



# CAPITOL HILL. DAWN OF A DEMOCRACY?



# Our idea

In recent years, social media platforms like Twitter have played a significant role in politics.

As a result, political conversations have become increasingly polarized, leading to a rise in disagreement and division among people with differing opinions.

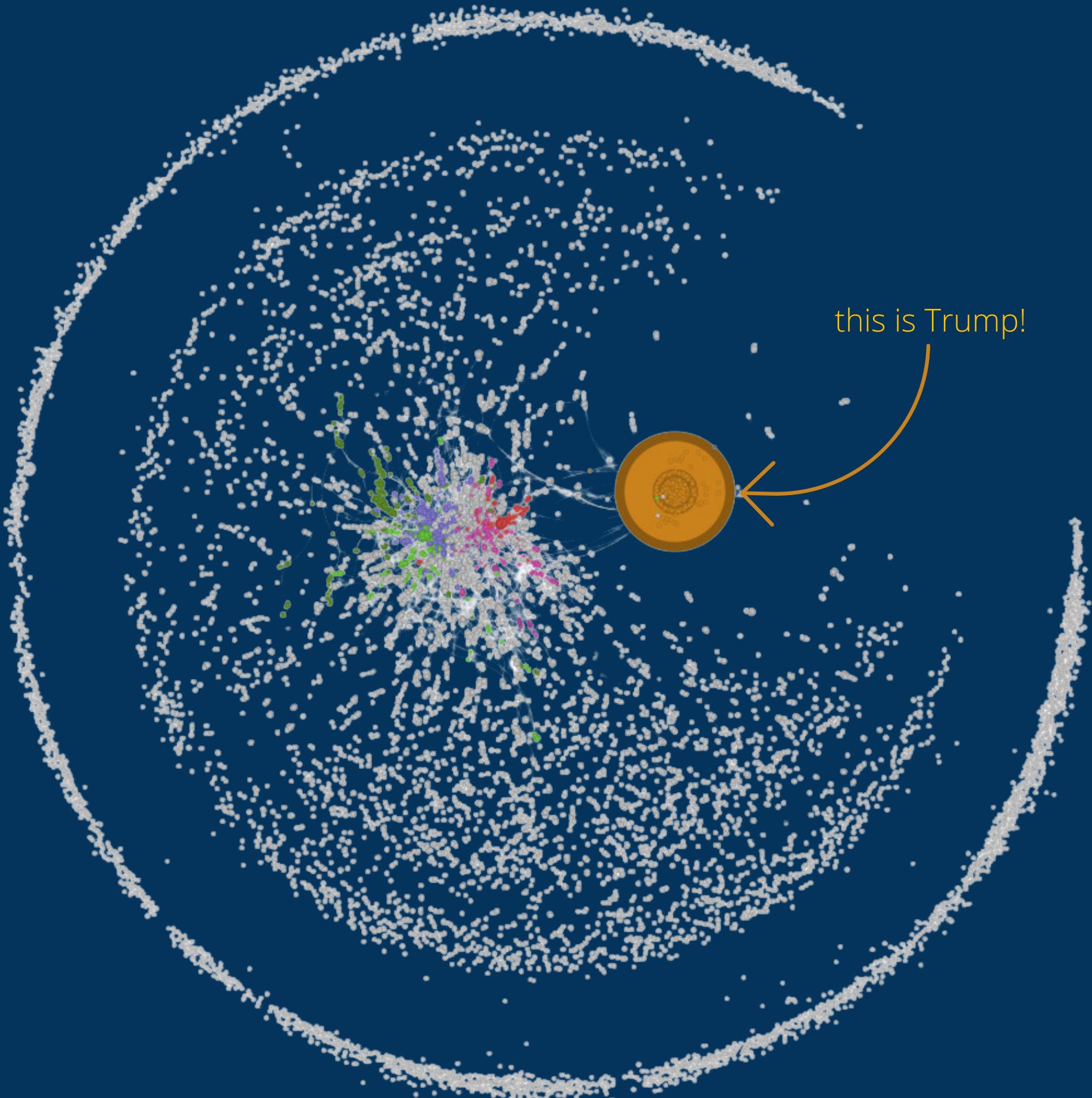
We aim to provide insights into the impact of keywords on political discourse and the level of agreement/disagreement associated with them.

Scraping Twitter data (10/20 - 01/21)

Inter Communities

Intra  
Communities

# OUR METHODOLOGY



We extracted tweets over seven research keywords.

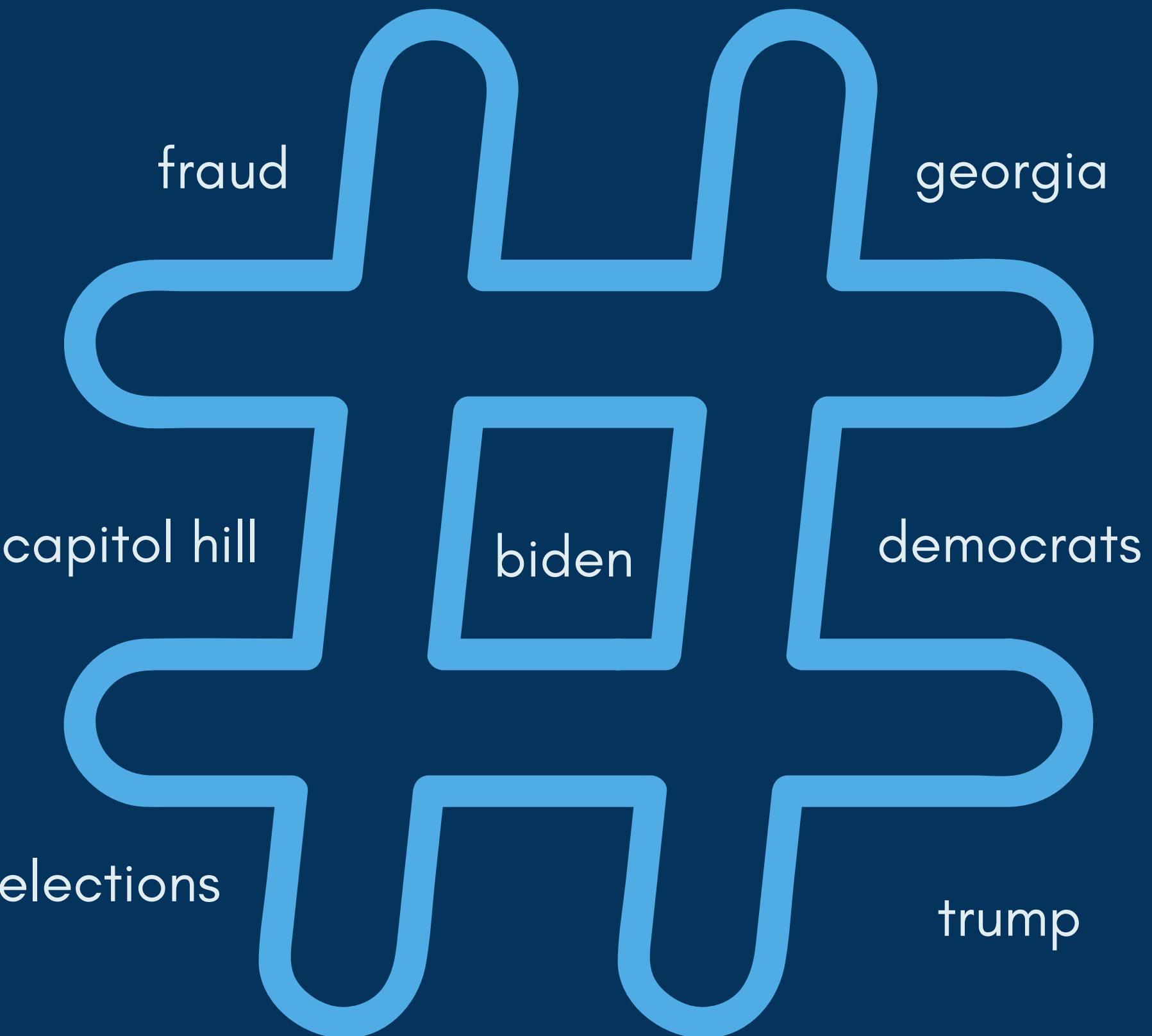
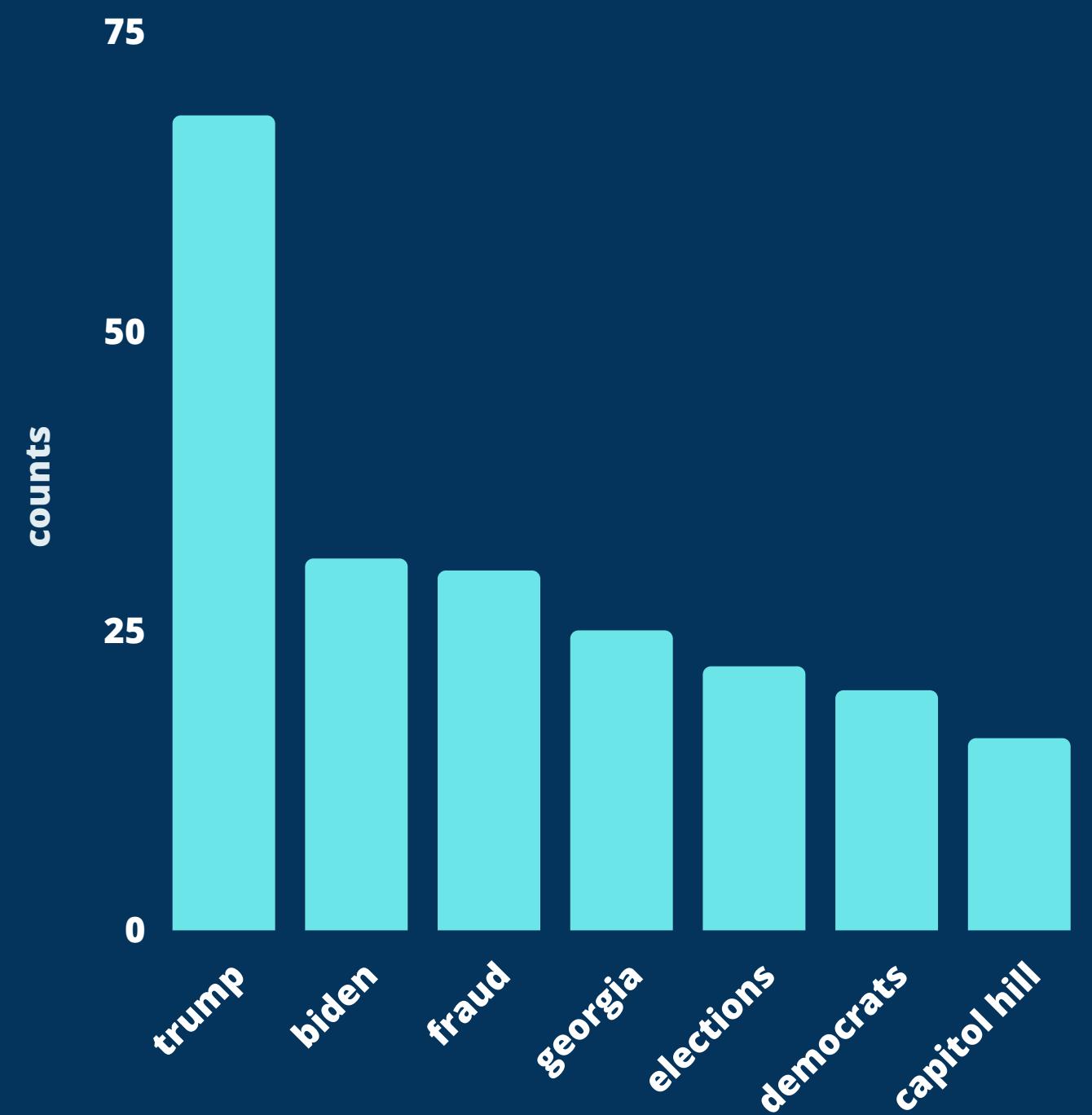
We calculated the basic node centrality measures to plot graphs like this and better understand the structure of the network.

We used state-of-the-art NLP models to map the agreement between tweets and study users behavior

We used the YAKE Python library to extract tweet-specific keywords

We computed different statistical analyses to guide our storytelling

# 1. THE RESEARCH KEYWORDS



## 2. THE AGREEMENT



the scraped tweet



its reply

ROBERTA-LARGE-MNLI  
(AGREEMENT CLASSIFICATION)

### 3. (SOME OF) THE STATISTICAL ANALYSES



#### **Chi-squared test over communities and agreement**

Is there a relationship between the community where users belong and their agreement?



#### **Chi-squared test over keywords and agreement**

Is there a relationship between the keywords users tweet about and their agreement with others?



#### **Chi-squared test over communities linked by keyword and agreement**

Is there a relationship between specific communities linked by the same keywords and the agreement among them?



#### **The Kruskal-Wallis test**

After computing the communities' edge betweenness, what happens when different communities collide?

## 4. A DEEP DIVE IN: DEBATE OVER FRAUD



Senators Lindsey Graham and  
Mike Lee  
polarized the debate the most



## 4. A DEEP DIVE IN: DEBATE OVER FRAUD



When users tweeted about senator David Perdue, it sparked the most outrage



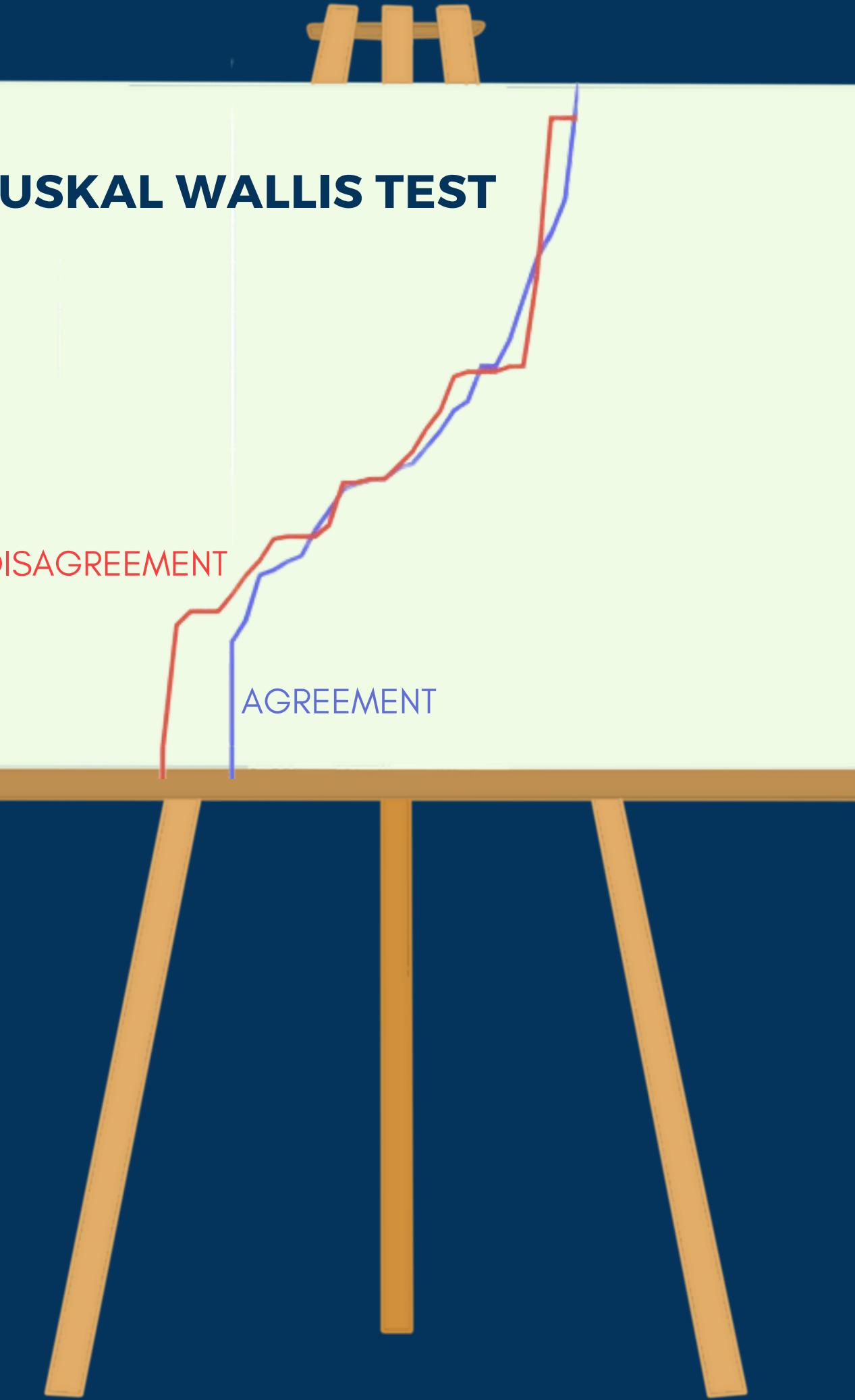
Republican,  
his claims about the  
"anarchic behavior" of Trump  
supporters was not appreciated

## 4. A DEEP DIVE IN: DEBATE OVER FRAUD

The Kruskal Wallis test answers to  
a simple question:  
*what happens when different  
communities collide?*  
They fight!

### THE KRUSKAL WALLIS TEST

DISAGREEMENT  
AGREEMENT



# AND NOW, LET'S MOVE TO THE WEBSITE!

Nicolò Rosso



Federico Jacopo Baldoni



Giovanni Raimnodo Quaratino

