

BUSINESS DATA VISUALIZATION

BLACK LIVES MATTER

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EXECUTIVE SUMMARY

When the world was already dealing with the havoc created by pandemic in early 2020 , the death of George Flyod on 25th May, 2020 an African American raged a global protest against the racism and police brutality among the indigeneous Americans. The protest began in US the very next day after his death followed by other countries in Europe , Asia and Africa , Australia, New Zealand to fight against the racism and get justice for him as the cases of police brutality against black has been in for long time since 2013. People protested in large crowds during a time when big crowds or gatherings were prohibited and shouted slogans “Black Lives Matter” , “I cant breathe” to name a few. More than 15 million people took part in Black Lives Matter protest of 2020 making it the largest protest history of United States. The following report brings out a detailed analysation of the protest source of which is data from twitter. Also , a detailed description of various trends, approach taken has been provided in the report for a better understanding of the issue.

INTRODUCTION

“Black Lives Matter” a movemement that shook the world in 2020 with the death of a 46 year old unarmed man named George Floyd in Minneapolis which caused a resurgence in the “Black Lives Matter” movement. It is an International Social Movement which began in 2013 in United States to protest against racism and anti-Black violence primarily focussing on the brutalities caused to the black people by the police (Black Lives Matter, 2020). People all over the world started fearing that what happened in America can happen to them being in any part of the world. The motivation to choose this topic came from the massive havoc caused by the protest in the midst of the pandemic and to gain some insights from the data in support of it.

CLIENT CHOSEN

The client with whom we are dealing is “Irish Council for Civil Liberties” which deals with the all the authorities and decisions related to protests that take place in Ireland. The council aims to gain some information from the data that helps them more in dealing with such Black Lives Matter protest that was held in places like Dublin outside the US Embassy, Cork in Grand Parade in Ireland to name a few.

APPROACH TAKEN

The approach taken was first to identify the most talked or trending topics in 2020 out of which Black Lives Matter tempted the most. A combination of several hastags were used to extract the data from Twitter. Some of which are as follows:

- #BlackLivesMatter
- #GeorgeFloyd
- #I cant breathe

Based on these hashtags 800 tweets were extracted from twitter over the weeks starting from 1st week of March 2021. Twitter developer account does not provide data from back years , it is a feature supported by the premium accounts. So data was gather over the past few months which will be lised down in the following subtopics.

TOOLS & TECHNIQUES USED

TWITTER

- A twitter developer account was set up to extract the tweets using twitter API keys with the help of Rstudio.

R STUDIO

- The rtweet and twitterR package were installed and used to extract tweets from twitter and save those tweets into a specified location in a csv file.
- The code was run to extract hashtags related to blacklivesmatter for example “I cant breathe”, “george flyod”
- The retweets were removed which helped to get clean data with more relevant tweets.

EXCEL

- In the csv file extracted from twitter , the file was cleaned up all the blank spaces, NA values were removed.
- The date was by default in written in UNIX format which was converted to the standard date using the below formula. This formula will be implemented considering cell number B5.
- $B5/86400)+DATE(1970,1,1)$
- $(1538352000/86400)+25569$

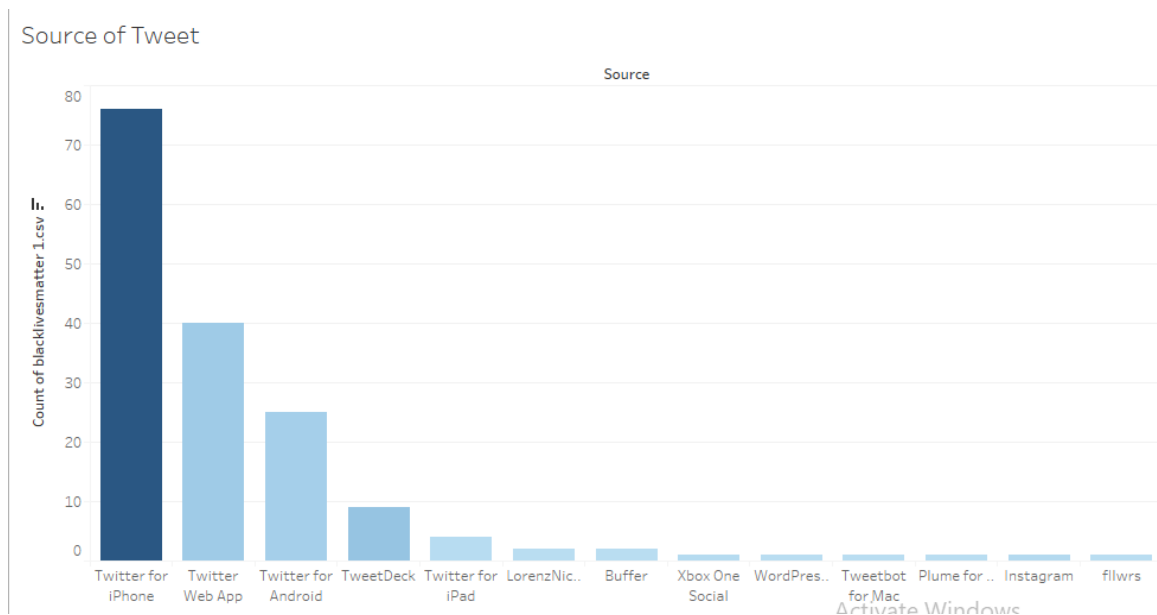
TABLEAU

- Tableau has been used to visulaize the KPI identified.
- The excel file generated was imported in the tableau to carry out further visualizations.

VARIOUS TRENDS IDENTIFIED USING BLACKLIVESMATTER

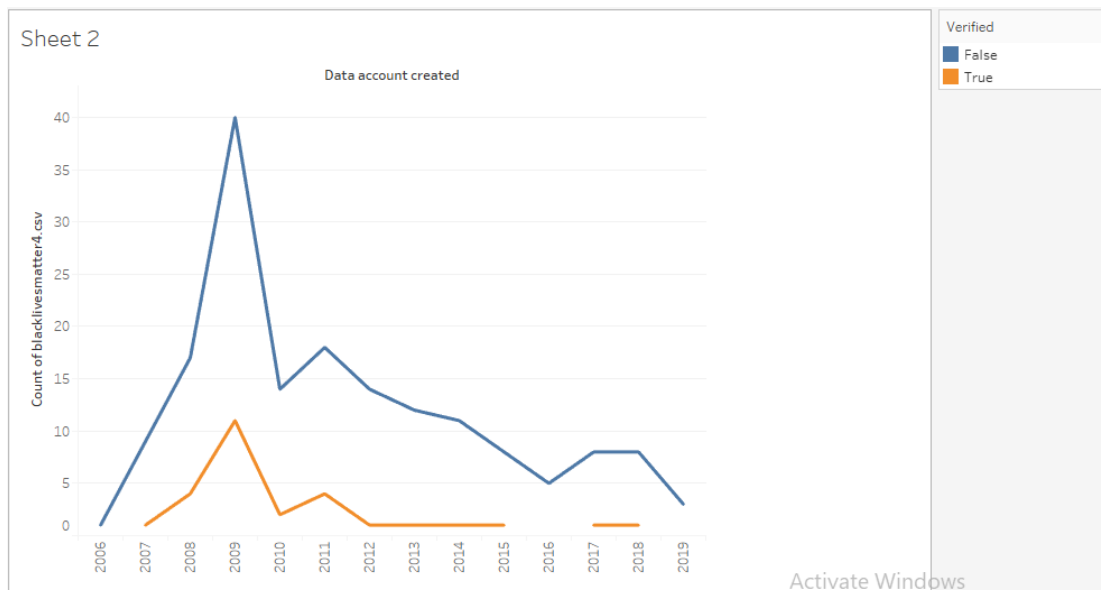
TREND1: SOURCE OF TWEETS

- The visualization below depicts the sources from where the people tweet like iphone, through web app, android device , ipad and so on.
- Here in the graph shown it is depicted the maximum number of tweets done by people are from twitter iPhone.
- The colour variation shows the most favourite tweets tweeted from various sources



TREND II: NUMBER OF ACCOUNTS CREATED AND WHICH ALL GOT VERIFIED OR NOT

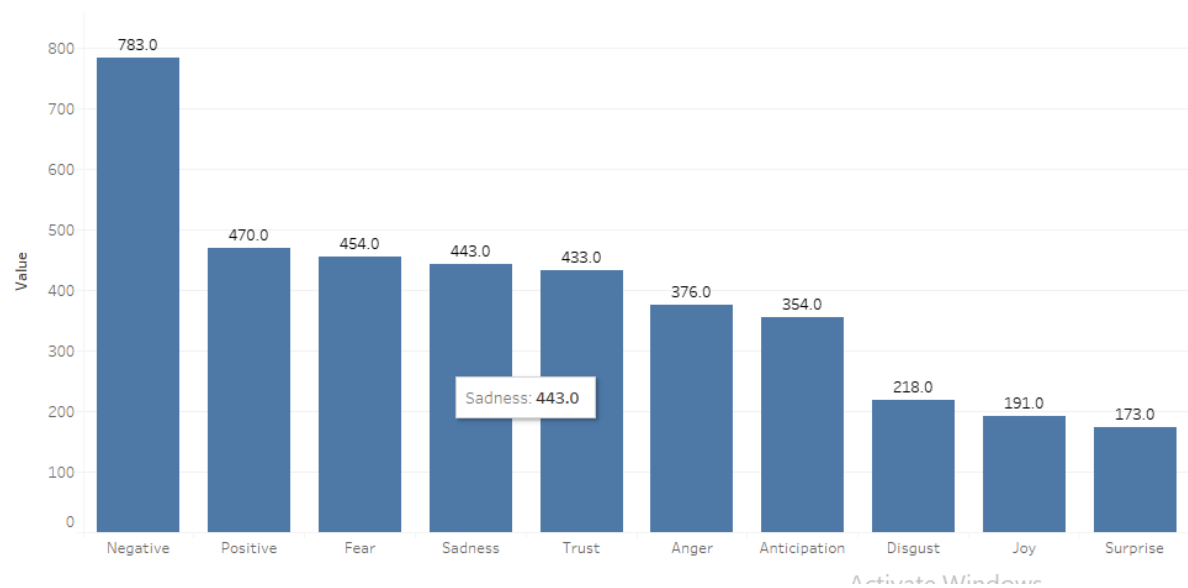
- The visualization below shows the number of accounts created in the beginning when twitter started in 2006.
- The graph shows a steep rise in the number of accounts created between 2006 and 2009 after which the number of accounts created continued to fall in 2010.
- The blue and yellow colour ines indicate the accounts verified and not verified between the 2006 and 2019.



TREND III: SENTIMENT ANALYSIS OF THE TWITTER DATA

- The bar graph below depicts the sentiments of the tweets related to blacklives matter.
- As per the graph it is clearly visible that the sentiments of maximum tweets were negative , also tweets showed emotions of fear, sadness, anger, anticipation and disgust among the people because of the protest.
- However, the graph also shows tweets with positive sentiments, mainly emotions of joy and surprise mainly because of success of protest leading to punishment of police officer who killed George Flyod.
- The top of bars also shows the sentiment scores showed by tweets with negative sentiment getting the highest score of 783 and surprise sentiment getting the least sentiment score of 173.

Sentiments of people behind the tweets

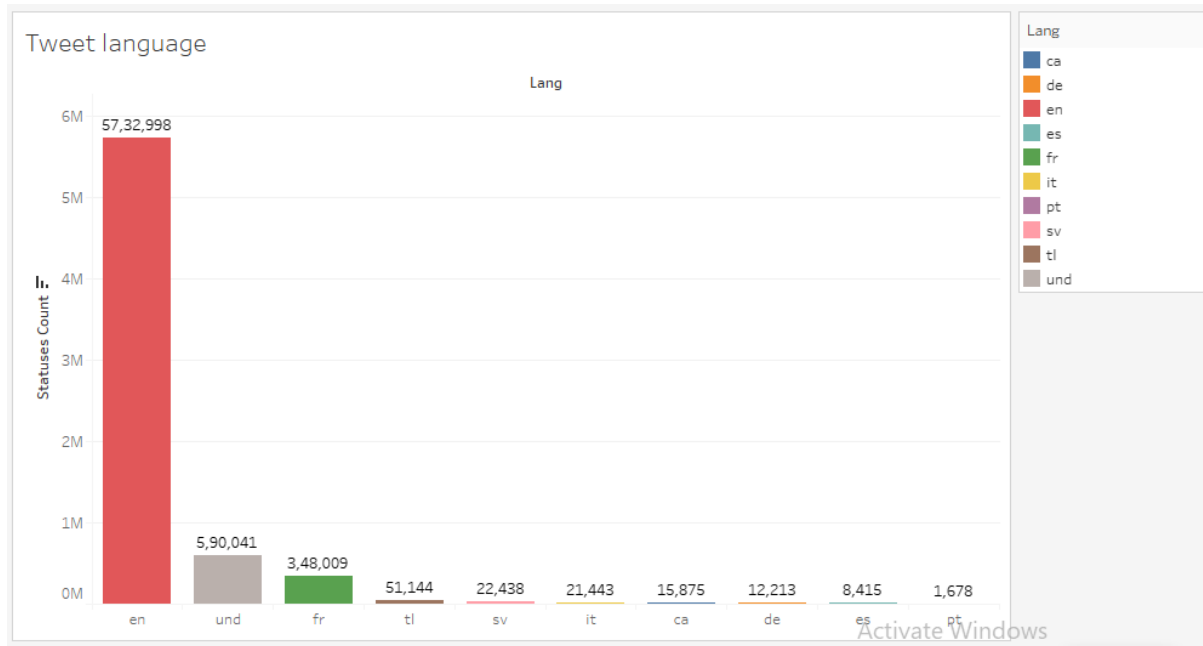


TREND IV: LANGUAGE OF THE TWEETS

- The below bar graph depicts the language in which tweets have been written.
- There are codes for various language description of which is mentioned as follows:-

Language Code	Language Name
en	English
und	undertermined
fr	French
tl	Tagalog
sv	Spanish (El Salvador)
it	Italian (Standard)
ca	Catalan
de	German(Deutsch)
es	Spanish
pt	Portuguese (Portugal)

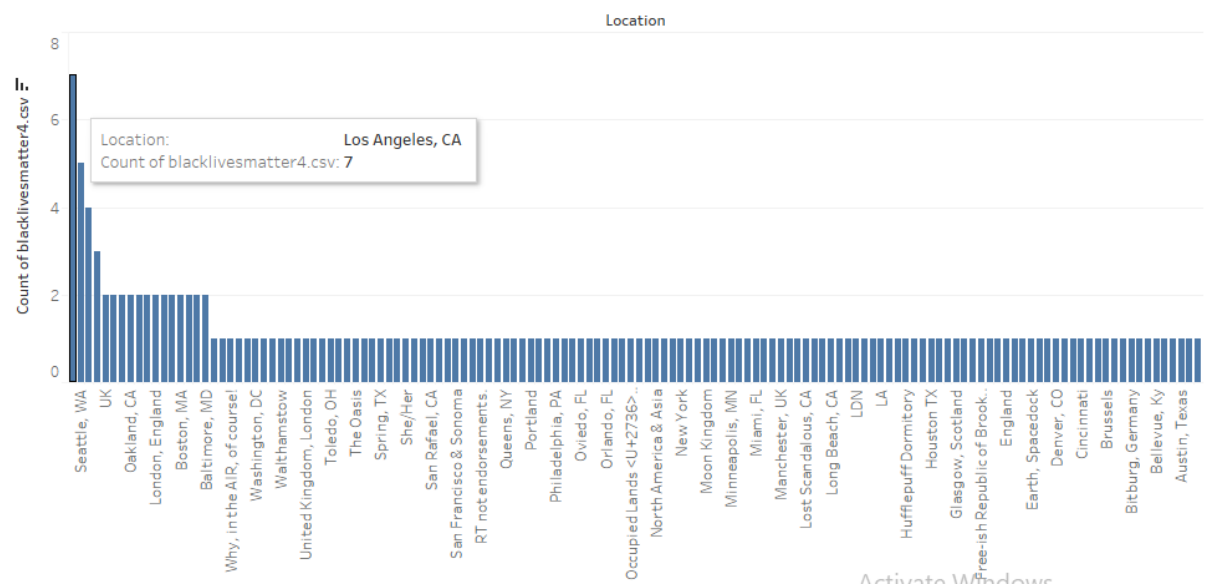
- From the graph it is clearly visible that most number of tweets were quoted in English and the minimum number of tweets were quoted in Portuguese(pt). However, 5,90,041 tweets language still remained undetermined.



TREND V: LOCATION OF TWEETS

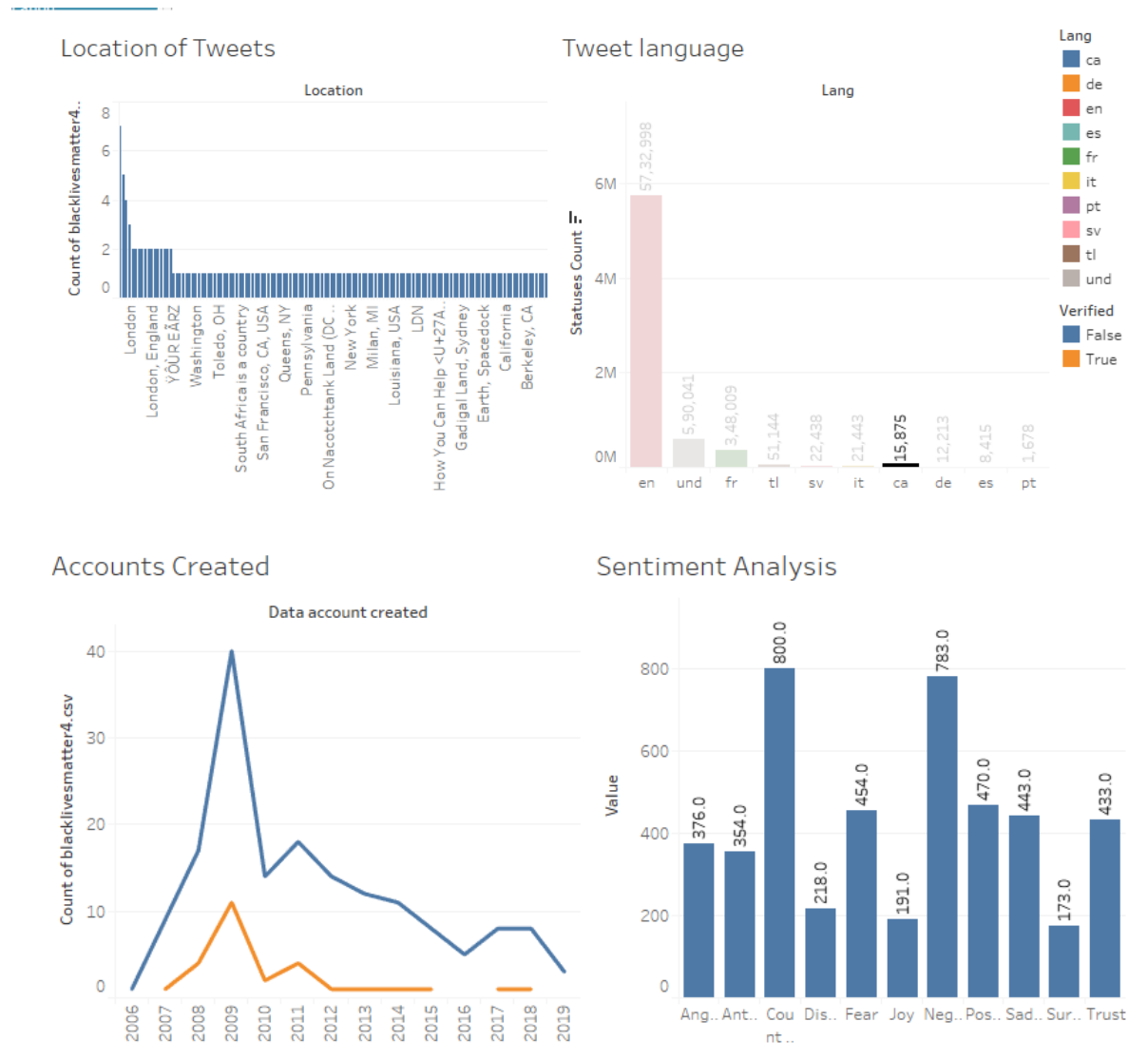
- The below visualization of tweets describes the various locations from where people twitted on twitter.
- From the bar graph it is clearly visible that the maximum number of tweets were done from Los Angeles, California followed by Seatle , Washington .
- The maximum locations in the graph are from USA mainly because of the death of George Flyod which raised violent protest supporting blacklives matter in other parts of the world like UK, London, Germany.

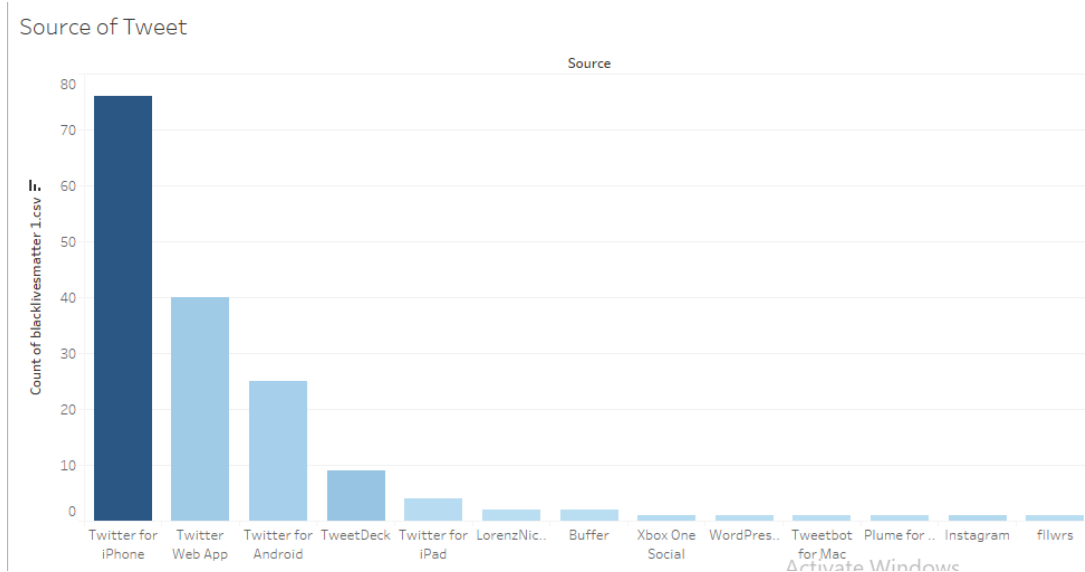
Location of Tweets



FINAL DASHBOARD

The below visualization depicts the final dashboard obtained from the above five trends put together on a single dashboard. The screenshot of dashboard has been taken in small parts for the ease of reading.





OVERVIEW OF KEY FINDINGS

Twitter is one of the most powerful sources of social media. Every news, trend or current affair becomes most talked affair within a small period of time. Black Lives Matter is already an on-going protest to support the black people and treat them equally. But with the death of George Floyd the protest raged all of a sudden, people from various regions in the world started to support the black lives matter campaign which is shown in the bar graph above. The sentiments of the people were analysed based on the tweets extracted with the help of sentimentr library in R and concepts of text mining to get the emotions behind the tweets of the people. It was seen that maximum sentiments behind the tweets were negative which is clear because of the unplanned and deadly mishap with George Floyd. Other emotions of sadness, anger, fear were also seen from the sentiments of the tweets analysed. There were positive sentiments one of the reason for this could be because of the punishments given to police officers who raised the emotions of hope and trust among the black people.

RECOMMENDATION AND CONCLUSION

Freedom of Speech and Freedom to Protest peacefully are considered human rights by law and by no means a democratic country can deny that to any of its citizen. The data analysed can be used to further handle such protest and also see to it no citizen takes an undue advantage of it. The language of tweets can help the council get a number of the various nationalities living and the numbers of languages people know here in the country. The sentiment analysis will help in better understanding of the people's emotions and their

thoughts about a particular issue. Twitter being a powerful social media platform will help the council analyse the sentiments beh

ind the people the tweets and also help in predicting the possibilities of protest arising in the areas. This will help the council to be better prepared to handle such situation of protests. Also, the accounts which are not verified or accounts having more than 2000 followers will be monitored to avoid any unlawful behaviour or cases of spamming.

REFERENCES

Encyclopedia Britannica. 2020. Black Lives Matter. [online] Available at: <<https://www.britannica.com/topic/Black-Lives-Matter>> [Accessed 1 April 2021].