

Background

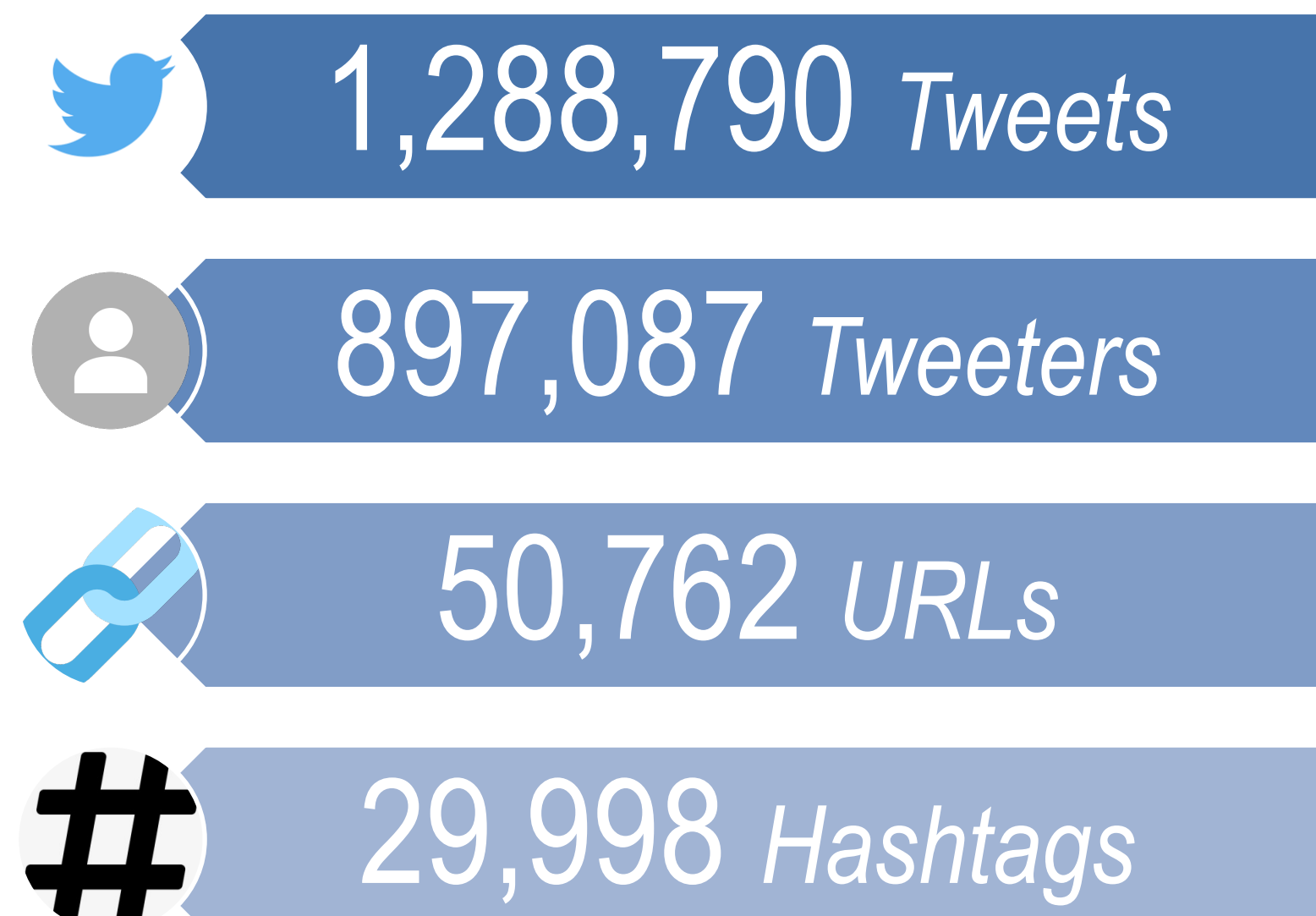
Cyber Flash Mob (CFM) is an event that is organized via social media, emails, SMS, or other forms of digital communication technologies in which a group of people (who might have an agenda or not) get together online or offline to collectively do something then disperse (quickly or over a longer period of time).

Cyber Flash Mob			
Agenda	Synchronously or (Time Duration < 20 Minutes)	Violent Act	Type of the Cyber Flash Mob
Yes	Yes	Yes	Deviant Cyber Flash Mob
Yes	Yes	No	Smart Mob
Yes	No	Yes	Deviant Cyber Flash Mob AND Long Mob
Yes	No	No	Smart Mob AND Long Mob
No	Yes	Yes	No such a case found in the literature
No	Yes	No	Flash Mob
No	No	Yes	No such a case found in the literature
No	No	No	No such a case found in the literature

Various forms of CFMs

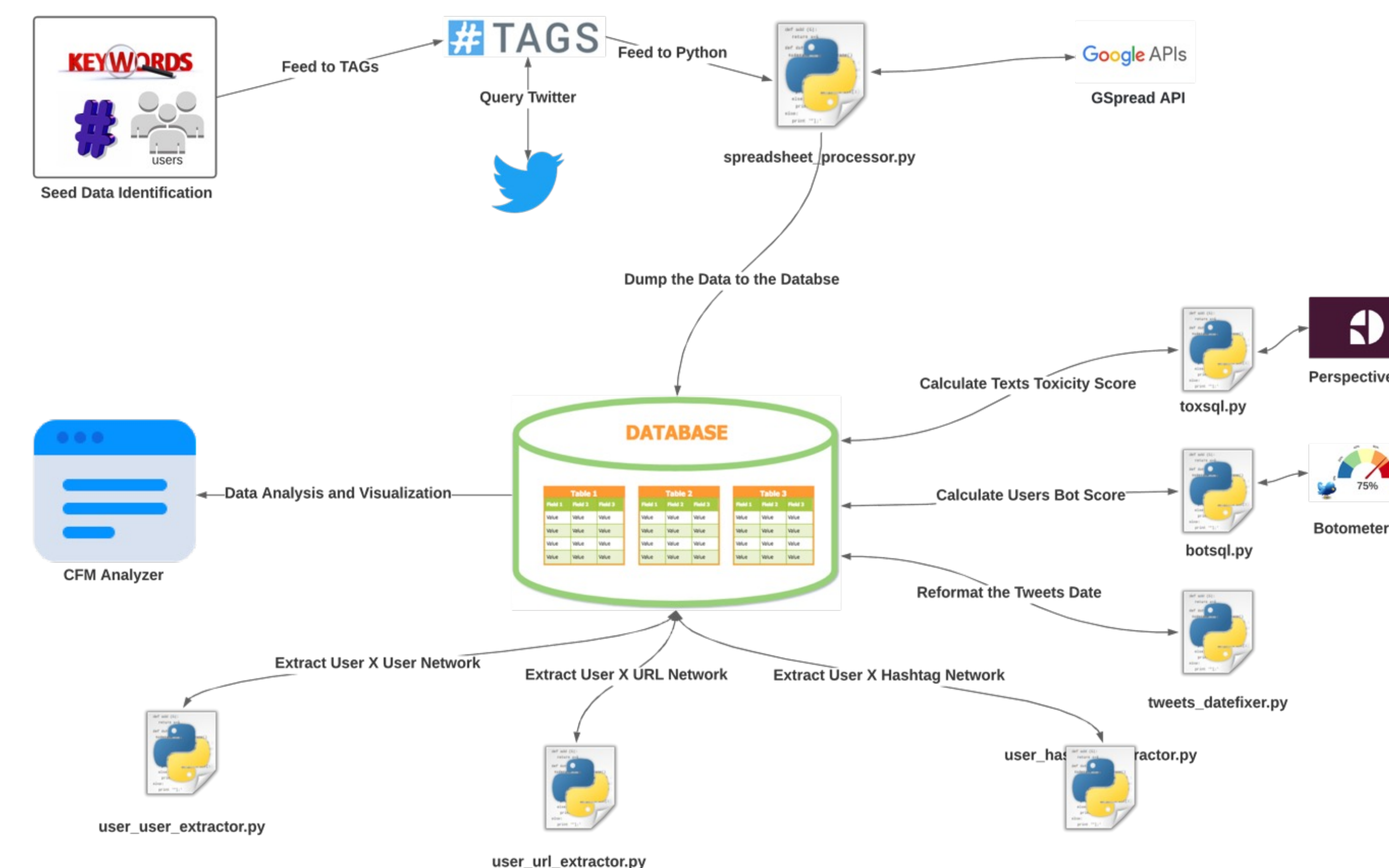
Data Collection

Using various **keywords**, **hashtags**, or **users** public data can be collected from various social media sites using their *Application Programming Interfaces (API's)*. We are currently collecting data from Twitter. The processed data which is currently stored in our data repository contains:



System Architecture

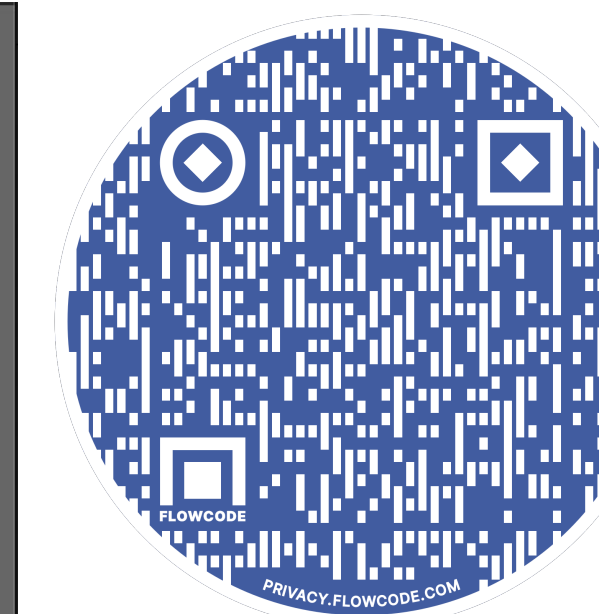
We developed a system that can be used to collect data from Twitter; analyze the collected data using various Python scripts and APIs; and visualize the results



The CFM Analyzer Architecture

Cyber Flash Mobs Analyzer Website

We developed a web interface to analyze the data. Currently, the tool has three types of data analysis: *Records Analysis*, *Tweepers Analysis*, and *Networks Analysis*



Scan the QR code to visit the website.

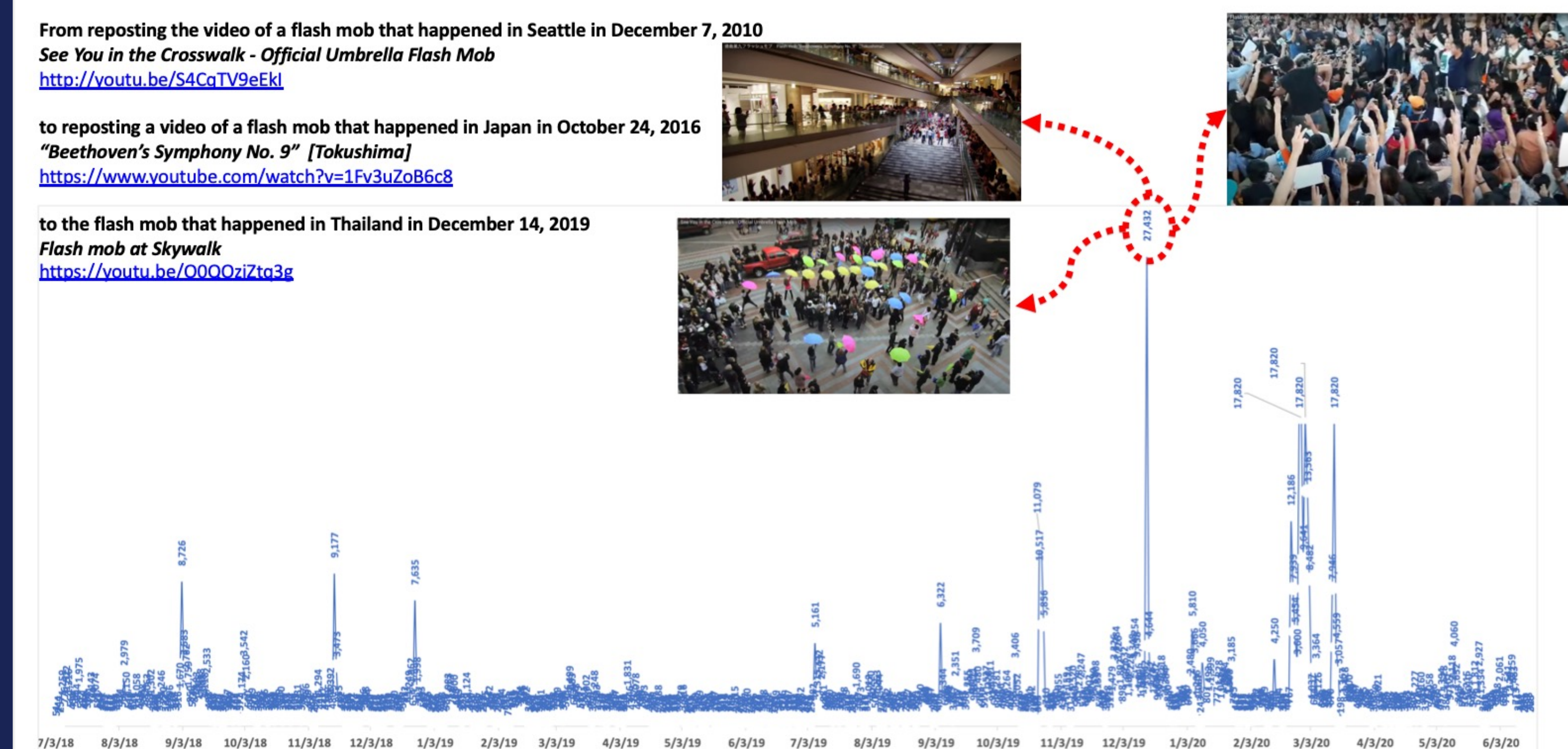
An Exploratory Study

The data collected and processed can be used to study various aspects of Cyber Flash Mobs. We conducted an exploratory study on *the role of social bots during cyber flash mobs*. We found that:

- ❖ social bots tend to share their location and language less than humans.
- ❖ social bots tend to post less toxic tweets than humans.
- ❖ the social bots communication network is less divided (has fewer components) and less densely connected (has fewer connections within components) than the humans' communication network.
- ❖ both social bots and humans tend to retweet a lot, however, social bots have a higher tendency to retweet than humans.
- ❖ social bots tend to shorten URLs less than humans.

Future Work

Try to devise a methodology to identify CFMs with their type. For example, examining the posts frequency helped us identify some cyber flash mobs.



Posting frequency shows CFMs on peak days.