...	None	Corkery Flat
2	pBOWeEyFYlw	UgyLKu8os0UYX...	None	Alta Burgs
3	pBOWeEyFYlw	UgzAJrfDUukAoc...	None	Thanks to uSMAR...
4	pBOWeEyFYlw	UgyC8dbLJmzTE...	None	Refinance means ...

## Why YouTube? 🤔

Major platform where users actively discuss and react to financial news providing a rich, diverse, and dynamic public sentiment data.

## Dataset Summary

1120 comments (and answers) collected.  
Includes comment ID, and comment text.



# Data Collection

1

YouTube Data API



Allow developers to access and interact with YouTube data

2

Python

Iteratively extracted comments from videos

3

Data storage

Merged extracted comments into a DataFrame

# Data Preprocessing

Preprocessing cleans and structures text for better insights.

## Noise Removal

- Lowercased text
- Removed:
  - URLs
  - numbers
  - punctuation
  - special characters
  - single characters

## Lemmatization

Reduced words to their base form, using linguistic rules

## POS Tagging

Kept only meaningful words to enhance the quality of topic modeling and sentiment analysis by filtering out unnecessary parts of speech.

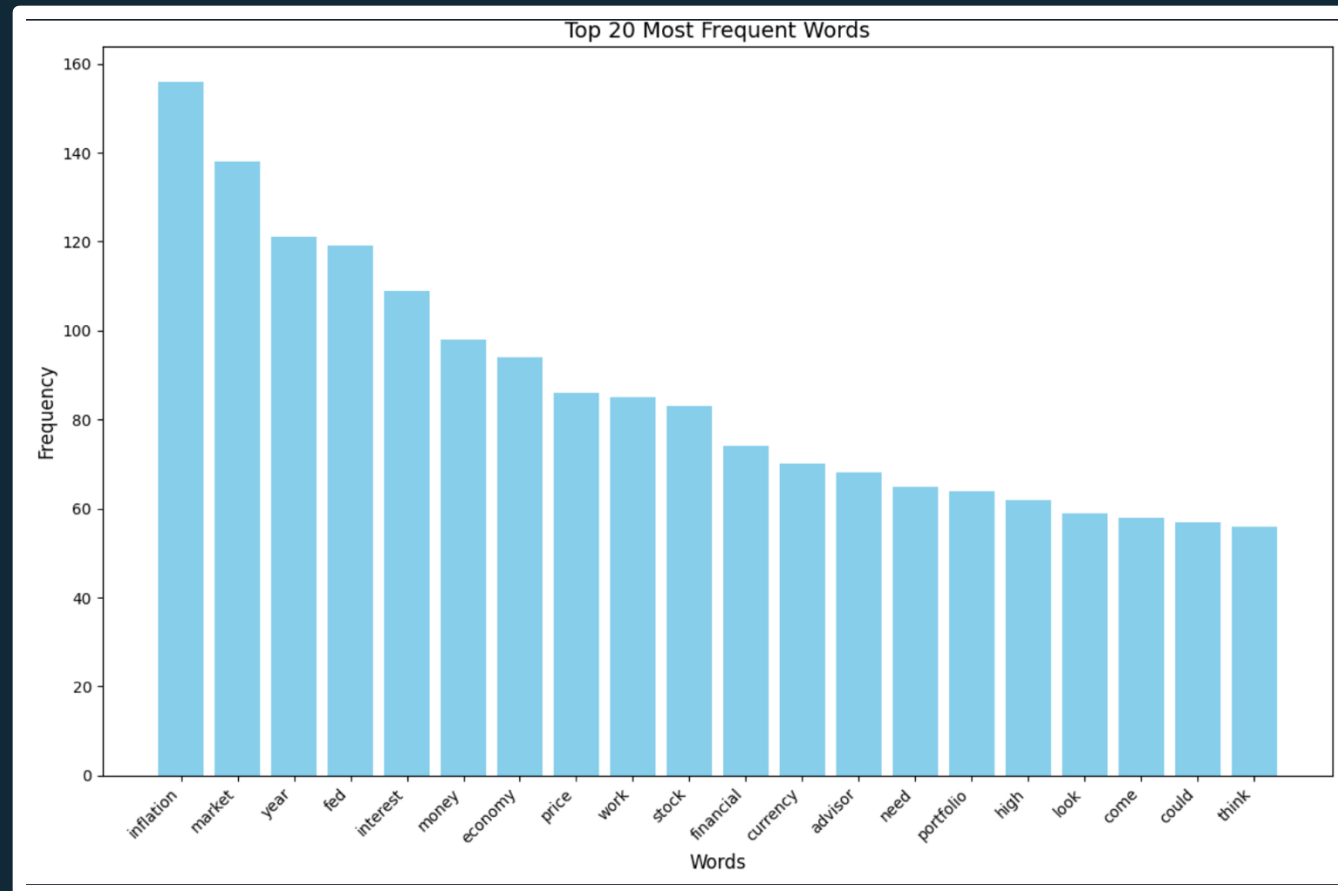
## Tokenization

Split text into individual words or phrases (tokens) to facilitate text processing and analysis.

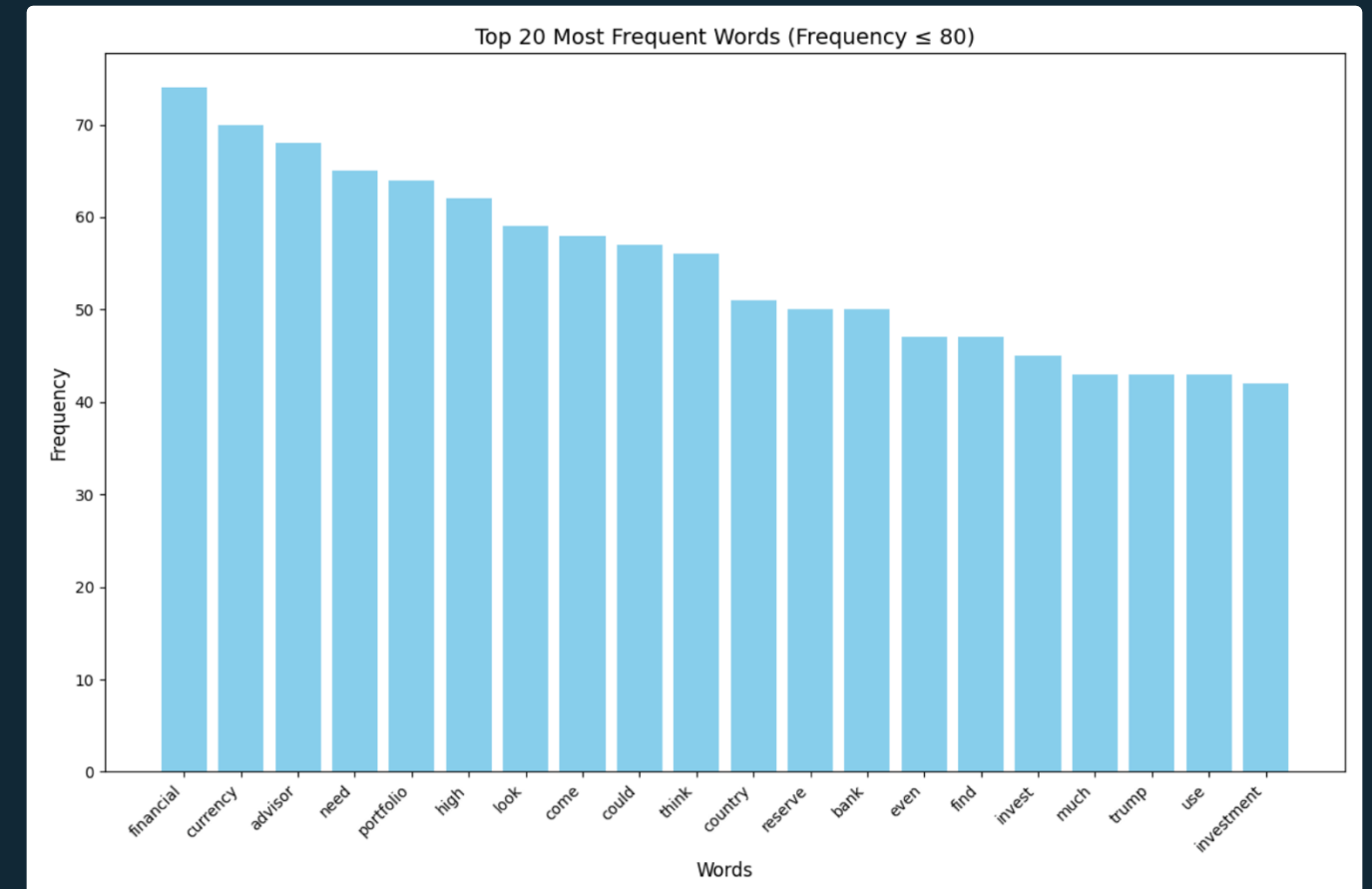


[illegible]

# Word Frequency



Identified the top 20 most frequent words, highlighting the dominant themes in the discussion.



Words that are too core for the topic have been restricted to have a more detailed view.

# Bigrams Analysis

Examines pairs of consecutive words in a text to identify common word associations, patterns, and contextual relationships.

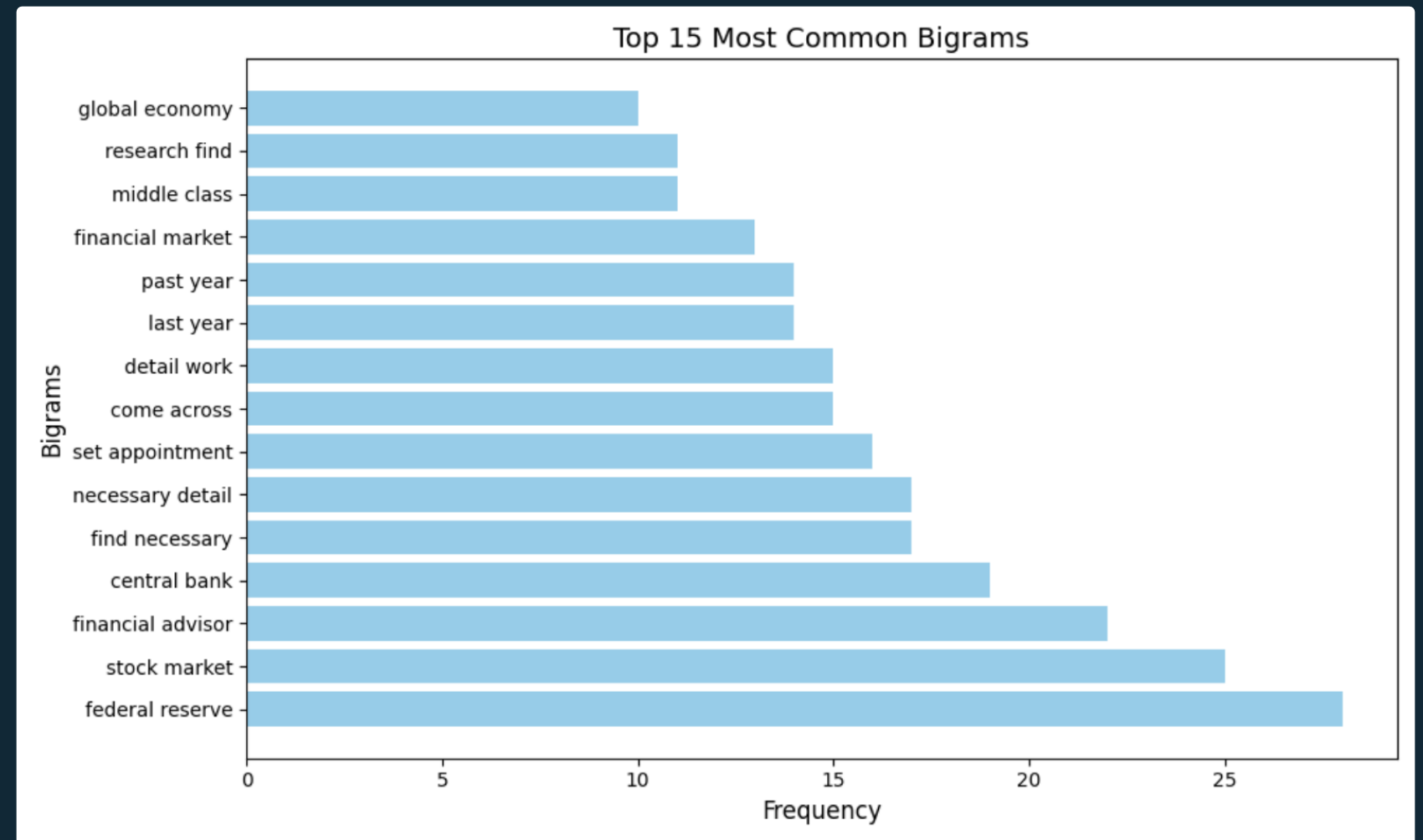
In simpler terms...

pairs of frequently occurring words.



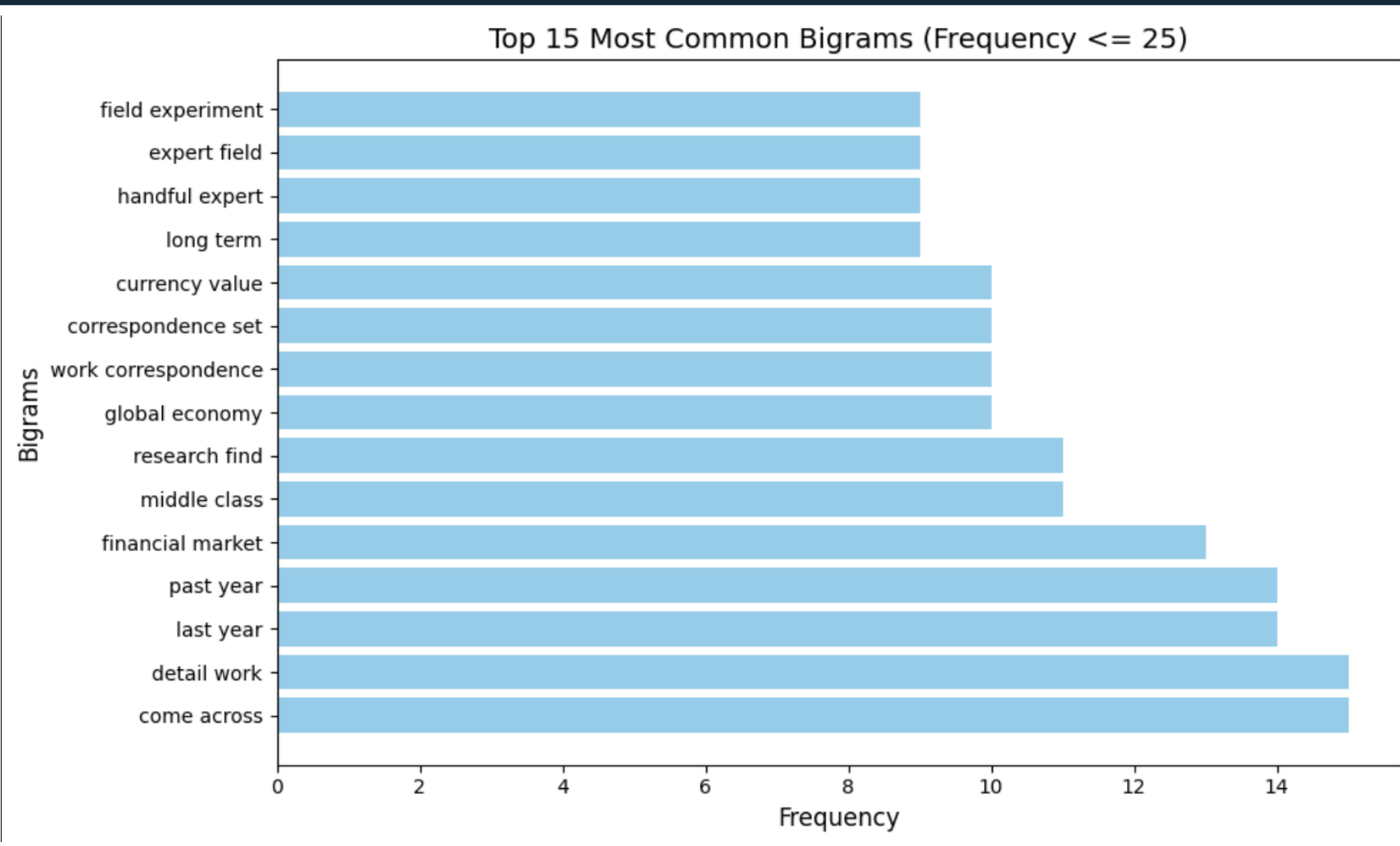
**Main focuses:**

- **economic policy**
- **financial impact.**





Ensure more relevant word associations and insights.



# Topic Modeling



Coherence Score

Optimized the number of topics based on coherence



Latent Dirichlet Allocation (LDA) Model

5 hidden themes through probabilistic inference



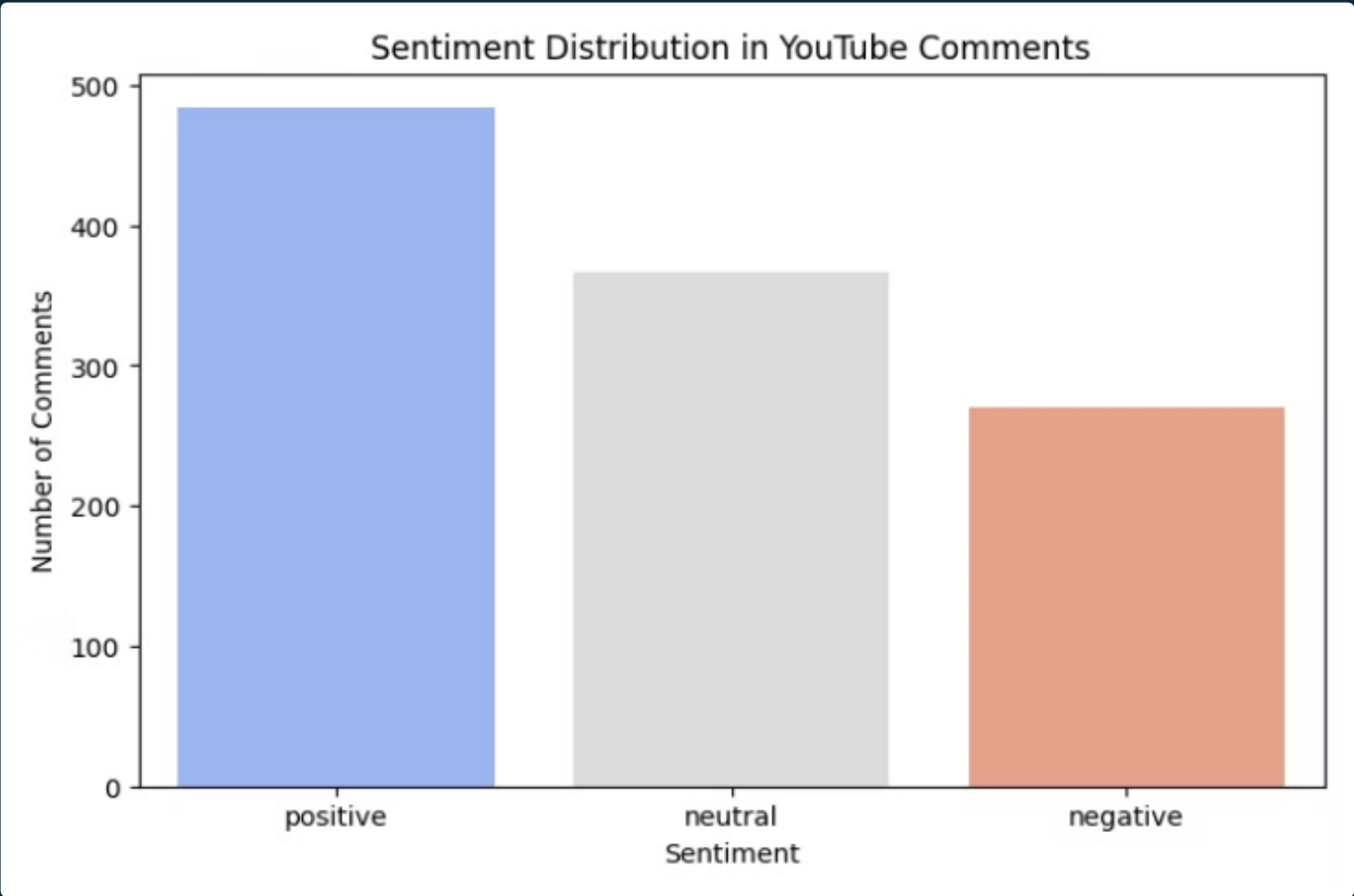
# Sentiment Analysis



VADER Model  
Specifically designed for informal social media texts

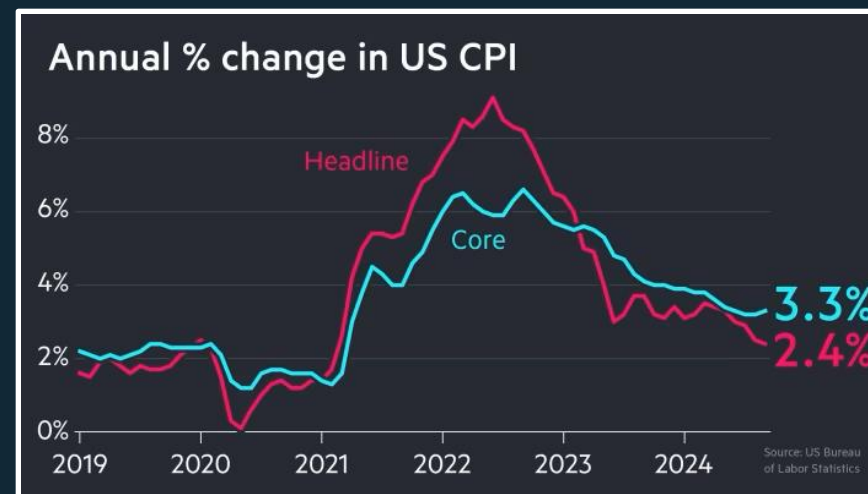
Characteristics  
Optimized for short text/social media.

Sentiment Scores  
Positive, Neutral, Negative ratings.



# Results and Interpretations

- **Key Topics:** Discussions frequently revolved around inflation, market conditions, and financial impacts



- **Sentiment Analysis:**
  - **Positive:** 43,2% users see rate cuts as a financial opportunity
  - **Neutral Discussions:** Analytical and fact-based comments focus on economic implications
  - **Negative Views:** Some users express frustration about timing or potential long-term consequences.
- **Topic modeling:** Users discuss personal finance (investments, stock market trends, and financial planning).



# Conclusion based on results

## 1 Answering the Research Question

Public sentiment is positive regarding the Fed's rate cut decision, and infere about potential investments.

## 2 Main Concerns

Concerns revolve around inflation, financial markets, and economic stability.

## 3 Sentiment Analysis

Quantifiable evidence of public perception was obtained from the sentiment analysis.  
analysis.

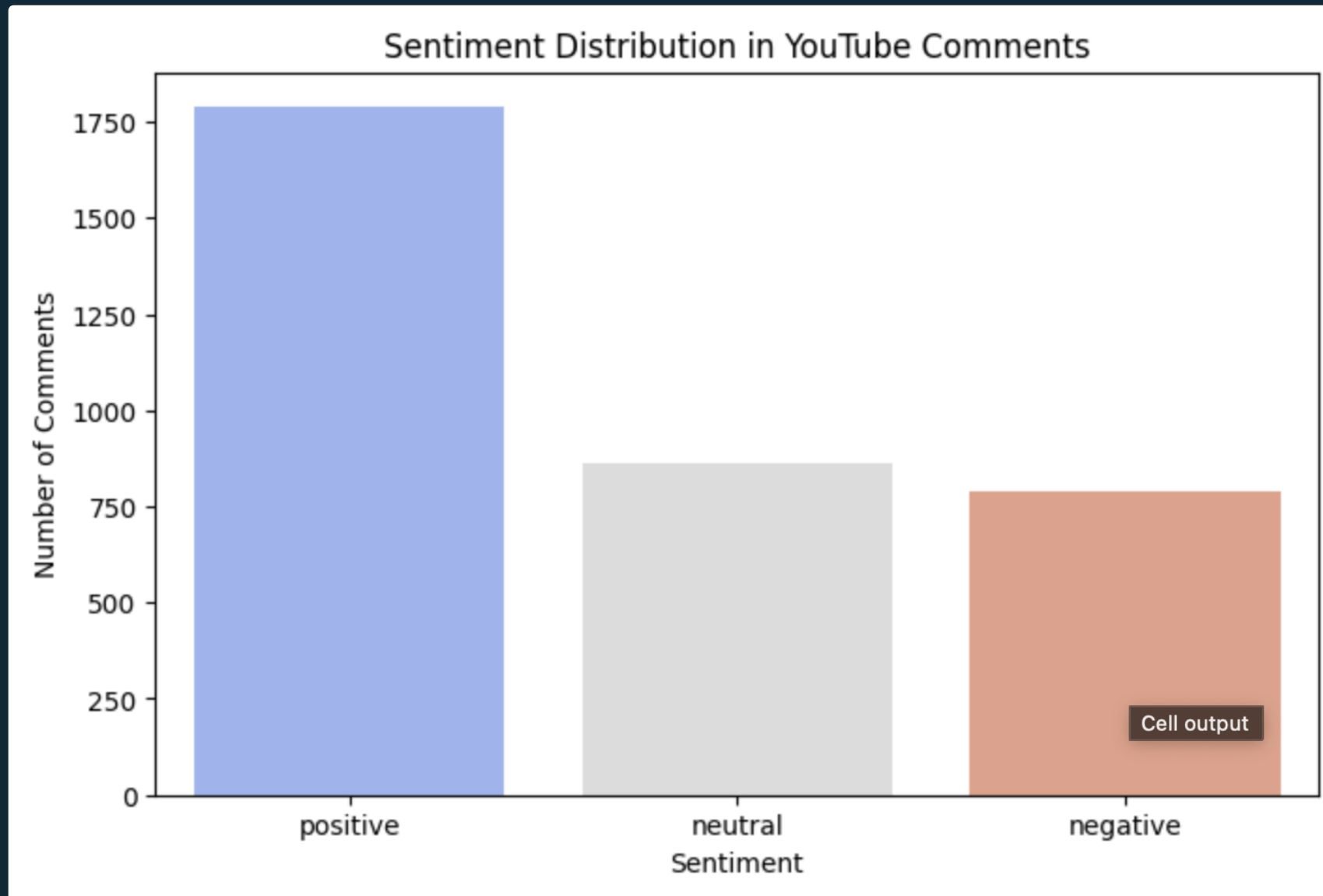




# Word Cloud



# Sentiment Analysis



Thank  
you!