



# A Comprehensive Analysis of the Sentiments of ChatGPT on Social Media

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## Abstract

ChatGPT is an artificial intelligence chatbot created to allow users to engage in human-like conversations. It has grown in popularity, going viral across several social media platforms since its release in November. Our goal is to understand the global impact of ChatGPT. Reddit and Twitter (currently X) are social media platforms, where users can share different content and express their thoughts and ideas, sparking conversations among a larger audience. Both platforms offer a variety of data containing valuable information into the perceptions surrounding ChatGPT. The primary objective of this research is to gain insight into the sentiments of ChatGPT to provide useful information about the product. We analyzed the data using natural language processing tools: Textblob, Vader, NRC Lexicon, Stanza, Flair, Word2Vec, and Bidirectional Encoder Representations from Transformers and Latent Dirichlet Allocation. Textblob and Vader found an overall neutral sentiment within the data gathered from Reddit and Twitter. Stanza indicated a neutral sentiment from Reddit, while there was positive sentiment from the Twitter data. From Flair, we found a more positive sentiment from both Reddit and Twitter. From NRC Lexicon, we also found positivity in the data. This suggests that the sentiment analysis models found highly positive expressions in discussions regard ChatGPT. Additionally, we looked into the topics of ChatGPT in different contexts such as social, academic, and economic aspects. From Word2Vec, we discovered 50 of the different topics that were frequently discussed. LDA found lots of mixed discussions about the abilities, limitations, and impact of ChatGPT. It's important to note that human interpretation plays a crucial role in understanding sentiment analysis. Our findings shed light and contribute to a deeper understanding of the impact of ChatGPT and the discussions surrounding this technology.

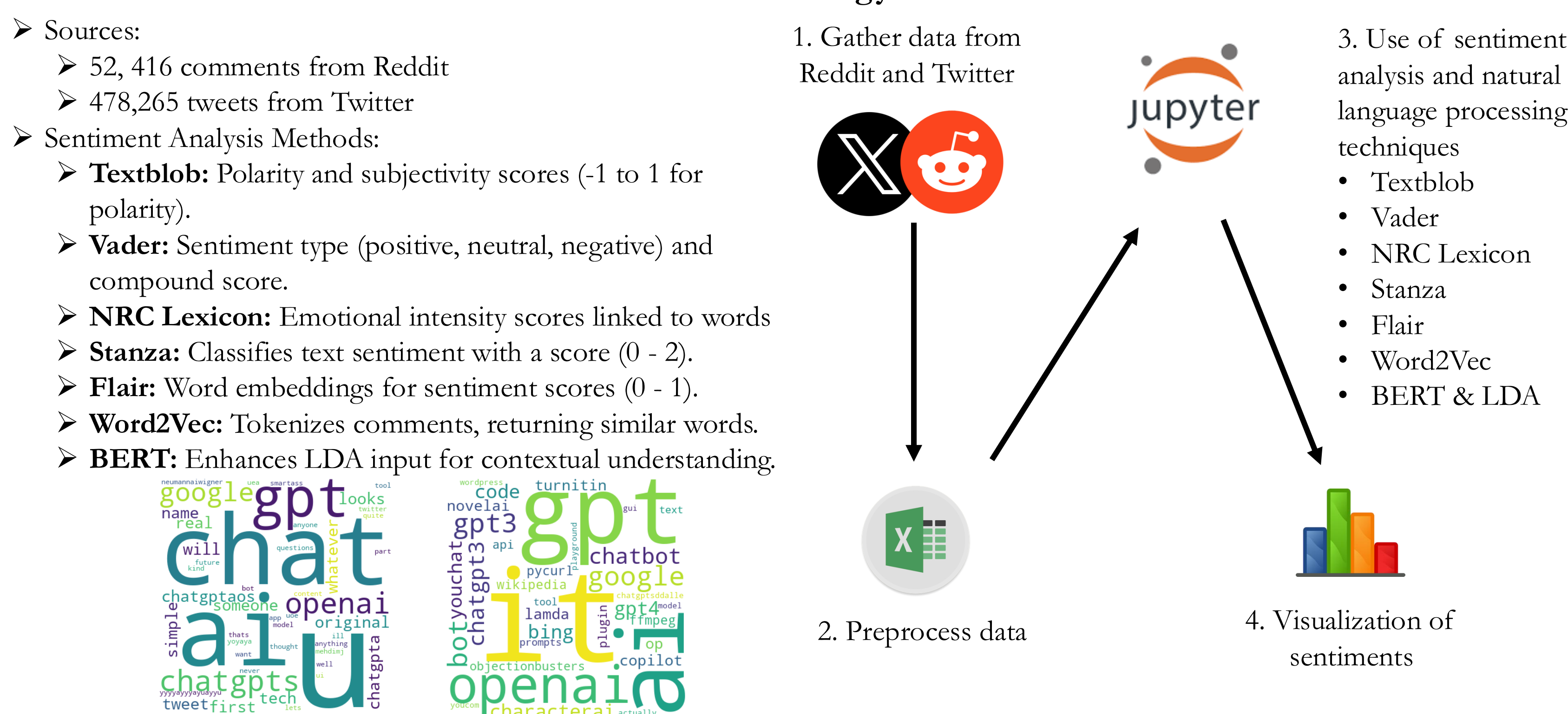
## Objective

- Gain insights into the public opinion regarding ChatGPT, in order to provide valuable information about the perception of the product.
- Contribute to existing knowledge and provide information on product reception and potential areas for improvement.

## Introduction

- ChatGPT, released in November 2022, is an AI chatbot developed by OpenAI designed to enable users to engage in human-like conversations and offers a wide range of functionalities.
- It is important to consider sentiments towards the tool as it is still a relatively new technology and early adopters' feedback can help shape public perception and improve user experience.
- This research focuses on understanding the global sentiment of ChatGPT, particularly through discussion on social media platforms such as Reddit and Twitter.

## Methodology



## Conclusions

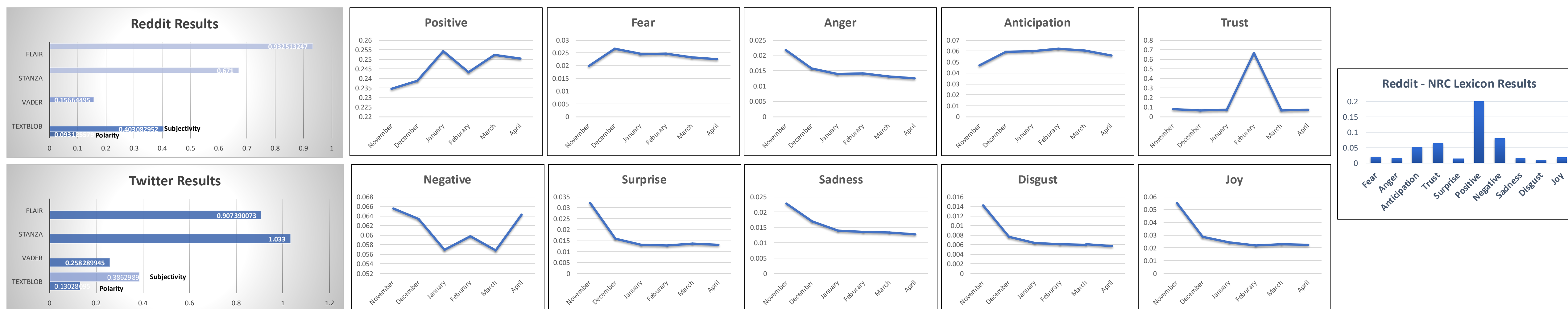
- The overall goal of this research was to understand the sentiment surrounding ChatGPT on social media.
- Users expressed a neutral sentiment towards ChatGPT, revealing that there are diverse opinions on its impact on the world.
- While NLP tools help provide insights on perception, human interpretation and analysis are crucial when it comes to understanding the sentiments in text data.
- This research showcases the complexities of sentiment analysis and why it's important to consider various perspectives in understanding the impact of ChatGPT.

## Future Work

- Expand data collection to include various social media platforms to provide a broader perspective on the sentiment surrounding ChatGPT across different platforms.
- Conduct other NLP techniques such as topic modeling to discover the "topics" that occur in the social media comments.

## Results

- Both Textblob and Vader returned an overall neutral sentiment.
- Stanza returned a neutral sentiment from Reddit, however there was positive sentiment discovered in the Twitter data, Flair found a more positive sentiment from both Reddit and Twitter.
- Using NRC Lexicon, more comments fell under the positive sentiment on Reddit. On Twitter, we found more optimism from the data.
- Common themes found within the topics were different versions of ChatGPT, comparisons to search engines, and mixed discussions on the abilities, limits, and impact of ChatGPT.



## Acknowledgements

This material is based upon work supported by the National Science Foundation under Grants No. 2137791 and 1834620. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.