



# Sentiment Analysis

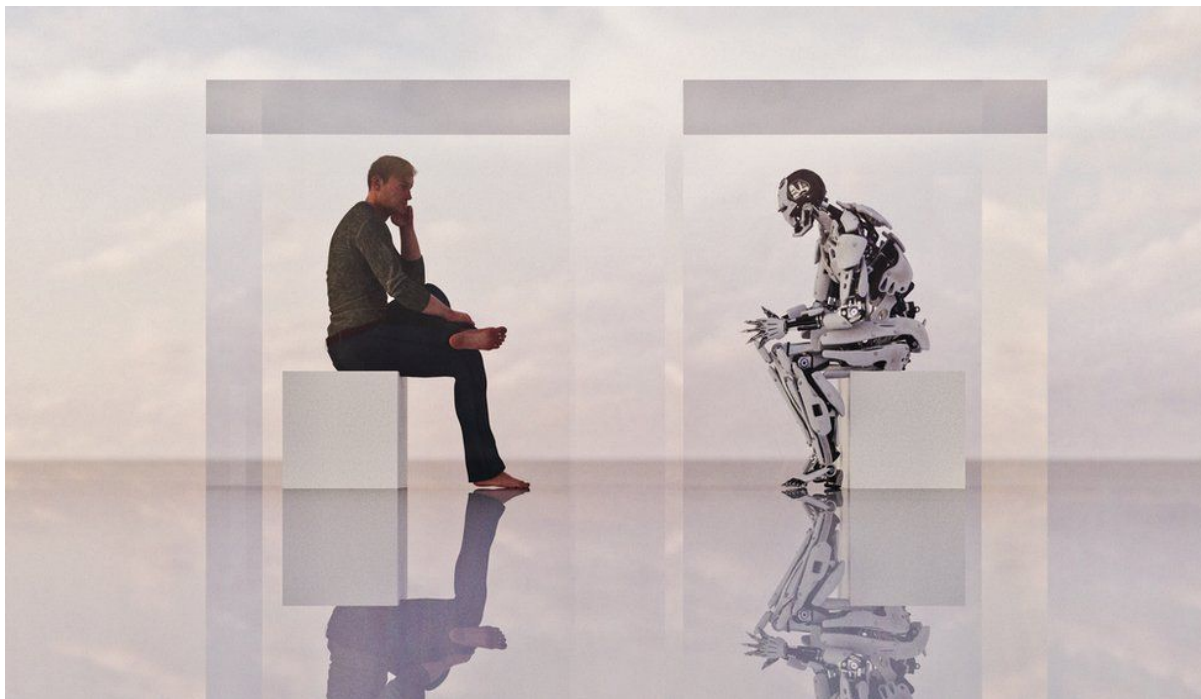
## ■ ChatGPT Tweets

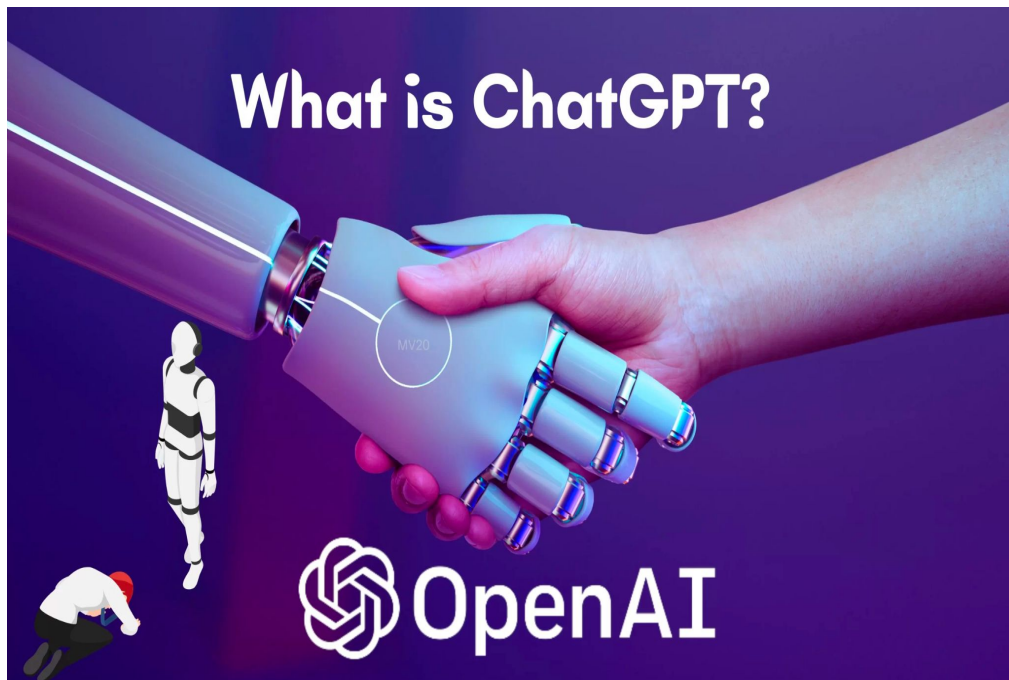
Yunling Ge

09.03.2023

# Agenda

- Introduction
- Data
- EDA
- Modeling
- Sentiment Generator





- AI chatbot
- Developed by OpenAI
- Launched in November 2022
- It can be used in various language tasks, including writing, summarization, translation, and conversation.



## Data

**Source:** kaggle

**Date:** 30/11/2022 ~ 31/12/2022

### Columns:

- Tweets: Comments
- Labels: Good/Neutral/Bad

### Rows:

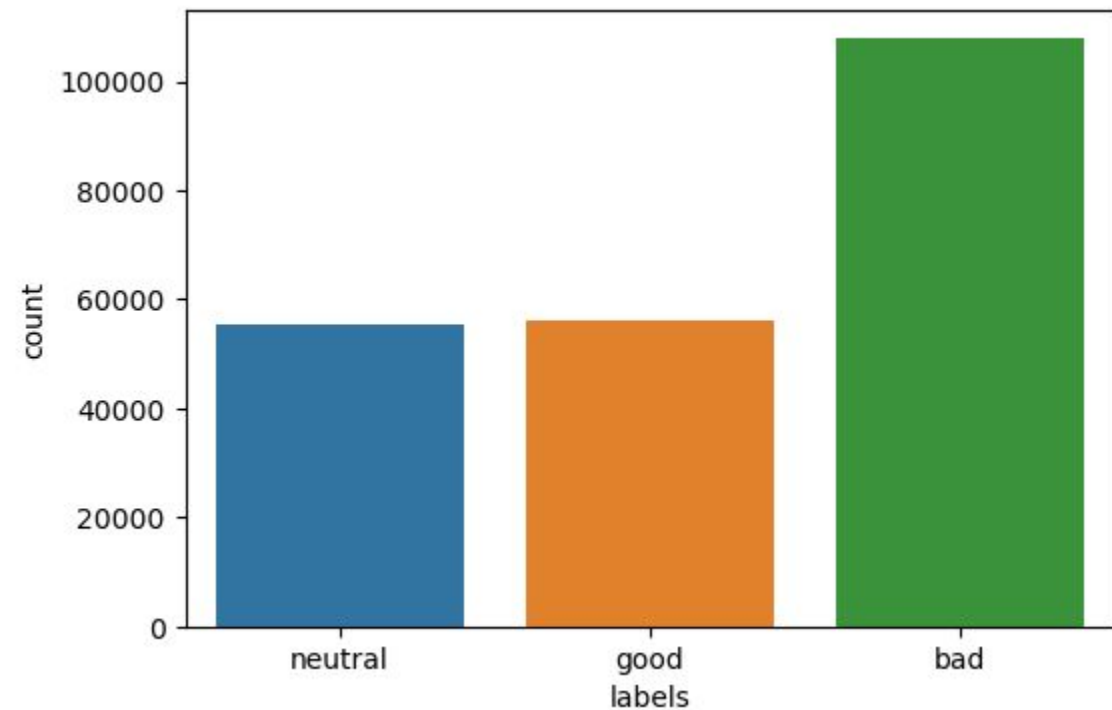
→ 219294

### Words:

→ 31954118

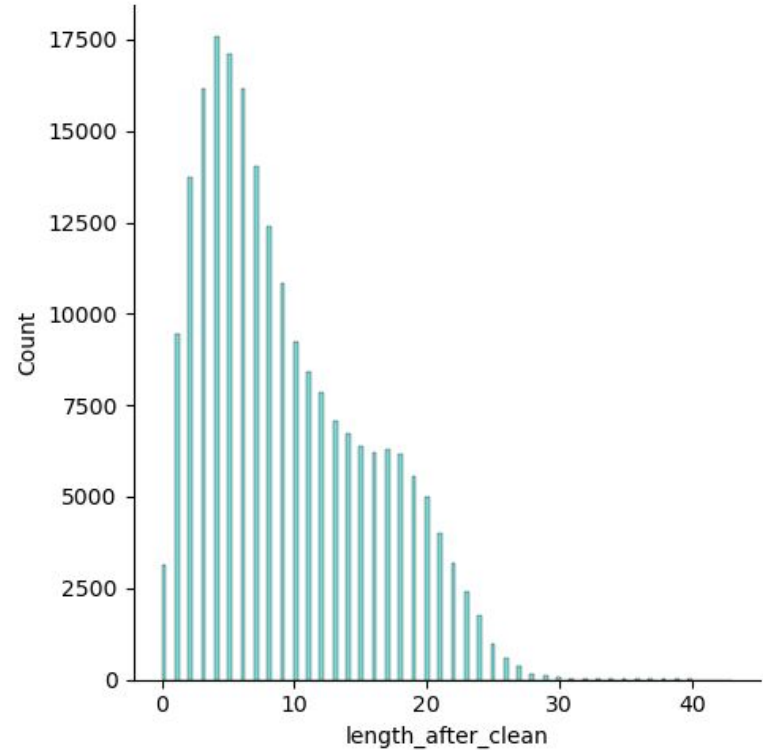
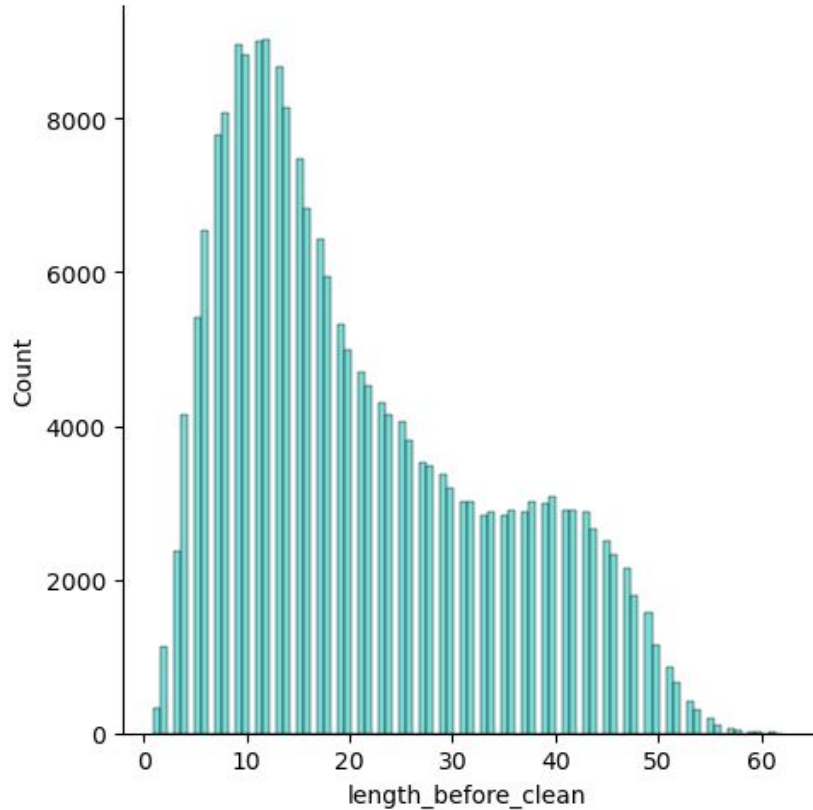
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# EDA: How people think about ChatGPT?

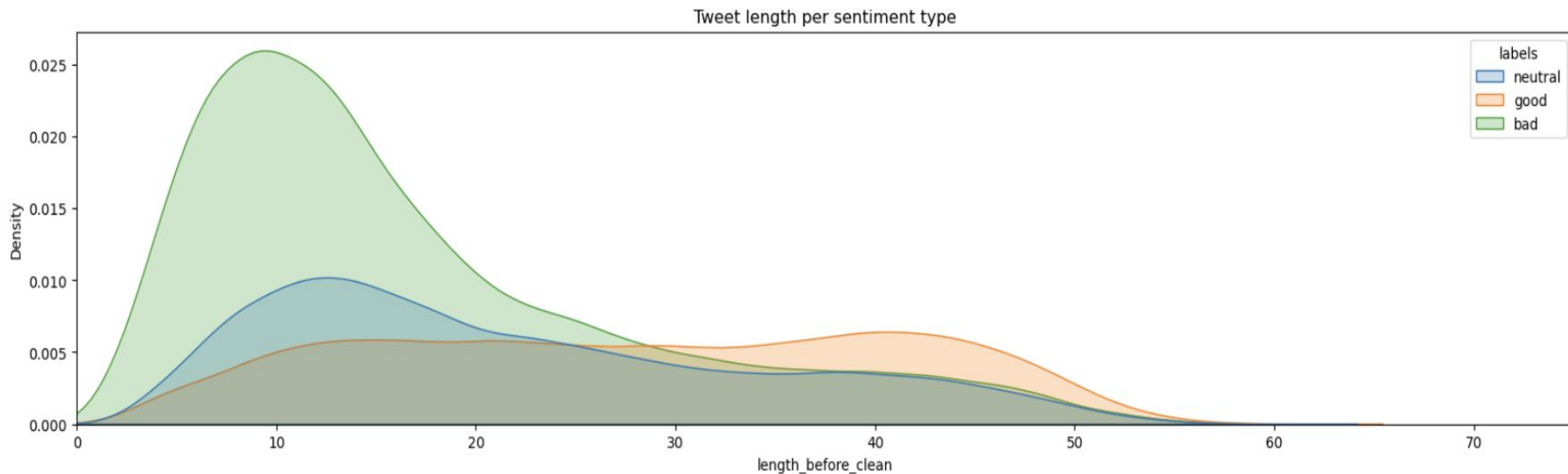


<b>Good</b> 😊	56011	25.54%
<b>Neutral</b> 🙂	55487	25.31%
<b>Bad</b> 😞	107796	49.15%


# EDA : Distribution of tweet length



# EDA: Word-level analysis per sentiment type



## EDA: Wordcloud



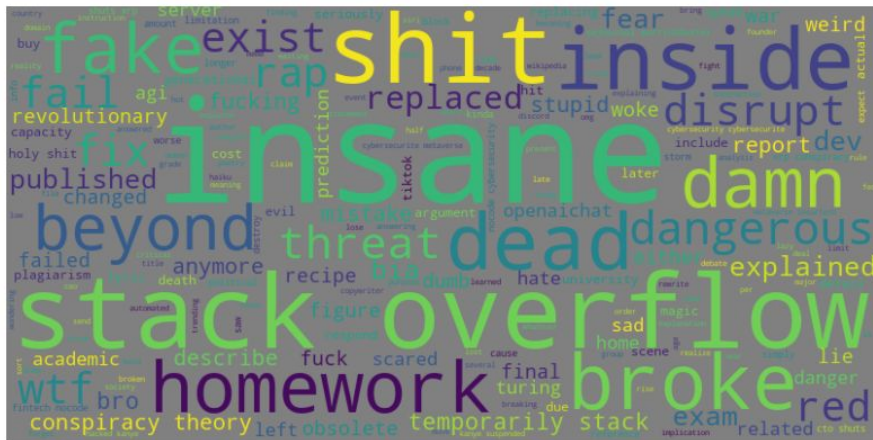
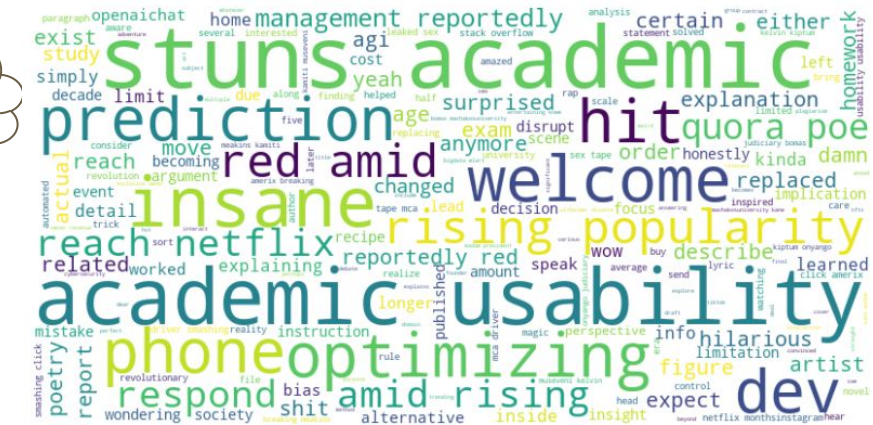
Neutral



Good



Bad





## Top 20 Common Words In Good



## Top 20 Common Words In Neutral



## Top 20 Common Words In Bad



# Modeling: Random Forests, Logistic Regression, Naive Bayes

## Assumption:

- Most tweets in the dataset are affirmative.

E.g.

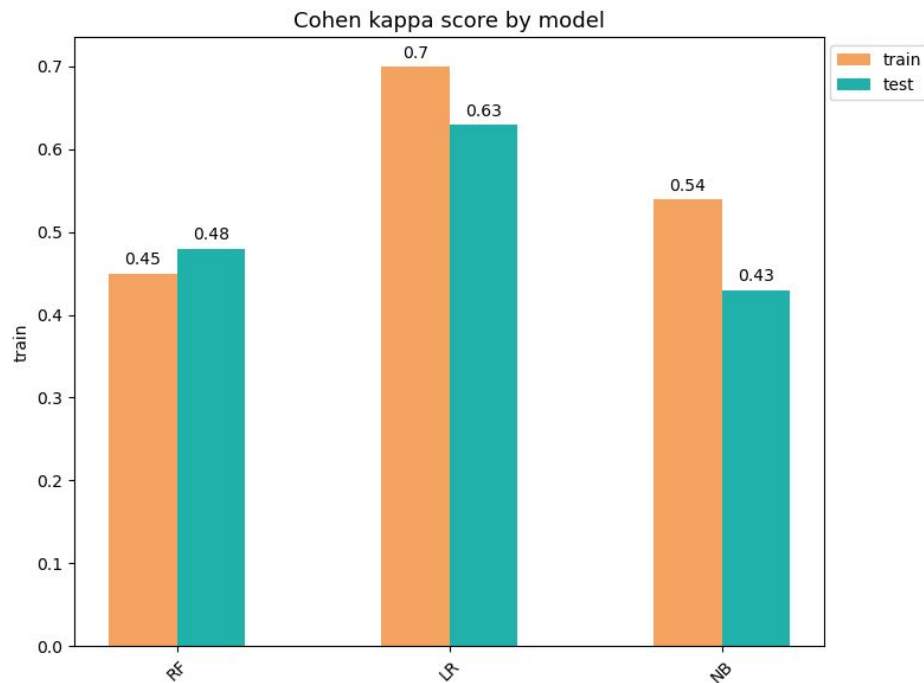
I think chatGPT is amazing.

**X:** unique single word (20000)

**y:** labels(good/neutral/bad)



# Model Comparison

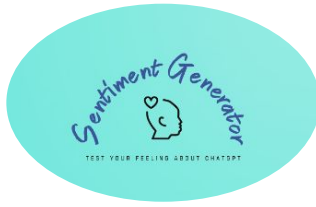


**Logistic Regression** model prediction performance is the best one compared to the other two.

## Limitation:

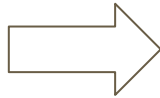
- Single word as features

E.g. I don't like chatGPT.

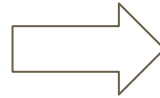


# Sentiment Generator

Your comment  
about ChatGPT



Sentiment  
Generator  
works in  
background



Sentiment  
(good/neutral  
/bad)

Let's go to my [app](#)!



TEST YOUR FEELING ABOUT CHATGPT

***Thank you for your  
attention!***

 OpenAI  
**ChatGPT**

