Introduction

at the time of preparation of this present report , 245,156,078 people became infected with Covid19 , additionally, the number of covid19 related deaths up to 3,080,261 ,this pandemic's statistics reflected in social media content and become new field for the researchers and data analysts , we will use four topics "Hashtag " related to Covid19 pandemic , these Hashtags are

- Covid19
- Vaccine
- Astrazeneca
- Sputnikv

The mission is to “do real investigation in these four topics to check what people feels about the pandemic”.

According to these cases study, the investigation steps will be as follow:

Collect tweets related to this topics or hashtag. To retrieve a data from twitter you must get some secret keys as follow:

- consumerKey
- consumerSecret
- accessToken
- accessTokenSecret

As we as we mentioned in investigation scenario section and we mentioned in figure 8, this step will collect 2500 tweet from each Hashtag (Covid19, Vaccine, Astrazeneca, and Sputnikv) through twitter API and by using Tweepy library. Figure 11 show how we collect tweets by python. Where:

- keyword : we will enter targeted hashtag (Covid19, Vaccine, Astrazeneca, and Sputnikv).
- noOfTweet: 2500

Analyze all of these tweets by VADER Sentiment Analysis and extract the negative tweets then extract the information of these tweet’s users (location , join date).

Visualize the result to be able to find the **relationships** from this information.

Result what people feels about the pandemic?

Libraries

This section we define some libraries that we used in this research

Tweepy

Tweepy is open-sourced, hosted on GitHub and enables Python to communicate with Twitter platform. Tweepy is a Python library for accessing the Twitter API. It is great for simple automation and creating twitter bot.

VADER Sentiment

VADER Sentiment Analysis. VADER (Valence Aware Dictionary and SEntiment Reasoner) is a lexicon and rule-based sentiment analysis tool that is specifically attuned to sentiments expressed in social media, and works well on texts from other domains.

Geopy

Geopy is a Python client for several popular geocoding web services. geopy makes it easy for Python developers to locate the coordinates of addresses, cities, countries, and landmarks across the globe using third-party geocoders and other data sources.

Summary

In general and according to what we mention in pervious section, we will build the investigation to four steps as follow:

Phase 1: collect the data from the social media platform

Phase 2: analyze the data by text sentiment engine, to classify the tweets to positive and negative

Phase 3: visualize the result

Phase 4: study the analysis and visualization result to extract relationships between the object

Explain in more details for each steps will be in next chapter, and since a picture is worth a thousand words, figure 1 show each steps during the investigation lifecycle.