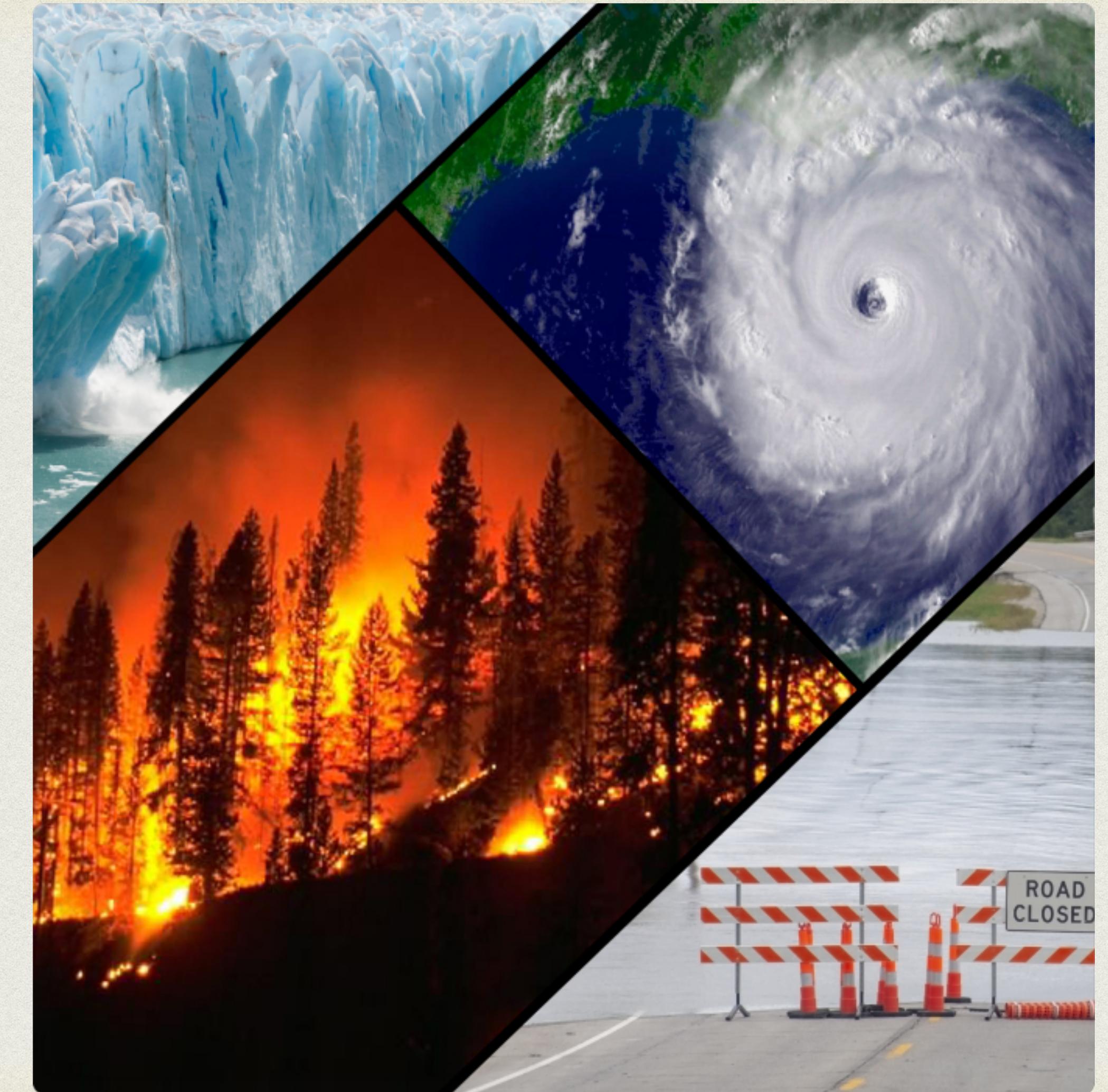




TO WHAT EXTENT CAN PUBLIC SENTIMENTS ON
SOCIAL MEDIA PLATFORMS SUCH AS TWITTER
INFLUENCE NATIONAL OR GLOBAL POLICIES ON
CLIMATE CHANGE?

WHAT IS CLIMATE CHANGE AND WHY DOES IT MATTER?

- According to the United Nations, “Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, such as through variations in the solar cycle. But since the 1800s, human activities have been the main driver of climate change, primarily due to burning fossil fuels like coal, oil and gas.”
- Climate change can affect our health, ability to grow food, housing, safety and work.



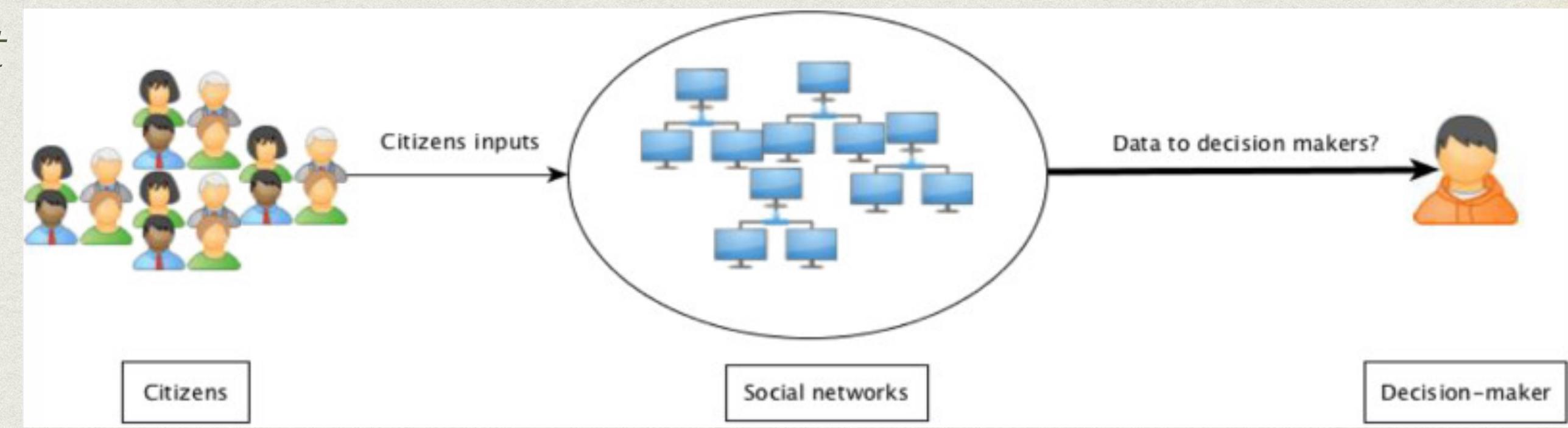
PROBLEM

Social media is still largely underutilized as a **source of knowledge** to spur public policy and social change. However, there are numerous ways to provide information for **decision- and policy-making** thanks to the variety of social media platforms and research tools accessible. Social media content, for instance, can offer immediate details about the effects of policy changes.

This presentation contends that **social media analytics**, specifically Twitter, which can be a valuable **addition** to conventional social science data gathering and analysis, can help **policy initiatives** and the extent to which it **influences decision-making**.

OBJECTIVES

- To extract tweets that concern the subject of climate change
- To classify the various tweets as **anti**(*the tweet does not believe in man-made climate change*), **news**(*the tweet links to factual news about climate change*), **pro**(*the tweet supports the belief of man-made climate change*) or **neutral**(*the tweet neither supports nor refutes the belief of man-made climate change*)
- To understand how the tweets' sentiments are analyzed to formulate policies



PROJECT DESIGN

Different steps involved in the solution:

- Discovering the Data
- Exploratory Data Analysis (EDA)
- Extracting Buzzwords in different categories
- Entity Extraction
- Logistic Regression Modeling



RESULTS

Count of each category

Analysis

Anti

3,990

Neutral

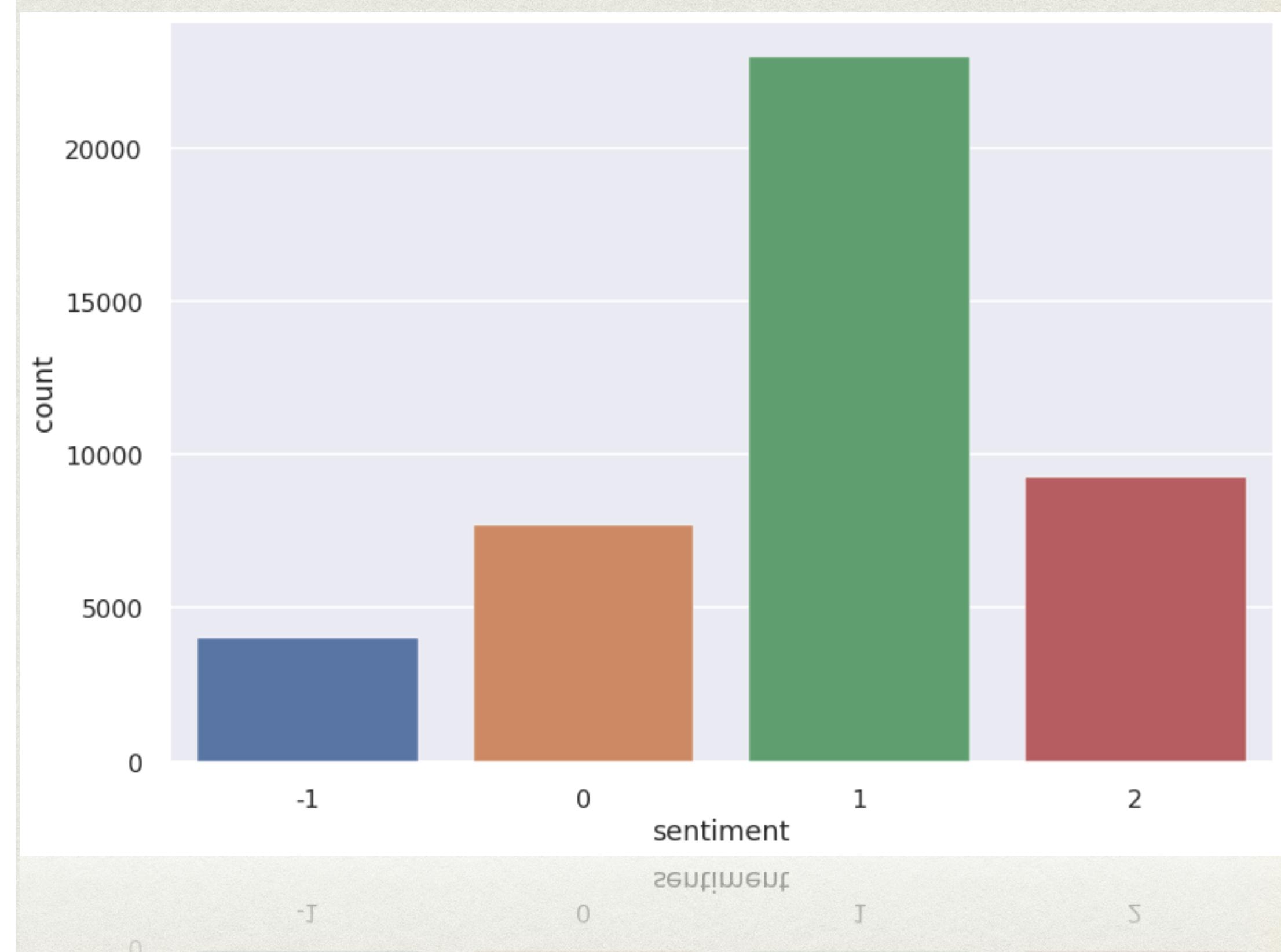
7,715

News

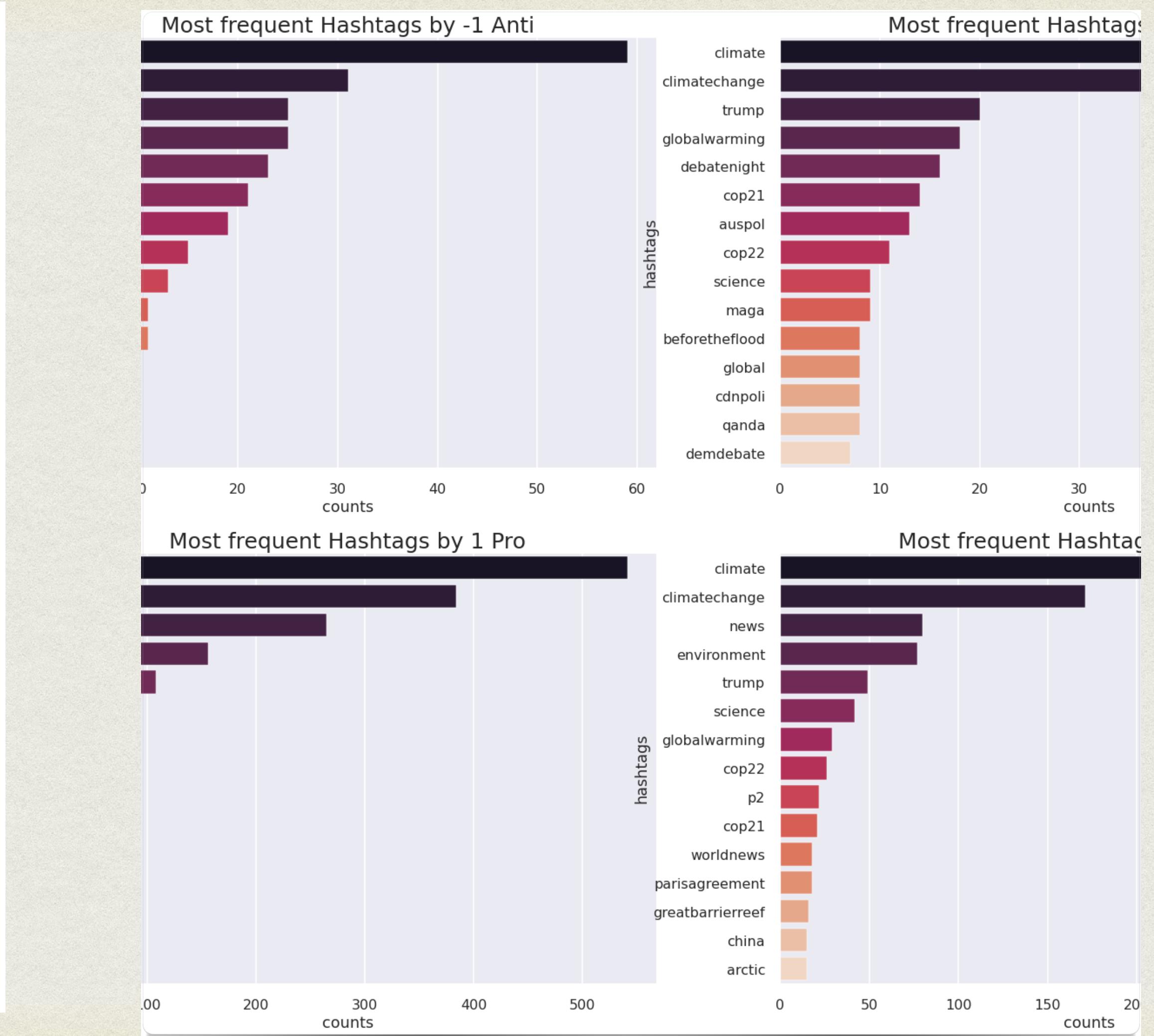
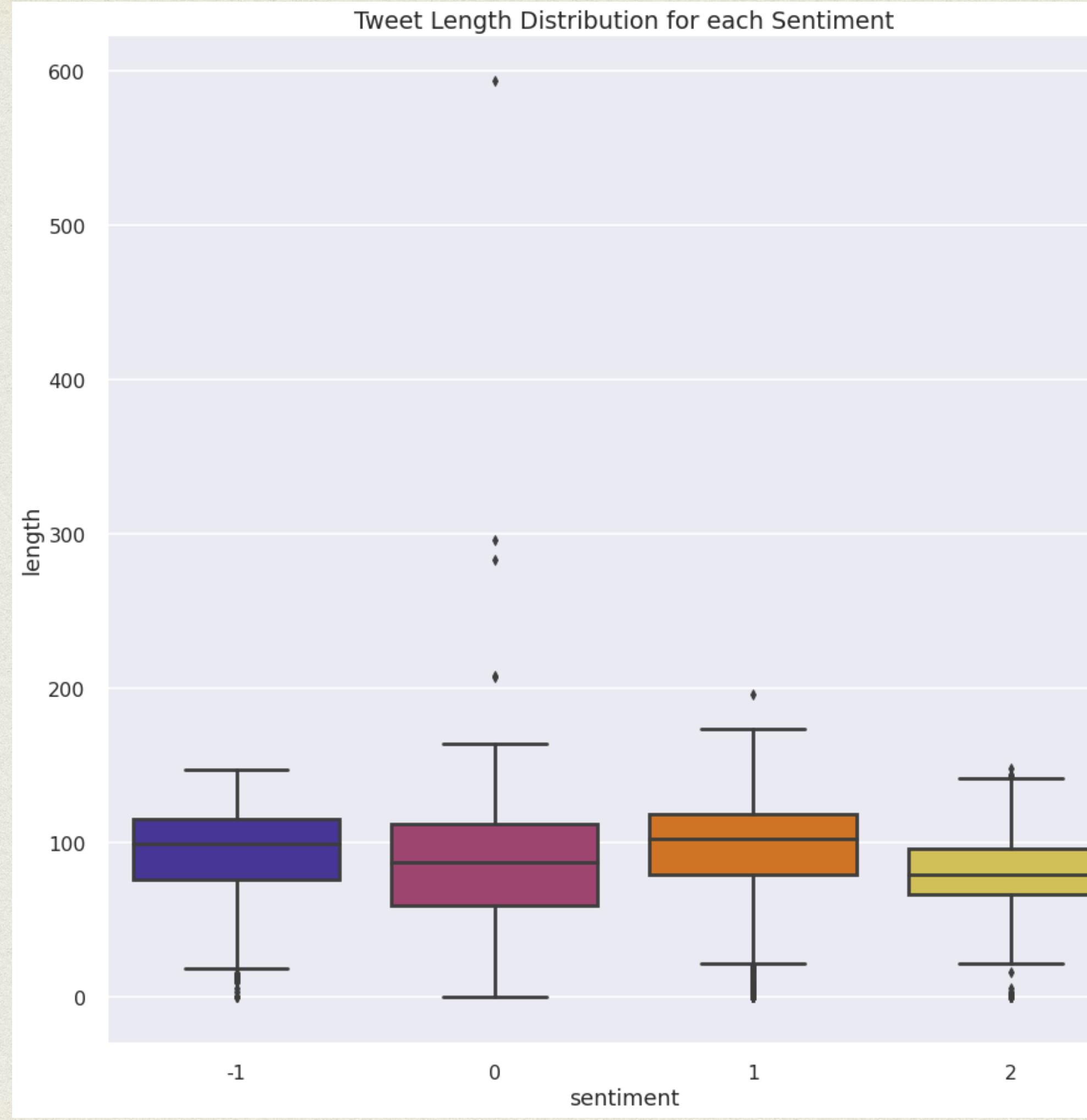
9,276

Pro

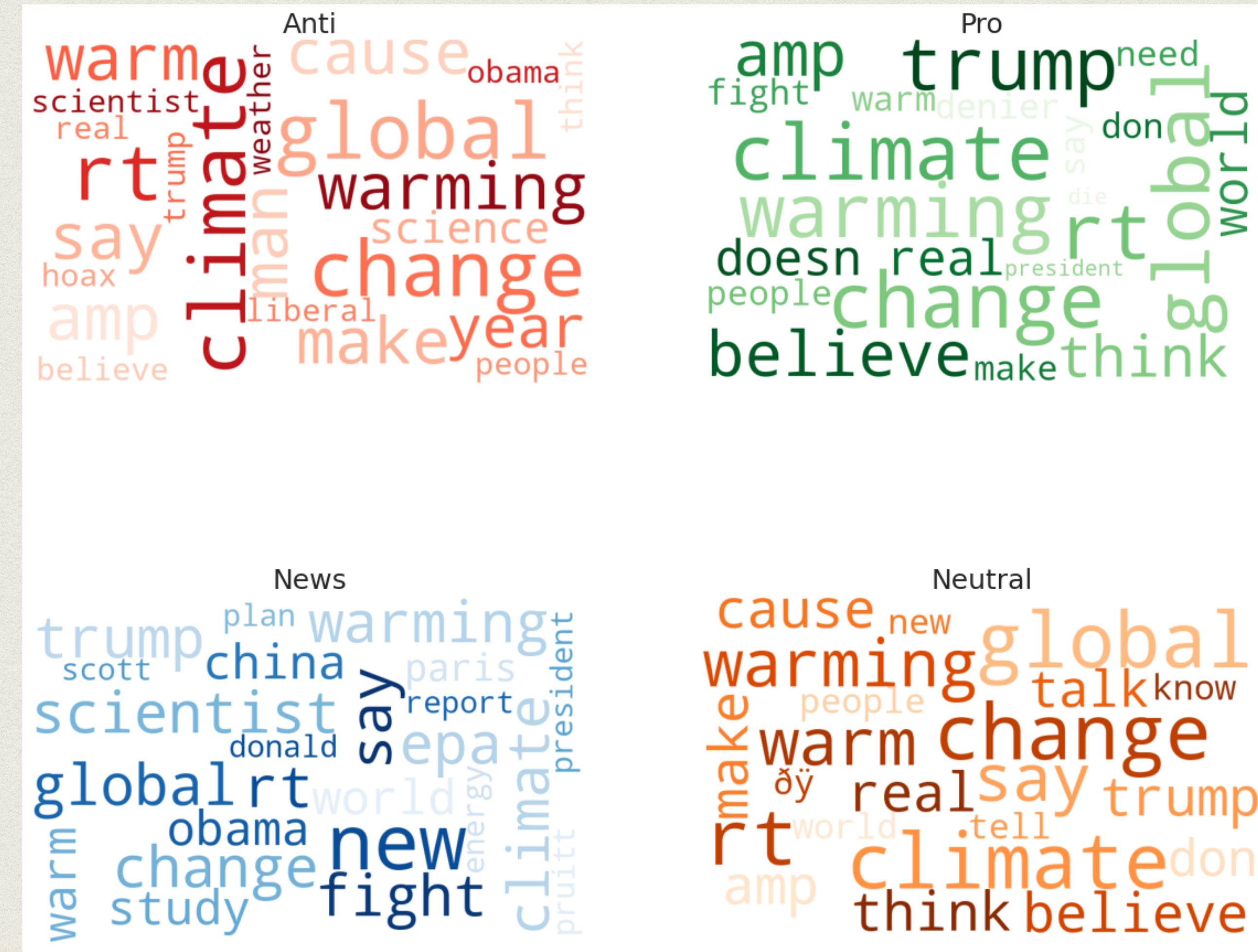
22,962



RESULTS

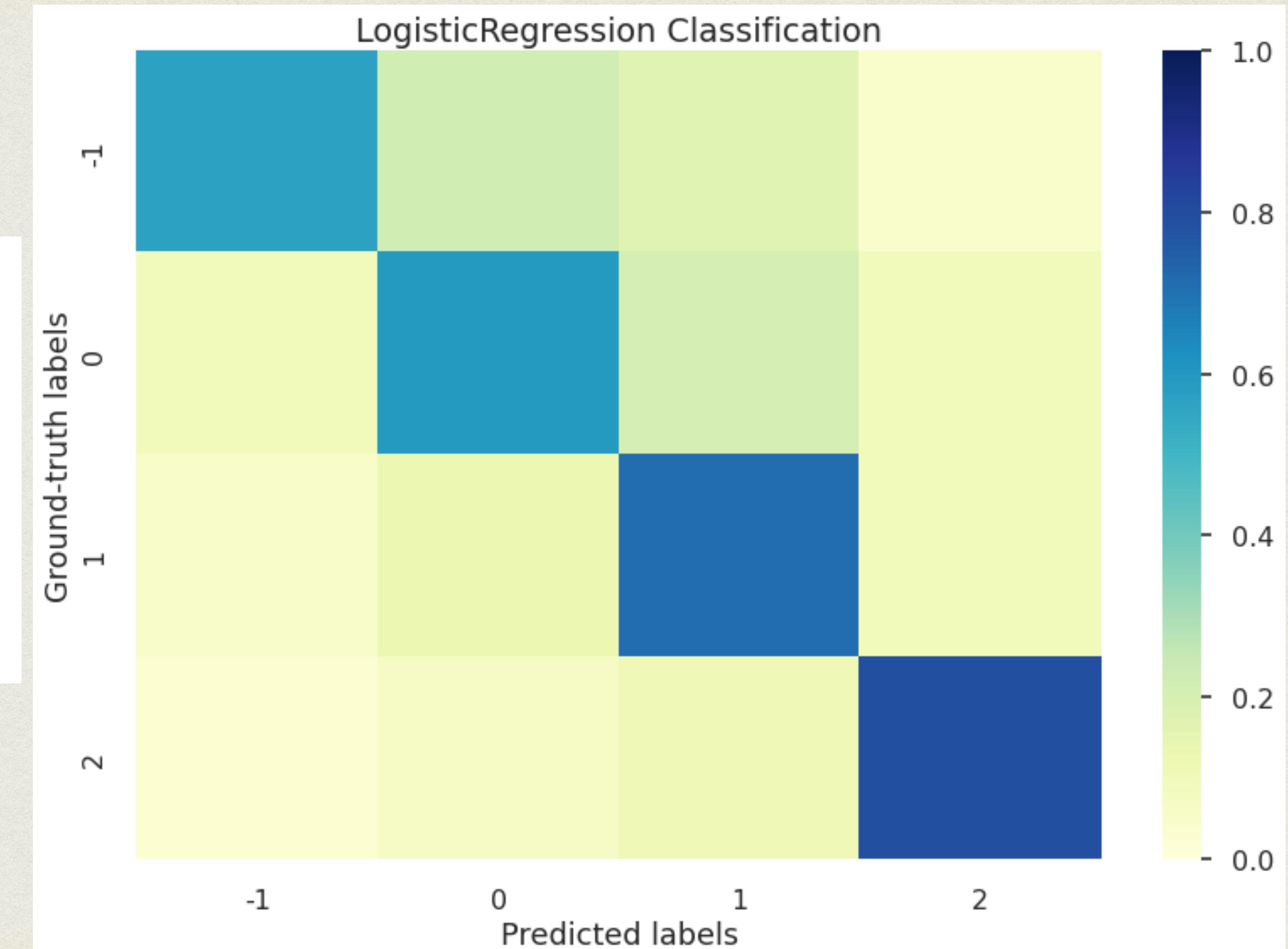


RESULTS



RESULTS

	precision	recall	f1-score	support	
-1	0.51	0.57	0.54	633	
0	0.51	0.59	0.55	1244	
1	0.83	0.71	0.77	3678	
2	0.69	0.79	0.74	1476	
accuracy			0.70	7031	
macro avg	0.63	0.67	0.65	7031	
weighted avg	0.71	0.70	0.70	7031	



A REAL-LIFE EXAMPLE

- Link for the project: <https://www.unglobalpulse.org/project/using-twitter-to-measure-global-engagement-on-climate-change/>
- UN Global Pulse in New York came up with a Twitter monitor to track and research online climate change conversation in support of the 2014 UN Climate Summit.
- Daily tweets in English, Spanish, and French were analyzed by the publicly accessible monitor to reveal the number and substance of tweets about climate change across a range of subject areas, including economy and energy.
- The monitor is being used to gauge awareness, aid in deciding on climate policy, and encourage increased participation from the general population.



CHALLENGES

- The main challenge with this project is **misinformation**. Climate change misinformation has been prevalent for many years, primarily in the form of **denial of global warming**. Misinformation still has the same effect today despite its various forms: it undermines research and slows down climate action.
- There is no way to find out if the news-related tweets are actually fake or real, because there is no way to find out if the news is fake or real in the first place!
- After testing 4 models, the highest accuracy for our model was 70%



MOST NOVEL/INTERESTING PART

- We used a method that we came across while researching for social media analytics: **Crude Entity Extraction**
- This helps in giving an overview of NGOs or any other focused groups, geopolitical places, and people who raise awareness for/against climate change caused by humans.



The climate is changing, so why aren't we?

Thank you