



Observing Information Manipulations Targeting US Presidential Elections from October 2023 to June 2024

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Glossary

Term	Explanation
Troll Account	Taiwan AI Labs employs large language models to analyze accounts on social media platforms, identifying accounts that frequently comment on the same posts together, indicating coordinated behavior. These accounts exhibit long-term similarities in their commenting patterns, suggesting they are not controlled by natural persons but are likely automated or manipulated, thus termed “Troll Accounts.”
Troll Group	When Troll Accounts show long-term similarities in commenting patterns and signals, they are grouped into a “Troll Group.” These groups can be analyzed for the events they participate in and the targets they manipulate, providing insights into the political forces they may serve.
Battlefield	An event generates extensive news coverage and social media discussions, including posts and videos. Taiwan AI Labs uses large language models to organize these reactions into an “Event,” facilitating the observation of social media manipulation related to the event.
Story	Events can develop over time, linking many related events into a continuous narrative. Through classification with large language models, these interconnected events can be organized into a “Story,” summarizing the coordinated manipulation and related news across a prolonged period for each story, allowing for the observation of long-term collaborative operations.
Media Volume	Media Volume refers to the amount of media presence, calculated by the number of news reports.
(PRC) State-affiliated Media	(PRC) State-affiliated Media denotes media outlets whose content is controlled or censored by the government of the People's Republic of China.
Community Volume	Community Volume represents the volume on social media platforms, encompassing the total number of comments observed from both troll accounts and regular accounts.
Troll Volume	Troll Volume pertains to the volume of comments made by troll accounts.
User Behavior Features	Analysis of social media data reveals a series of columns that represent user behavior features, such as the ‘destination of user interactions’ (post_id or video_id), the ‘time of user actions’, and the ‘domain of shared links by users’, among others. These data are subsequently utilized for user clustering.
Co-occurrence Features	Co-occurrence features aim to identify users who frequently engage with the same topics or respond to the same articles, appearing together in the same context to create a fabricated volume, a common characteristic of troll accounts. Through this method, we can identify troll accounts and cluster them into troll groups.
User Clustering	Taiwan AI Labs analyzes the relationship between pairs of accounts based on a series of signals and assigns a score. If the score exceeds a certain threshold, a connection is established. If multiple accounts are connected, they are clustered into a troll group.

Group Analysis	Taiwan AI Labs uses Taiwan LLM, a large language model pre-trained in Taiwanese dialects, to classify the comments and opinions of troll groups, identify their main narratives, and analyze the primary information manipulated by troll groups and their underlying intentions.
Topic Engagement	Taiwan AI Labs employs large language models to analyze community platform posts and comments related to news, identifying traces of message manipulation by troll groups. This clarifies which topics troll groups participate in and manipulate discussions on.
Operation Methods	Taiwan AI Labs utilizes the DISARM Framework to analyze the methods and intentions behind the information operations conducted by troll groups.
Leverage Existing Narratives	Use or adapt existing narrative themes, where narratives are the baseline stories of a target audience. Narratives form the bedrock of our worldviews. New information is understood through a process firmly grounded in this bedrock. If new information is not consistent with the prevailing narratives of an audience, it will be ignored. Effective campaigns will frame their misinformation in the context of these narratives. Highly effective campaigns will make extensive use of audience-appropriate archetypes and meta-narratives throughout their content creation and amplification practices.
Reframe Context	Reframing context refers to removing an event from its surrounding context to distort its intended meaning. Rather than deny that an event occurred, reframing context frames an event in a manner that may lead the target audience to draw a different conclusion about its intentions.
Flooding the Information Space	Flooding and/or mobbing social media channels feeds and/or hashtags with an excessive volume of content to control/shape online conversations and/or drown out opposing points of view. Bots and/or patriotic trolls are effective tools to achieve this effect.
Trolls Amplify and Manipulate	Use trolls to amplify narratives and/or manipulate narratives. Fake profiles/sock puppets operating to support individuals/narratives from the entire political spectrum (left/right binary). Operating with increased emphasis on promoting local content and promoting real Twitter users generating their own, often divisive political content, as it's easier to amplify existing content than create new/original content. Trolls operate wherever there's a socially divisive issue (issues that can/are to be politicized).
Comment or Reply on Content	Delivering content by replying or commenting via owned media (assets that the operator controls).
Manipulate Platform Algorithm	Manipulating a platform algorithm refers to conducting activity on a platform in a way that intentionally targets its underlying algorithm. After analyzing a platform's algorithm (see: Select Platforms), an influence operation may use a platform in a way that increases its content exposure, avoids content removal, or otherwise benefits the operation's strategy. For example, an influence operation may use bots to amplify its posts so that the platform's algorithm recognizes engagement with operation content and further promotes the content on user timelines.

Executive Summary

The U.S. presidential election has always attracted global attention, influencing both domestic policies and international relations of the United States. This event, held every four years, draws intense interest worldwide as people eagerly watch to see who will enter the White House and how this change will impact U.S. and global policies.

With the ongoing conflict between Russia and Ukraine, the rise of right-wing victories in the European Parliament elections, and Trump's return as a candidate, the global social situation has been quite turbulent in recent years. This study will conduct a detailed analysis from October 2023, one year before the presidential election, to June 2024. The study observed a total of 38,530 troll accounts, accounting for 15.1% of the total dialogue, and examined 5,639 media reports related to the presidential election across 131 battlefields. Among these reports, 139 (2.46%) were associated with Chinese and Russian state media.

We observed monthly events where troll volumes accumulated to reach 50-60% of the total volume. These events can be summarized into seven main topics: Trump's hush money scandal, the ruling on whether he has immunity, Biden's age issues, his family's legal troubles, the controversy over aid to Ukraine and Israel, border issues, and abortion rights.

Within these events, we identified three main goals of the troll groups: attacking U.S. presidential candidates, manipulating foreign issues, and influencing U.S. domestic affairs.

First, the troll groups targeted controversies involving U.S. presidential candidates in judicial cases, questioning the fairness and effectiveness of the judicial system to undermine voters' trust. For example, in the hush money case, the troll groups emphasized the judge's decision to delay sentencing, questioning whether it was a tactic to allow Trump to delay through appeals. Similarly, in the case of immunity related to the Capitol riots, the Supreme Court's ruling that Trump had partial immunity during his term was used by troll groups to criticize the court for political bias, further manipulating voter mistrust in the judicial system (5.2%).

Regarding cognitive issues with the candidates, the troll groups echoed the sentiment among Americans that someone with poor memory should not be president (3.76%). On the other hand, in the Chinese community, especially on Weibo, the troll groups directly labeled the U.S. presidential candidates as "old men and criminals," echoing the Chinese state media's narrative on Trump's criminal cases. They even mentioned that both candidates were running just to prevent the other from winning, mocking the democratic system (12.75%). These actions show that troll groups use different strategies in different communities to achieve the same goal: undermining trust in the judicial system and the candidates, and even extending doubts about the democratic system, thereby deepening the division in American society.

Troll groups also exploited the Russia-Ukraine war, manipulating anti-war sentiments among Americans and polarizing opinions on government aid. For English-speaking audiences, troll groups used extreme rhetoric to amplify their views on both sides, with 11.3% arguing that Ukraine should be supported, while 8.9% highlighted Ukraine's corruption and the Western interests behind the war, further intensifying polarization. For Chinese-speaking communities, especially on Weibo, 6.25% of the troll groups' discourse spread anti-American sentiment, portraying the U.S. and NATO as the real culprits behind the Russia-Ukraine war. This behavior demonstrates how troll groups use different strategies in different

linguistic and cultural contexts, but their goal is consistent: to manipulate public opinion by stirring emotions and conflicts, weakening trust in governments and international organizations.

On domestic issues, troll groups manipulated hot topics such as border issues, gun control, and women's abortion rights. Regarding the border bill, 8.37% of the troll groups' discourse attacked the Democratic Party for the uncontrolled immigration surge during its rule, while nearly 5.3% criticized the Republican Party for deliberately obstructing the passage of the bill for election manipulation. By fueling opposing views, they intensified the conflict between American political parties.

Moreover, troll groups exploited the influx of immigrants in Texas, emphasizing that ignoring federal law in Texas equates to a call for fascism, and accusing Texas of appalling expansionism. Such rhetoric accounted for 19.8%, with some even calling for civil war. On Weibo, 17% of the troll groups' discourse fueled Texas independence. Both Chinese and English troll groups used domestic issues to stir up conflict between the government and the federal system, not just challenging the U.S. system but also intending to divide the entire American society.

In the abortion rights debate, 4.5% of the troll groups' discourse redirected the discussion towards questioning the judicial system, attacking the court's rulings and arguing that it should not affect women's rights. Additionally, the same troll group (Twitter @10946) also participated in controversies related to Trump's criminal cases, indicating that the troll groups deliberately manipulated public mistrust in the judicial system to further incite anti-government sentiment in the U.S.

The overall operations of the troll groups are to make voters lose trust in the candidates and deliberately amplify the political disputes between the two parties, aiming to polarize American democratic society. On domestic issues, they stoked public skepticism of the judicial system and government through the manipulation of judicial cases, border issues, gun control, and women's abortion rights, inciting anti-government sentiments. On foreign issues, they portrayed Western countries as the real culprits of wars, intending to divide democratic societies and make voters weary and disillusioned with democracy. Troll groups use different strategies in different linguistic and cultural contexts, but their goal is consistent: to weaken trust in governments and international organizations by inflaming emotions and conflicts, thereby dividing American society.

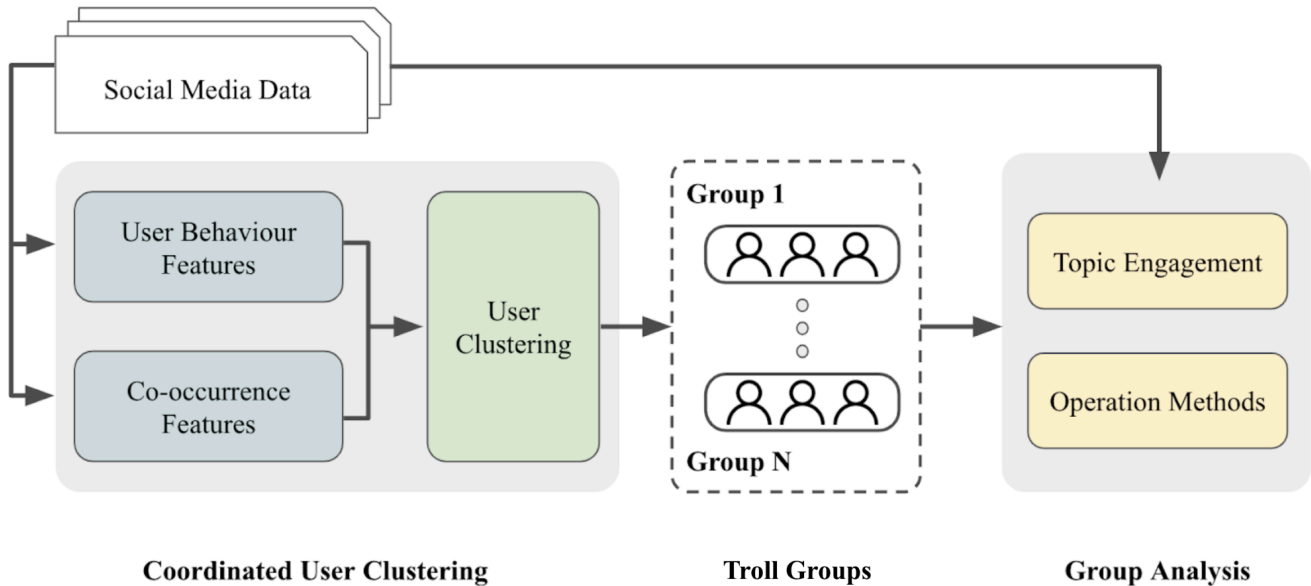
Throughout the events, four troll groups were the most representative, consistently appearing in monthly events. In addition to participating in the events mentioned above, these troll groups were also involved in foreign political activities. For example, Twitter #10946 and Twitter #10968 participated in European-related political events, while YouTube #253 and YouTube #72 echoed the Chinese state media narrative in the TikTok ban incident. These signs and the objectives of the troll groups suggest that they are not from any political party or civil organization, but are instead backed by foreign forces aiming to influence U.S. voters' perceptions through information warfare.

Compared to the past, troll groups have become much more sophisticated. They no longer rely solely on mass article flooding or bot comments to manipulate voters' perceptions but instead engage in targeted discourse on significant U.S. events to achieve their goals.

Methodology

The Taiwan AI Labs employ their analytical tool "Infodemic" to examine information operations across different social media platforms.

Building Similarity Nodes Between User Accounts



Graph 1: An overview of the coordinated behavior analysis pipeline

Graph 1 depicts the analysis workflow for this report, which consists of three main stages:

- **User Feature Extraction:** We evaluate and quantify users' behavioral characteristics, converting these traits into user vectors for further analysis.
- **User Clustering:** Using these user vectors, we create a network of users with similar patterns. We then apply a community detection algorithm to identify groups of highly correlated users, classifying them as collaborative units for closer examination.
- **Group Analysis:** We explore the tactics and strategies of these collaborative units, focusing on their choice of topics, operational methods, and their tendency to either support or oppose certain entities.

User Feature Extraction

To capture user information on social forums effectively, we propose two feature sets:

User Behaviour Features

Preparing data to highlight user behavior features is essential for deriving significant insights from the dataset, which includes a vast array of details about social media posts (or videos) and user interactions. We gathered a wide variety of raw social media data, subsequently converting it into a structured format with columns that depict various aspects of user behavior. This includes elements like the 'destination of user interactions' (indicated by `post_id` or `video_id`), the 'timing of user actions', and the 'domains of links shared by users', among others. These user behavior features will undergo further transformation and structuring to facilitate their use in assessing user similarity and for clustering purposes.

Co-occurrence Features

Co-occurrence features aim to pinpoint users who often interact with similar topics or engage with identical articles. To quantify these features among users, we utilize Non-Negative Matrix Factorization (NMF), a mathematical method applied in data analysis and for reducing dimensionality. This technique decomposes a given matrix into two or more matrices, ensuring all elements within these matrices are non-negative.

User Clustering

User Similarity Evaluation

After establishing user features, we move to examine the coordinated relationships among users. For behavioral features, we conduct comparisons of various behaviors between pairs of users and scale the results to a range from 0 to 1. For example, regarding the timing of user activities, we document the hours of activity for each user over a week in a 7x24-dimensional matrix. Subsequently, we calculate the cosine similarity between user pairs based on their activity timing matrices.

In terms of co-occurrence features, cosine similarity is also employed to gauge the resemblance between users' co-occurring vectors. This involves calculating the cosine of the angle between these vectors to determine the degree of similarity in users' responses or actions. This method proves particularly effective in social media studies, enabling the grouping of users by shared behavioral patterns. Users exhibiting high cosine similarity are indicative of a closely coordinated behavior pattern, revealing clusters of users with similar interests or engagement habits.

User Clustering

Once we've calculated pairwise similarities among users from their features, we proceed to connect user pairs that exhibit a similarity beyond a set threshold by establishing an edge between them, thus forming a user network. Following the creation of this network, we employ the Infomap algorithm to cluster it. Infomap is a community detection algorithm that identifies structures within networks based on the flow of information. Communities discovered within this network are subsequently classified as troll groups for further analysis in subsequent sections. This method allows us to systematically identify and categorize groups of users exhibiting coordinated behavior patterns, which are indicative of troll activity.

Group Analysis

Opinion Clustering

To effectively decipher the narratives put forth by each user group, we utilized a text clustering approach on the comments made by troll groups. By leveraging a pre-trained text encoder, we transformed each comment into vector form. We then employed a hierarchical clustering algorithm to organize similar posts into cohesive groups. These clustered groups of posts will be analyzed further in subsequent discussions, providing a structured framework to examine and understand the narratives and themes prevalent within troll group communications.

Stance Detection and Narrative Summary

Large Pretrained Language Models have showcased their effectiveness in identifying entities within textual content and providing insightful explanations about them. This functionality aids in grasping the key components of discourse, especially in analyzing the influence of comments and evaluations on these recognized entities.

In our analysis, we utilize Taiwan LLM for text examinations. Taiwan LLM is a substantial language model that has been pre-trained on a corpus predominantly in the native Taiwanese language. It has demonstrated exceptional ability in understanding Traditional Chinese and is particularly adept at identifying and interpreting topics and entities related to Taiwan. Specifically, we employ Taiwan LLM to discern essential topics, entities, and names of organizations mentioned in each comment. Additionally, it evaluates the comment author's perspective towards these entities, classifying their sentiment as positive, neutral, or negative. This method is systematically applied across all clusters of opinions.

Ultimately, we aim to calculate the proportion of each primary topic or entity mentioned within the opinion groups, alongside the percentage of positive or negative sentiment linked with each. Moreover, we generate summaries for each opinion cluster using the language model, which assists data analysts in quickly comprehending the broad overview of the event and the prevailing sentiments within the discourse.

Data Coverage

The study analyzed data from October 1, 2023, to June 30, 2024. During this period, we tracked 131 battlefields and recorded 5,639 instances of media engagement related to keywords associated with the US Presidential Election. Of these instances, 2.46% were linked to media outputs from China and Russia. The analysis identified 38,530 troll accounts actively participating in online discussions across various social media platforms. Out of a total discussion volume of 833,780, 15.1% were attributable to these troll accounts.

Battlefields	Media Volume	(PRC) State-affiliated Media (%)	Troll Accounts	Community Volume	Troll Volume (%)
131	5,639	139 (2.46%)	38,530	833,780	125,914 (15.1%)

Table 1: Analyzed data quantity during the period of the US Presidential Election battlefields
(from <https://infodemic.cc>)

Timeline

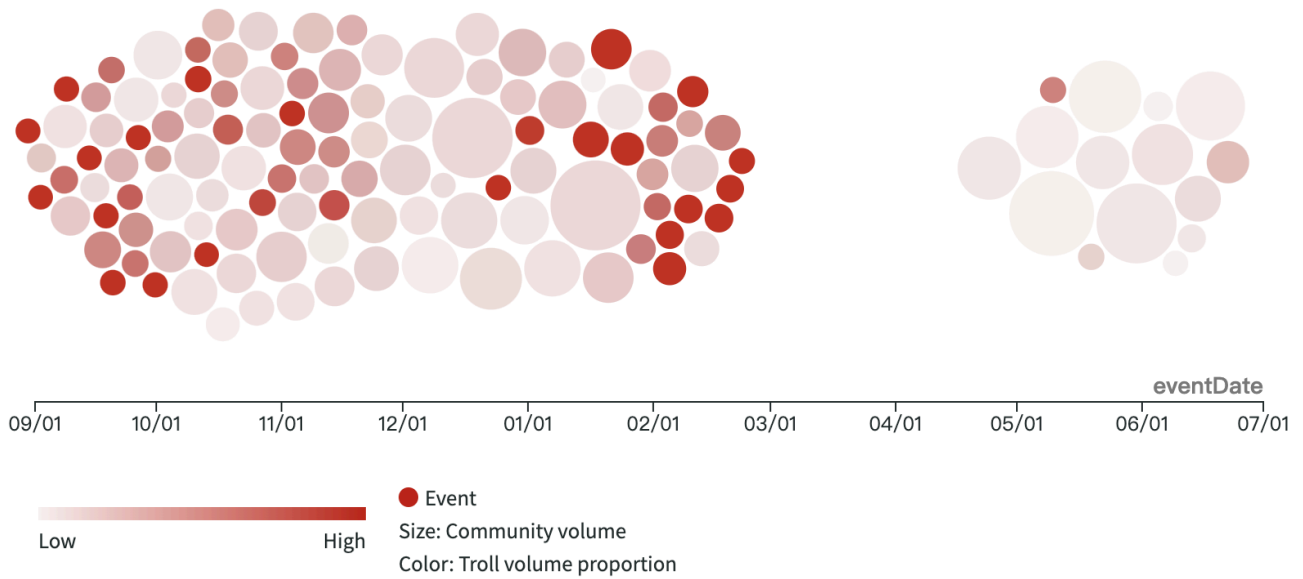
The battlefields analyzed by the Infodemic platform are presented in a BeeSwarm Plot, as shown in Graph 2. From October 1, 2023, to June 30, 2024, the analysis highlights the top battlefields of each month, as shown in Table 2.

In the sections below, we will provide detailed explanations of the key battlegrounds influenced by troll groups each month, and identify the main troll groups involved in each.

Date	Top Troll Participated Battlefields (accumulated %)
Oct. 2023	<ul style="list-style-type: none"> Ukraine says election of new US House speaker won't affect future aid(30.4%) Donald Trump says US presidents immune from charges in challenge to election case(57.23%)
Nov. 2023	<ul style="list-style-type: none"> Ex-DOJ Official Has Withering 1-Liner On Donald Trump Jr.'s Trial Claims(16.7%) Biden turns 81 as worries about his age(32.1%)
Dec. 2023	<ul style="list-style-type: none"> Trump Insists He's 'Not An Insurrectionist' After Colorado Ruling(23.95%) Hunter Biden Defies a Subpoena(41.75%)
Jan. 2024	<ul style="list-style-type: none"> Trump's win in New Hampshire win confirms Nikki Haley's big problem(38.6%) 'Stop giving money to refugees' – Zelensky wants Germany to transfer money to Ukraine(49.55%)
Feb. 2024	<ul style="list-style-type: none"> Trump does not have immunity from Jan. 6 prosecution, appeals court rules(27.4%) Republicans asked for a border security bill. Do they still want it? (50.4%)
Mar. 2024	<ul style="list-style-type: none"> Supreme Court keeps Trump on Colorado ballot, rejecting 14th Amendment push(31.2%) Caitlyn Jenner slams Biden for celebrating Transgender Day of Visibility on Easter(37.5%) Donald Trump says states should dictate abortion laws(41.3%)
Apr. 2024	<ul style="list-style-type: none"> The Supreme Court case on Trump's presidential immunity explained(32.7%) Defying Hardliners, Speaker Johnson Presses Ahead on Ukraine, Israel Plan(43.1%)
May 2024	<ul style="list-style-type: none"> The Latest Closing arguments in Trump's hush money trial could stretch into the evening(29.15%) TikTok begins automatically labeling AI-generated content(40.1%)
Jun. 2024	<ul style="list-style-type: none"> Biden's pledge with G7 leaders clouded by Trump's possible return, right-wing EU wins(30.67%) Donald Trump joins TikTok after seeking to ban video app as president(41.55%)

*The number associated with each event represents the cumulative volume of troll activity.

Table 2: Analyzed top events of the US Presidential Elections from October 1, 2023, to June 30, 2024(from <https://infodemic.cc>)



- * Each circle represents an event related to this manipulated story
- ** The size of each circle is defined by the sum of the social discussion of that event
- *** The darker the circle is, the higher the proportion of troll comments in the event

Graph 2: Event overview by timeline (from <https://infodemic.cc>)

Troll Narratives During the Main Battlefields from October to December 2023

In October 2023, discussions among trolls highlighted their concerns about the administration's handling of the Ukraine-Russia conflict. They expressed doubts about the advisability of supporting Ukraine, citing the prolonged nature of the war. Additionally, in the context of battlefields where former President Trump claimed immunity, troll comments revealed skepticism toward his statements and the legitimacy of the election.

During November 2023, troll narratives strongly criticized Donald Trump Jr. for his unethical behavior, labeling them a 'crime family.' Additionally, when discussing Biden's health issues, troll accounts claimed that Biden has dementia and is unable to serve as president.

In December 2023, troll narratives expressed strong support for the Colorado court decision, asserting that Trump is a detriment to democracy. Furthermore, when discussing Hunter Biden, they stated that he deserves no special treatment.

Date	Battlefields	Troll Narratives	Main Troll Group
Oct. 2023	Ukraine says election of new US House speaker won't affect future aid	Comments mock the GOP and highlight concerns about the administration's handling of Afghanistan.	twitter@10946 twitter@8489
	Donald Trump says US presidents immune from charges in challenge to election case	Comments express skepticism towards politicians' actions, the legitimacy of the election, and political manipulation.	youtube@72 twitter@10946

Nov. 2023	Ex-DOJ Official Has Withering 1-Liner On Donald Trump Jr.'s Trial Claims	Comments reflect strong negative sentiments towards Donald Trump, Jr., insinuating his unethical behavior.	twitter@10946 twitter@10968
	Biden turns 81 and worries about his age	Comments include false claims about Joe Biden having dementia, calls for his impeachment, and attacks on his family.	twitter@10946 twitter@10968
Dec. 2023	Trump Insists He's 'Not An Insurrectionist' After Colorado Ruling	Comments reflect a mix of opinions on the Colorado court decision related to Trump. Some anticipate the rule be overturned by SCOTUS.	twitter@10946 twitter@10968
	Hunter Biden Defies a Subpoena	Comments vary in sentiment towards President Joe Biden, with some discussing the alleged criminal activities of his family.	twitter@10946 twitter@10968

Table 3: Key narratives Surrounding main events from October to December (from <https://infodemic.cc>)

Troll Narratives During the Main Battlefields from January to March 2024

In January, when Trump won in New Hampshire, troll narratives discussed his potential impact on the US presidential election. Additionally, when Zelensky requested more financial support for Ukraine from other countries, we observed troll comments accusing the US and NATO of instigating the war and criticizing the Ukrainian government.

In February, following the federal appeals court's statement that Trump has no immunity, troll accounts expressed their support for the court, emphasizing that no one is above the law. Regarding border security issues, troll comments expressed opposition to the GOP, accusing them of not wanting to solve the border problem.

As the Supreme Court upheld Trump's placement on the Colorado ballot in March, troll accounts criticized the justice system, questioning its support for democracy and expressing skepticism toward authority. During the controversies surrounding Biden celebrating Transgender Day of Visibility on Easter, troll accounts supported Biden's recognition of the day, and criticized Trump and the GOP for they raised concerns about extremism and religious hypocrisy. Regarding abortion laws, they criticized Trump and voiced concerns about reproductive rights.

<i>Date</i>	<i>Battlefields</i>	<i>Troll Narratives</i>	<i>Main Troll Group</i>
Jan. 2024	Trump's win in New Hampshire win confirms Nikki Haley's big problem	Comments express strong opinions on Trump's political potential impact on the the upcoming event.	twitter@10946 twitter@8489 twitter@10968

	'Stop giving money to refugees' – Zelensky wants Germany to transfer money to Ukraine	Comments express the US and NATO for instigating the war and criticize the Ukrainian government's handling of the situation.	twitter@6630
Feb. 2024	Trump does not have immunity from Jan. 6 prosecution, appeals court rules	Comments express concerns about Trump's potential trial and political divisions.	youtube@72 youtube@163
	Republicans asked for a border security bill. Do they still want it?	Comments express opinions against Trump, criticizing him and Republican lawmakers for their actions on various issues like border deals and election denial.	youtube@72 twitter@10946
Mar. 2024	Supreme Court keeps Trump on Colorado ballot, rejecting 14th Amendment push	Comments criticize the justice system, support for democracy, and skepticism towards authority.	youtube@72 youtube@253
	Caitlyn Jenner slams Biden for celebrating Transgender Day of Visibility on Easter	Comments express support for Biden's recognition of Transgender Day of Visibility, criticize Trump and the GOP, and highlight concerns about extremism and religious hypocrisy.	youtube@253 youtube@72
	Donald Trump says states should dictate abortion laws	Comments concern about reproductive rights being threatened under Trump's administration.	youtube@72 youtube@168

Table 4: Key narratives Surrounding main events from January to March (from <https://infodemic.cc>)

Troll Narratives During the Main Battlefields from April to June 2024

In response to discussions about Trump's immunity, troll comments expressed a lack of faith in the Supreme Court. During the battlefields of Johnson's moving ahead on foreign aid, troll accounts criticized Democrats for their support of aid to Ukraine.

In May, following Trump's conviction on 34 counts of felony business fraud related to hush money payments to an adult film star, troll comments celebrated and expressed satisfaction, calling for his incarceration. Additionally, when the US government threatened to ban TikTok nationwide unless it was sold, troll accounts voiced skepticism towards the government and concerns about media manipulation and freedom of speech.

Finally, in June, regarding Trump joining TikTok after previously seeking to ban the video app as president, comments criticized Trump and his team members for being convicted felons and for their continuous dishonesty.

<i>Date</i>	<i>Battlefields</i>	<i>Troll Narratives</i>	<i>Main Troll Group</i>
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Apr. 2024	The Supreme Court case on Trump's presidential immunity explained	Comments express attacks on Trump and lack of faith in the Supreme Court.	youtube@72 youtube@168
	Defying Hardliners, Speaker Johnson Presses Ahead on Ukraine, Israel Plan	Comments cover a range of topics including claims of Iran being a source of terrorism, and criticism of Democratic support for Ukraine aid.	youtube@253 youtube@72
May 2024	The Latest Closing arguments in Trump's hush money trial could stretch into the evening	Comments celebrate and express satisfaction over Trump being found guilty on all 34 counts, with numerous calls for him to be incarcerated.	youtube@72 youtube@163
	TikTok begins automatically labeling AI-generated content	Comments reflect skepticism towards the government and concerns about media manipulation and freedom of speech.	youtube@253 twitter@3395
Jun. 2024	Biden's pledge with G7 leaders clouded by Trump's possible return, right-wing EU wins	Comments express strong opinions against Donald Trump, accusing him of only caring about voters, lacking character, and being a liar.	youtube@72 youtube@253
	Donald Trump joins TikTok after seeking to ban video app as president	Comments criticize Trump and his team members for being convicted felons, and cannot stop lying.	youtube@72 youtube@163

Table 5: Key narratives Surrounding main events from April to June (from <https://infodemic.cc>).

Summary of Main Battlefields

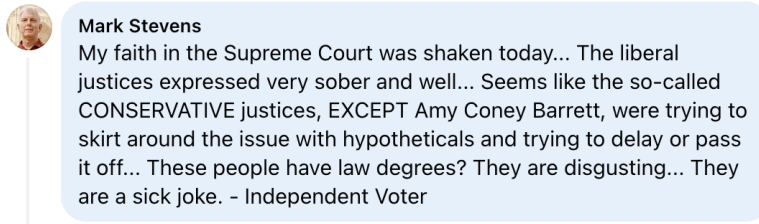
We can summarize the key issues from October 1, 2023, to June 30, 2024, focusing on the seven major topics listed in Table 6. We observed troll groups manipulating controversies involving Biden and Trump, such as Trump's hush-money scandal and Biden's health issues. They attacked both figures, labeling them as criminals and disparaging their age.

When discussing policy issues, they express strong negativity towards the US government and NATO, accusing them of instigating the Ukraine-Russia war. Additionally, they criticize the GOP for obstructing border policy and for rejecting Roe v. Wade, actions they claim have led to a decline in women's rights.

During this period, we observed that the troll group efforts in both English and Chinese (Weibo) were remarkably aligned, indicating that China is deliberately and continuously working to divide and polarize American society while also weakening public trust in democracy. We have summarized these troll groups operational patterns as amplifying events to target systemic issues and spreading anti-American sentiment to destabilize society:

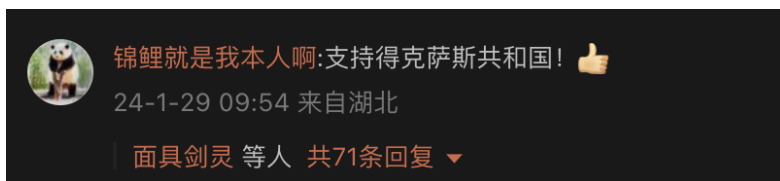
1. Amplifying events to target systemic issues:

- Manipulating mistrust in the judicial system through Trump's criminal cases.

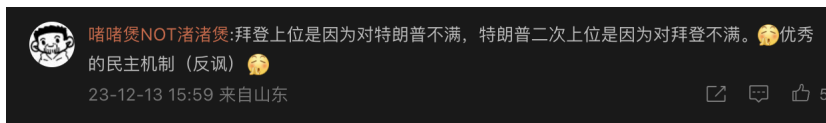


- Exploiting the Texas border issue to stir conflict between federal and state governments.

無視最高法院？這是對法西斯主義的呼喚。

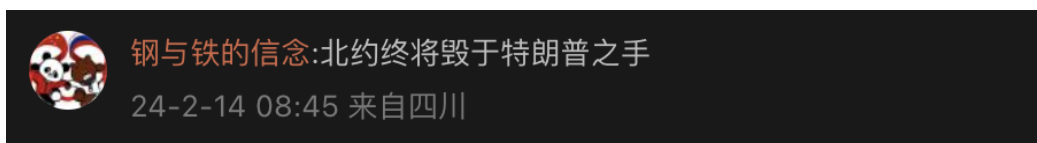
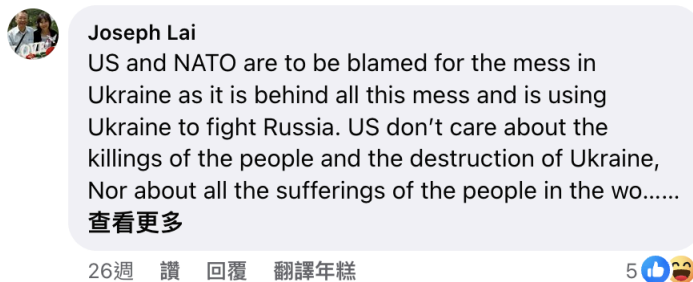


- Extending the controversy over presidential candidates to mock the democratic system.



2. Spreading anti-American sentiment to destabilize society:

- Implying that Ukraine's situation is manipulated by the Western world.



Battlefields	Troll Narratives
Trump hush-money case	Comments express skepticism towards politicians' actions, the legitimacy of the election, and political manipulation.

Trump immunity case	Comments express attacks on Trump and lack of faith in the Supreme Court.
Biden's health	Discuss replacing Biden among Democrats to improve their chances against Trump due to his popularity.
Biden's family case	Comments include false claims about Joe Biden having dementia, calls for his impeachment, and attacks on his family.
Ukraine Support Issue	<ul style="list-style-type: none"> • Comments express the US and NATO for instigating the war and criticize the Ukrainian government's handling of the situation. • She criticized both parties, expressing distrust and highlighting international issues like Russian influence and conflicts in the Middle East.
Border Issue	Comments express opinions against Trump, criticizing him and Republican lawmakers for their actions on various issues like border deals and election denial.
Abortion Issue	Comments concern about reproductive rights being threatened under Trump's administration.

Table 6: troll narratives of main battlefields (from <https://infodemic.cc>).

Main Troll Groups

During the main US presidential election battlefields, we noticed several troll groups were constantly manipulating the different battlefields. So, we conducted a deep analysis of these troll groups and found that they had some unusual activities.

These troll groups include Twitter#10946 and Twitter#10968, which were the main troll groups in the second half of 2023, as well as YouTube#72 and YouTube#253, which emerged as the primary groups in the first half of 2024.

They generated significant noise and manipulation on X and YouTube platforms, actively engaging in international political controversies and policy-related issues without confining themselves to any single nation. We believe the behavior of these troll groups is typical and warrants further investigation. Below are the detailed analysis results for each troll group.

Troll Group: Twitter#10946

Twitter #10946, observed by AI Labs, is the most active troll group on X (formerly Twitter), with 984 accounts participating in 177 stories recently.

Troll Accounts	Operated stories	Target entities
984	177	402

Table 7: Summary of Twitter#10946 (from <https://infodemic.cc/zh-hant/collab/twitter@10946>)

Operated Stories

The Twitter troll group #10946 is highly active in discussions surrounding US election-related battlefields. However, we observe this troll group still participates in other country issues such as the European Parliament adopting a resolution calling for a permanent ceasefire in Israel's war against Hamas.

Battlefield time (UTC+8)	Title
2023-10-07 ~ 2023-10-08	Is there a new speaker of the House yet? Republicans brace for infighting ahead of crucial vote
2024-01-19 ~ 2024-01-21	Trump ordered to pay \$83.3 million in E Jean Carroll defamation case
2023-12-13 ~ 2023-12-14	Hunter Biden Defies a Subpoena
2023-12-20 ~ 2023-12-21	DOJ's Jack Smith Further Presses Supreme Court For Fast Decision On Trump Immunity
2024-01-18~ 2024-01-19	Europe's conditions for a permanent ceasefire

*The event marked in red is related to the EU battlefields.

Table 8: Operated stories of Twitter #10946 (from <https://infodemic.cc/zh-hant/collab/twitter@10946>)

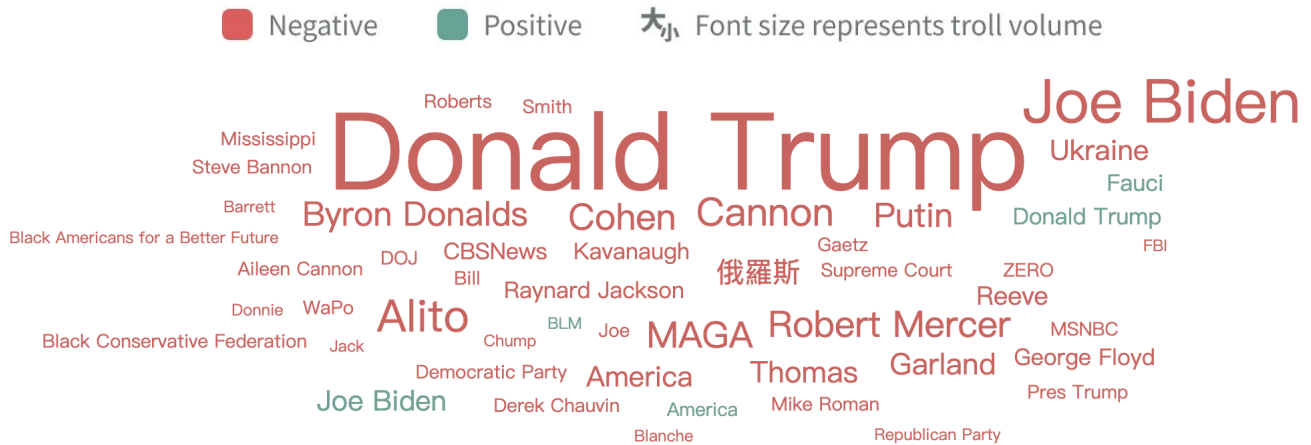
Operated Entity

The Twitter troll group #10946 primarily targets entities focused on Trump and Biden. They discuss Trump approximately 21% more often than Biden, with comments criticizing Trump for his hush-money scandal and court proceedings. Additionally, when discussing Biden, they express opinions about Hunter Biden's business dealings.

Entity	Summary of Narratives
Donald Trump – 28.3%	Comments discuss Trump, his associates, and legal matters. They mention his potential political decisions and court proceedings.
Joe Biden – 7.4%	Comments discuss Biden's administration and personal life, including criticism of gun control and Hunter Biden's business dealings.
Alito – 2.6%	Comments express strong opinions on Justice Alito, with some alleging misconduct and calling for impeachment.

Table 9: Main operated entity of Twitter #10946(from <https://infodemic.cc/zh-hant/collab/twitter@10946>)

Targets of Troll Activities



Graph 3: Troll activity targets of Twitter #10946 (from <https://infodemic.cc/zh-hant/collab/twitter@10946>)

Troll Group: Twitter#10968

Twitter #10968, observed by AI Labs, is the most active troll group on X (formerly Twitter), with 718 accounts participating in 153 stories recently.

Troll Accounts	Operated stories	Target entities
718	153	300

Table 10: Summary of Twitter #10968 (from <https://infodemic.cc/zh-hant/collab/twitter@10968>)

Operated Stories

The X troll group #10968 is actively in discussions surrounding US election-related battlefields, especially targeting Trump-related battlefields. However, we also observe their involvement in issues concerning other countries, such as Hungary’s potential veto over financial aid to Ukraine. In this context, we see this troll group commenting on Orbán’s stance towards Ukraine and they express their support for aiding Ukraine. Additionally, they mock Putin and the far right.

Battlefield time (UTC+8)	Title
2023-12-20 ~ 2023-12-20	DOJ’s Jack Smith Further Presses Supreme Court For Fast Decision On Trump Immunity
2023-10-27 ~ 2023-10-28	Is there a new speaker of the House yet? Republicans brace for infighting ahead of crucial vote
2024-01-19 ~	Trump ordered to pay \$83.3 million in E Jean Carroll defamation case

2024-01-20	
2023-12-19 ~ 2023-12-19	Trump cases thrust Supreme Court into US election fray
2023-12-16~ 2023-12-17	EU nation warns of 'hard veto' on Ukraine accession process

*The event marked in red is related to EU battlefields.

Table 11: Operated stories of Twitter #10968 (from <https://infodemic.cc/zh-hant/collab/twitter@10968>)

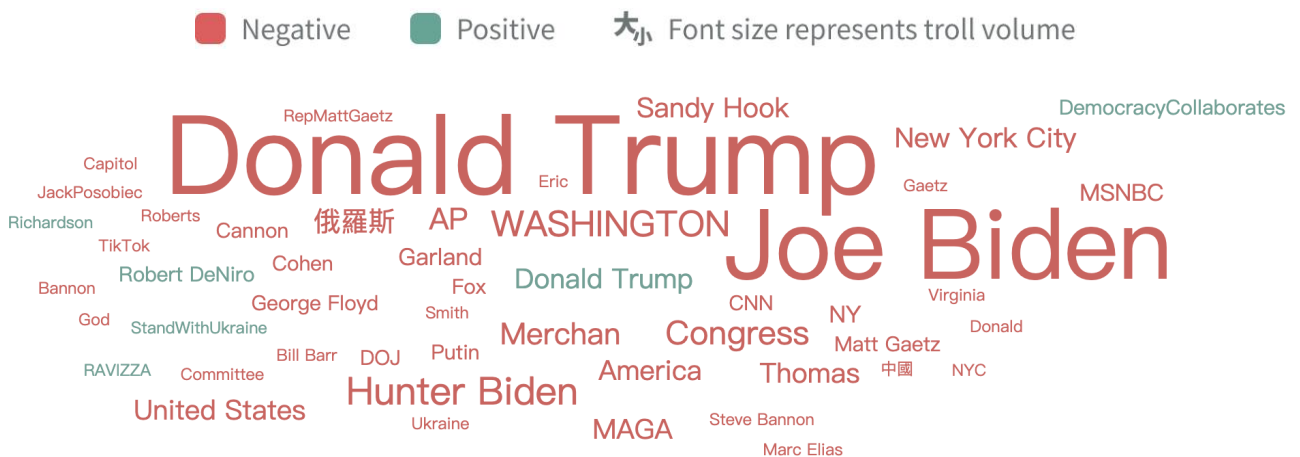
Operated Entity

The X troll group #10968 also primarily targets entities focused on Trump and Biden. They discuss Trump approximately 13% more often than Biden. They attack Trump for his behavior and legal issues, similar to Twitter#10946. However, when criticizing Biden, they accuse him of various wrongdoings and allege that his policies negatively impact the U.S. economy.

Entity	Summary of Narratives
Donald Trump – 25.8%	Comments include criticism of Trump, questioning of his actions, and disdain for his behavior, dishonesty, and legal issues.
Joe Biden – 12.9%	Comments express frustration and criticism towards President Biden, accusing him of various wrongdoings and shortcomings.
America – 2.2%	Comments discuss various political issues, including criticism of Joe Biden, Israel, and comparisons to Nazi behavior. Also, criticize Trump with a video referencing the “creation of a unified Reich,”

Table 12: Main operated entity of Twitter #10968 (from <https://infodemic.cc/zh-hant/collab/twitter@10968>)

Targets of Troll Activities



Graph 4: Troll activity targets of Twitter#10968 (from <https://infodemic.cc/zh-hant/collab/twitter@10968>)

Troll Group: Youtube#72

Youtube #72, observed by AI Labs, is the most active troll group on YouTube, with 4,355 accounts participating in 1,055 stories recently.

Troll Accounts	Operated stories	Target entities
4,355	1,055	3,490

Table 13: Summary of Youtube#72(from <https://infodemic.cc/zh-hant/collab/youtube@72>)

Operated Stories

The YouTube troll group #72 actively engages in discussions surrounding US election-related battlefields. In the top five battlefields they engage in, we observe their operation in the discussion that Sunak intends to increase defense spending to 2.5 percent of the country's annual GDP by 2030. In this context, troll groups mock Sunak, accusing him of undermining democracy in Britain.

Battlefield time (UTC+8)	Title
2024-06-05 ~ 2024-06-05	Sen. Bob Menendez's son wins New Jersey House primary amid father's corruption trial
2024-04-23 ~ 2024-04-23	U.S. Supreme Court appears to lean toward Oregon City in complex homelessness case
2024-05-06 ~ 2024-05-06	People v. Donald Trump heads to closing arguments in New York
2024-04-13 ~ 2024-04-13	EU Foreign Ministers Agree to Expand Iran Sanctions
2024-04-22~ 2024-04-22	Sunak promises to boost UK defence spending by 2030

*The event marked in red is related to the EU battlefields.

Table 14: Operated stories of Youtube#72 (from <https://infodemic.cc/zh-hant/collab/youtube@72>)

Operated Entity

The YouTube troll group #72 also primarily targets entities focused on Trump and Biden. They discuss Trump approximately 27% more often than Biden. They express frustration toward McCarthy, Cohen,

and Trump for their behavior and political actions. When discussing Biden, they criticize his age and suggest that a more robust individual should replace him as president.

Entity	Summary of Narratives
Donald Trump – 32.9%	Comments express frustration and criticism towards politicians like McCarthy, and Cohen for their behavior and tactics resembling Trump's rhetoric style.
Joe Biden – 5.6%	Comments criticize Biden's age, suggesting that a stronger person should be president, and also question the economic performance of the United States under Biden's leadership.
America – 5.3%	Social media comments express frustration and disappointment towards Trump's actions in America, describing him as a traitor and a disaster.

Table 15: Main operated entity of Youtube#72(from <https://infodemic.cc/zh-hant/collab/youtube@72>)

Targets of Troll Activities



Graph 5: Troll activity targets of Youtube#72 (from <https://infodemic.cc/zh-hant/collab/youtube@72>)

Troll Group: Youtube#253

YouTube #253, observed by AI Labs, is the most active troll group on YouTube, with 3,004 accounts participating in 1,792 stories recently.

Troll Accounts	Operated stories	Target entities
3,004	1,792	3,253

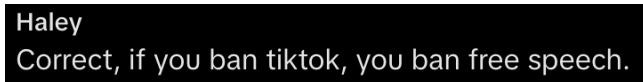
Table 16: Summary of Youtube #253 (from <https://infodemic.cc/en/collab/youtube@253>)

Operated Stories

The YouTube troll group #253, actively engages in the US presidential election events. We observe that the top five stories are equally related to both Trump and Biden. However, in the discussions where the U.S. government threatened to ban TikTok nationwide unless it was sold, the China state-affiliated media argued that the U.S. government was attempting to strip the constitutional rights of free speech from 170 million Americans. The troll groups echo the state-affiliated media and express comments such as, 'If you ban TikTok, you ban free speech.'

Battlefield time (UTC+8)	Title
2024-06-05~ 2024-06-05	Sen. Bob Menendez’s son wins New Jersey House primary amid father’s corruption trial
2024-06-13~ 2024-06-15	Donald Trump Wants Republicans to Fight His Conviction: Report
2024-06-14~ 2024-06-16	Biden's pledge with G7 leaders clouded by Trump's possible return, right-wing EU wins
2024-06-18~ 2024-06-20	Why Biden’s losing the young, Biden’s freezes are real, and other commentary
2024-06-17 ~ 2024-06-26	Joint Statement on the First U.S.-Vietnam Comprehensive Strategic Partnership Economic Dialogue

Table 17: Top 5 operated stories of Youtube #253 (from <https://infodemic.cc/en/collab/youtube@253>)



Graph 6: Troll Group Comments of TikTok Ban Battlefields

Operated Entity

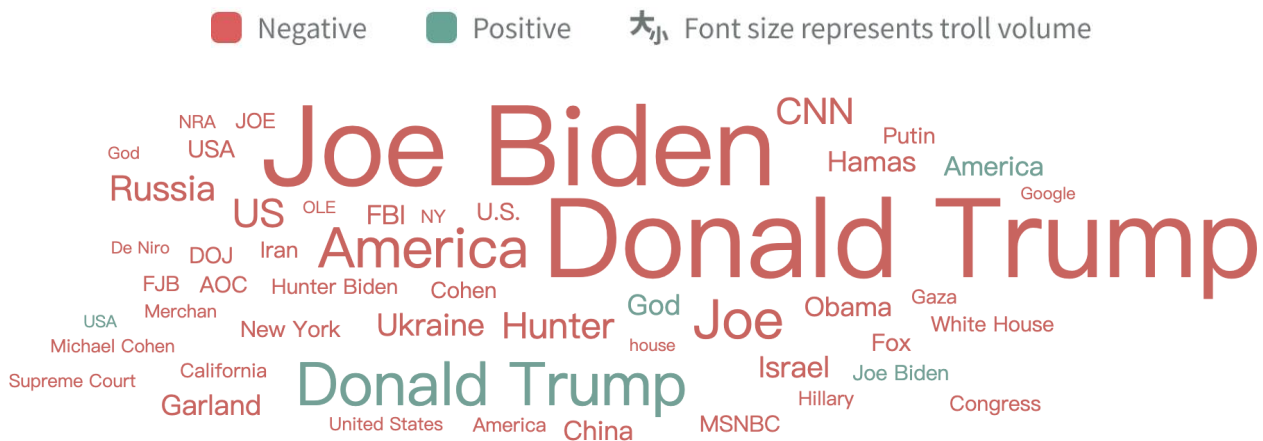
The YouTube troll group #253 primarily targets issues related to the U.S. presidential elections. They label Trump as a criminal and criticize Biden's actions regarding border policy. Also, they reflect strong opinions about political divisions.

Entity	Summary of Narratives
Donald Trump – 16.3%	Comments criticize Trump as a criminal and may lose his potential supporters.
Joe Biden – 15.7%	Comments criticize Biden's actions include sealing the border, deporting illegal aliens, and not counting them in the Census.
America –	Comments on social media reflect strong opinions about political divisions

4.3%	and concerns about illegal migrants in America.
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Table 18: Main operated entity of Youtube #253 (from <https://infodemic.cc/en/collab/youtube@253>)

Targets of Troll Activities



Graph 7: Troll activity targets of Youtube #253 (from <https://infodemic.cc/en/collab/youtube@253>)

Troll Group Comprehensive Analysis

The main troll group involved in U.S. presidential election activities, including Twitter #10946, Twitter #10968, and YouTube #72, primarily focuses on U.S. election issues. However, after closely observing all the issues they participated in over the past year, we discovered that these troll groups also engaged in European-related issues, such as Sunak's plan to increase defense spending and Orbán's stance towards Ukraine. Additionally, we noted that YouTube#253 echoed China state-affiliated media during discussions about the potential TikTok ban.

These observations provide insight into the activities of these troll groups. While they target Trump more frequently than Biden, it's clear that they criticize both presidential candidates, their behaviors, and their policies. Furthermore, it's unlikely that they are affiliated with a single party or organization since their involvement spans not only U.S. issues but also aligns at times with narratives from PRC state-affiliated media.

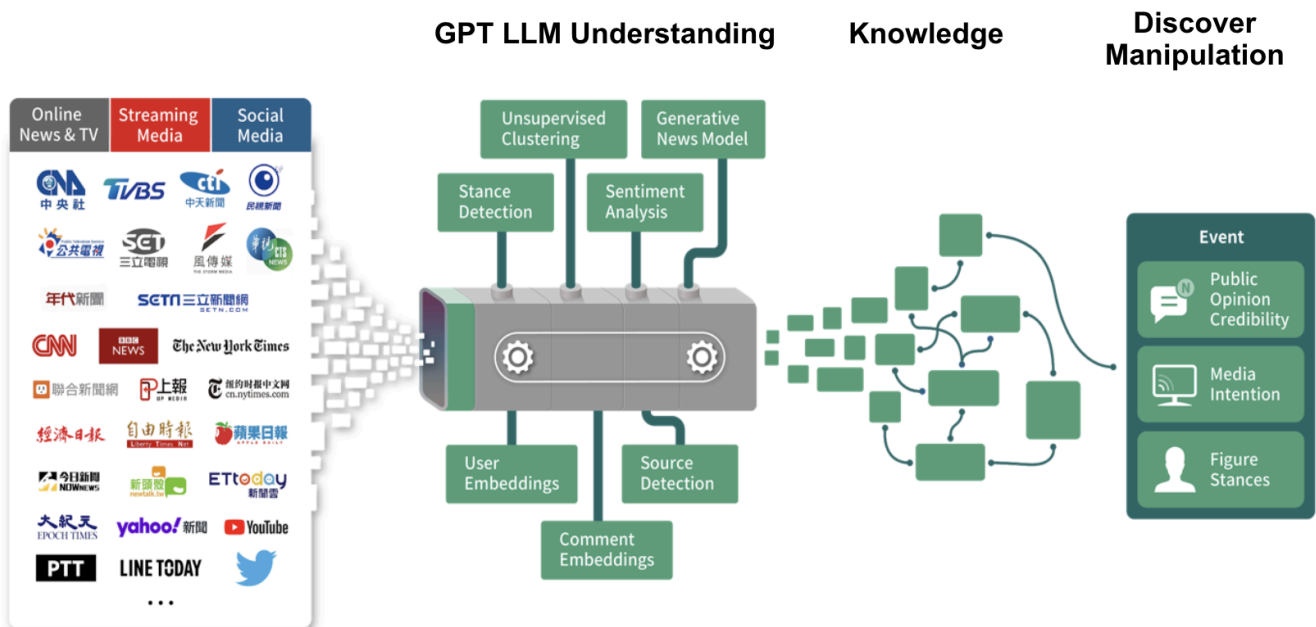
The Infodemic Platform

During the pandemic, Taiwan AI Labs collaborated internationally to develop trustworthy and responsible AI in healthcare while addressing the global challenge of misinformation related to the pandemic. Working with global partners, we established mechanisms to detect such activities. Taiwan AI Labs initially used AI to observe and understand the behavior of various accounts, identifying coordinated activities to detect synchronized accounts.

Troll accounts are defined as a group of accounts not operated by genuine users. These could be

accounts publishing specific content as per official directives, or those controlled programmatically or through PR firms, disseminating particular narratives in a non-organic, organized manner. By leveraging generative technologies and large language models (LLMs), Taiwan AI Labs analyzed billions of social media activities to unearth over 30,000 troll groups, understanding the content and patterns of their operations across more than two million topics. This helps to uncover the targets, methods, and possible motives behind these operations.

With the growing global demand for insights into information manipulation, international partners expressed interest in this service. Taiwan AI Labs further developed its capabilities into the Infodemic platform, providing real-time and comprehensive understanding of both domestic and international information manipulation for non-technical partners. This aids in developing digital literacy and response strategies. In recent years, Taiwan AI Labs has continued to use the Infodemic platform to observe coordinated behaviors on major Taiwanese social platforms such as Facebook, YouTube, X (Twitter), TikTok, and PTT. It employs LLMs to comprehend the targets and patterns of information manipulation attacks and the responses of mainstream media. It timely records the battlefields of information warfare participated in by troll groups, along with their potential impacts.



Graph 8: Overview of the data analysis process flow on the Infodemic platform.

- This report used data and tools from <https://infodemic.cc>
- How does the system work <https://infodemic.cc/en/faq>
- DISARM Disinformation Analysis and Risk Management is an open-source framework designed for describing and understanding the behavior parts of FIMI/disinformation. It sets out best practices for fighting disinformation through sharing data & analysis and can inform effective action. The Framework has been developed, drawing on global cybersecurity best practices. <https://www.disarm.foundation/>