PSOSM Assignment 1
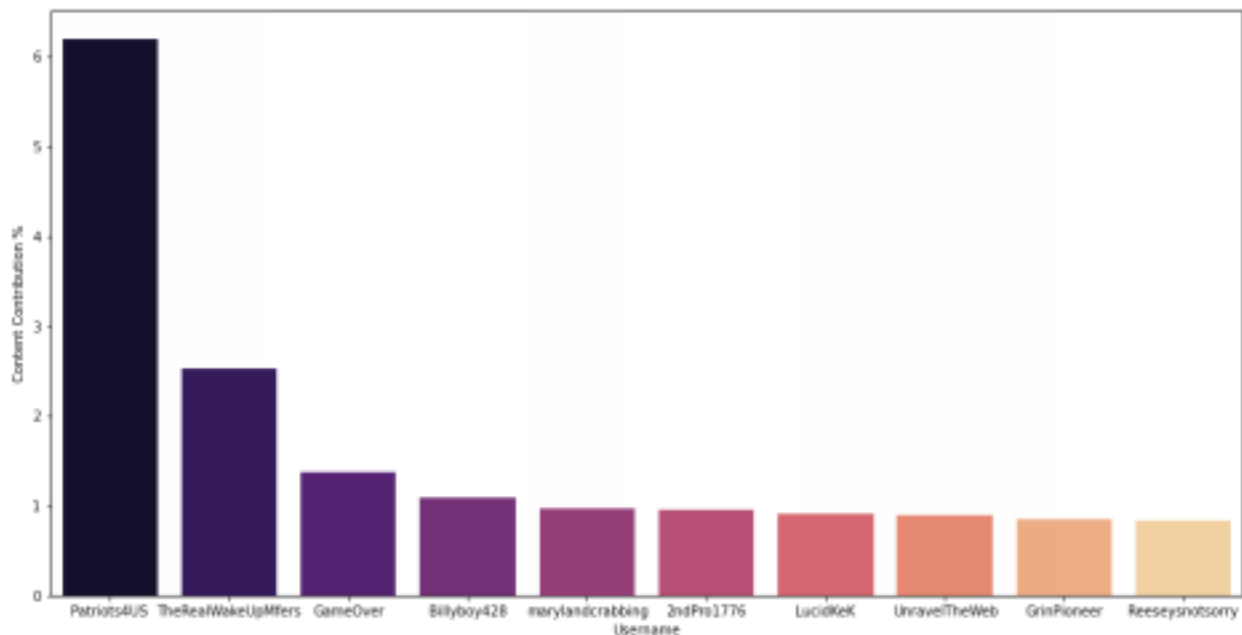
Arnav Tandon | 2018278

Ans 1)

a)

Patriots4US has the highest contribution in terms of content generated with almost 6.2% on the Parler platform and from the news that came on the internet it looks like they were in support of Donald Trump. It is a Human and a Not verified account

TheRealWakeUpMfers has the second highest contribution in terms of content generated with almost 2.5% on the Parler platform.It is a Not Human and a Not verified account

GameOver has the third highest contribution in terms of content generated with almost 1.37% on the Parler platform.It is a Not Human and a Not verified account

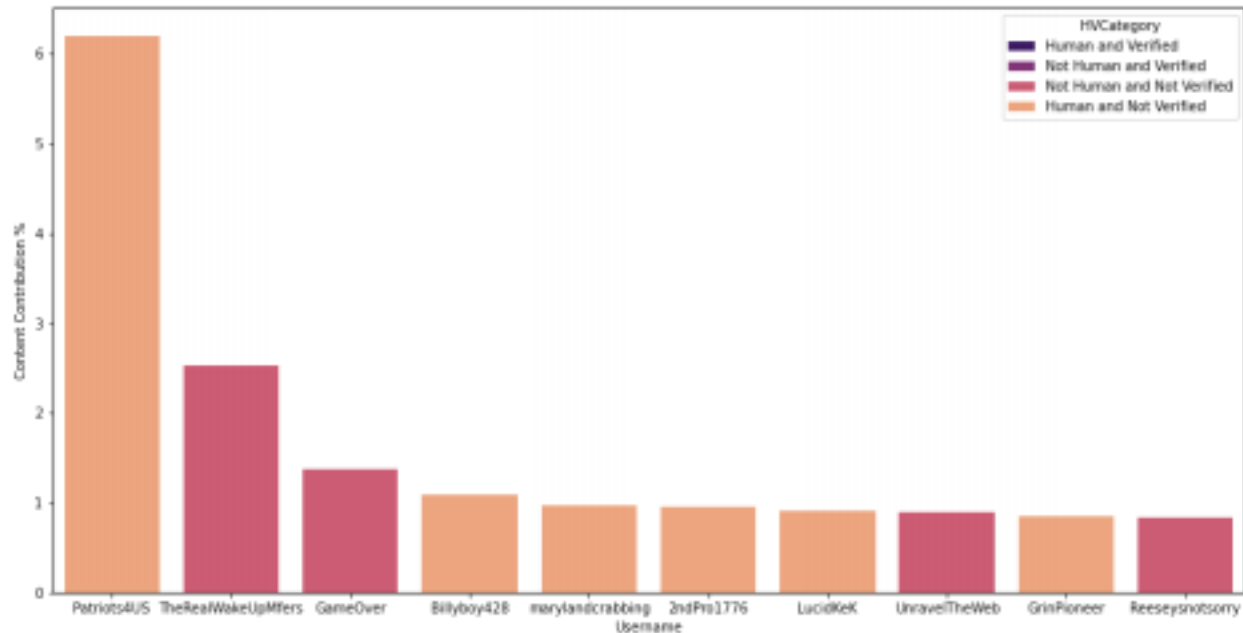Total content % generated by the top 10 users cumulatively : 16.60715336773333 %

b)

The below bar plot shows the status of the top 10 accounts which have the highest content contribution on Parler and their status of Human and Verified for each username.

Human and Verified : 0

Not Human and Verified : 0
Not Human and Not Verified : 4
Human and Not Verified : 6

All the top 10 accounts in terms of content generated on the Parler platform are **not verified** so these accounts cannot be trusted for the information they post from their parler account.
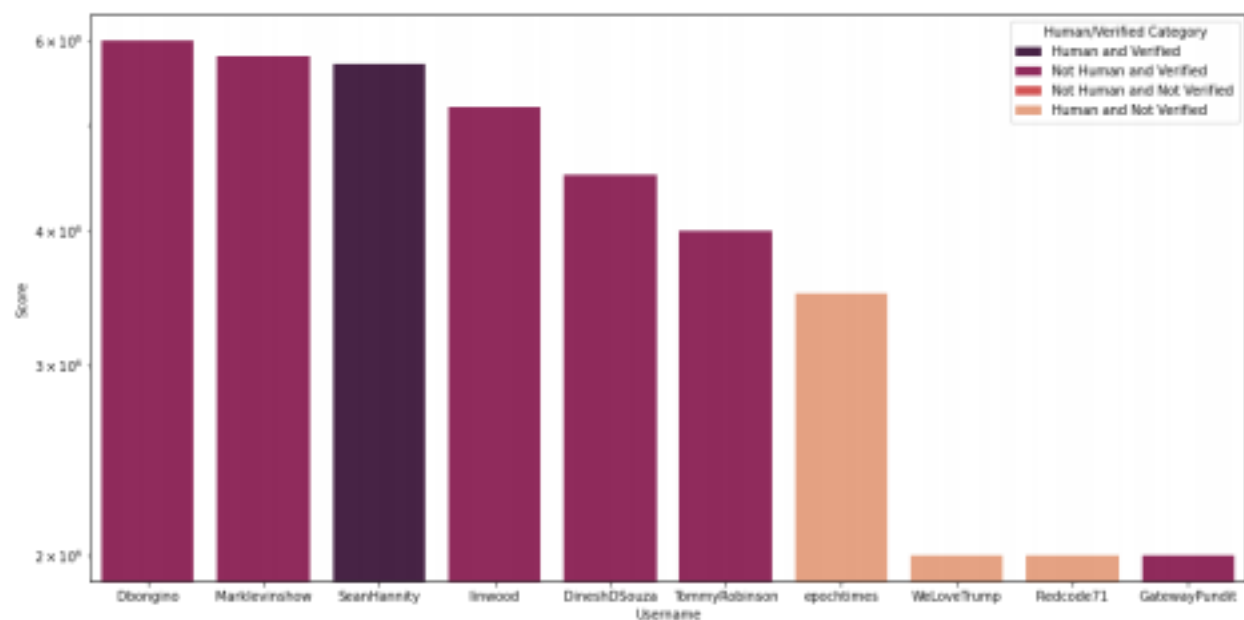

Ans 2)
a)

    1) The below table and the bar plot shows top 10 accounts with the usernames with the maximum number of upvotes, as given in the instructions the Score tells us the sum of the upvotes that a particular user has, it also shows the status of Human and Verified for each username.

    Human and Verified : 1
    Not Human and Verified : 6
    Not Human and Not Verified : 0
    Human and Not Verified : 3

There is a mix of either Human or Verified accounts in case of maximum upvotes and there is no [Not Human and Not Verified] account which is a case of bot accounts. So, this shows that the content generated by these accounts (7/10 are verified) is well thought out and is appreciated or liked by other people on parler.

```
Top 10 Usernames with most number of Upvotes:
                               Name    Score     Username    Human  Verified
1                      Dan Bongino  6000000     Dbongino    False     True
2                      Mark Levin  5800000  Marklevinshow    False     True
3                    Sean Hannity  5700000   SeanHannity     True     True
4                        LLinWood  5200000        linwood    False     True
5                  Dinesh D'Souza  4500000   DineshDSouza    False     True
6                  Tommy Robinson  4000000  TommyRobinson    False     True
7                 The Epoch Times  3500000     epochtimes     True    False
8   We Love President Donald J. Trump  2000000    WeLoveTrump     True    False
9                         private  2000000      Redcode71     True    False
10            The Gateway Pundit  2000000  GatewayPundit    False     True
```
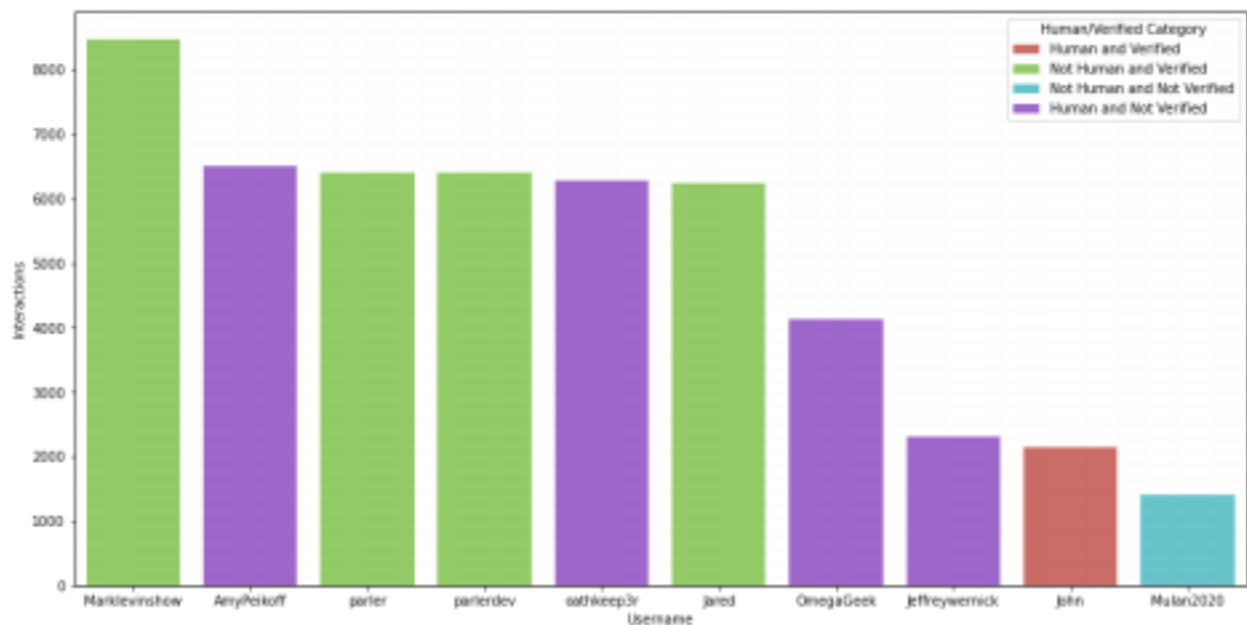

2) The below table and the bar plot shows top 10 accounts with the usernames with the maximum number of Interactions, as given in the instructions the Interactions from User data tells us the number of interactions of the user, it also shows the status of Human and Verified for each username.

Human and Verified : 1
Not Human and Verified : 4
Not Human and Not Verified : 1
Human and Not Verified : 4

We have a case of 1 Not Human and Not Verified account which shows that this bot account has high interactions with the other accounts on parler.

```
Top 10 Usernames with most number of Interactions:
                         Name  Interactions        Username  Human  Verified
1                  Mark Levin          8478   Marklevinshow  False     True
2                 Amy Peikoff          6503      AmyPeikoff   True    False
3                      Parler          6407          parler  False     True
4   Parler Dev Announcements          6403       parlerdev  False     True
5                   oathk33per          6275      oathkeep3r   True    False
6                       Jared          6247          Jared  False     True
7                 USMC Patriot          4131      OmegaGeek   True    False
8               Jeffreywernick          2307  Jeffreywernick   True    False
9               John Matze US          2151           John   True     True
10              木兰传奇 (文奇)         1410      Mulan2020  False    False
```


3) The below table and the bar plot shows top 10 accounts with their mentions which are retrieved from the 'At' attribute from the given Posts data.

      Human and Verified : 1
      Not Human and Verified : 8
      Not Human and Not Verified : 1
      Human and Not Verified : 0

Here I have made temporary lists which stores all the individual mentions which are stored by traversing through all the 'At' attributes and then counting their occurrences.

The inference I derive from this result is that Donald Trump and his supporters had planned this event in advance and were in full force to stop Biden from becoming the president and actions on the US election.
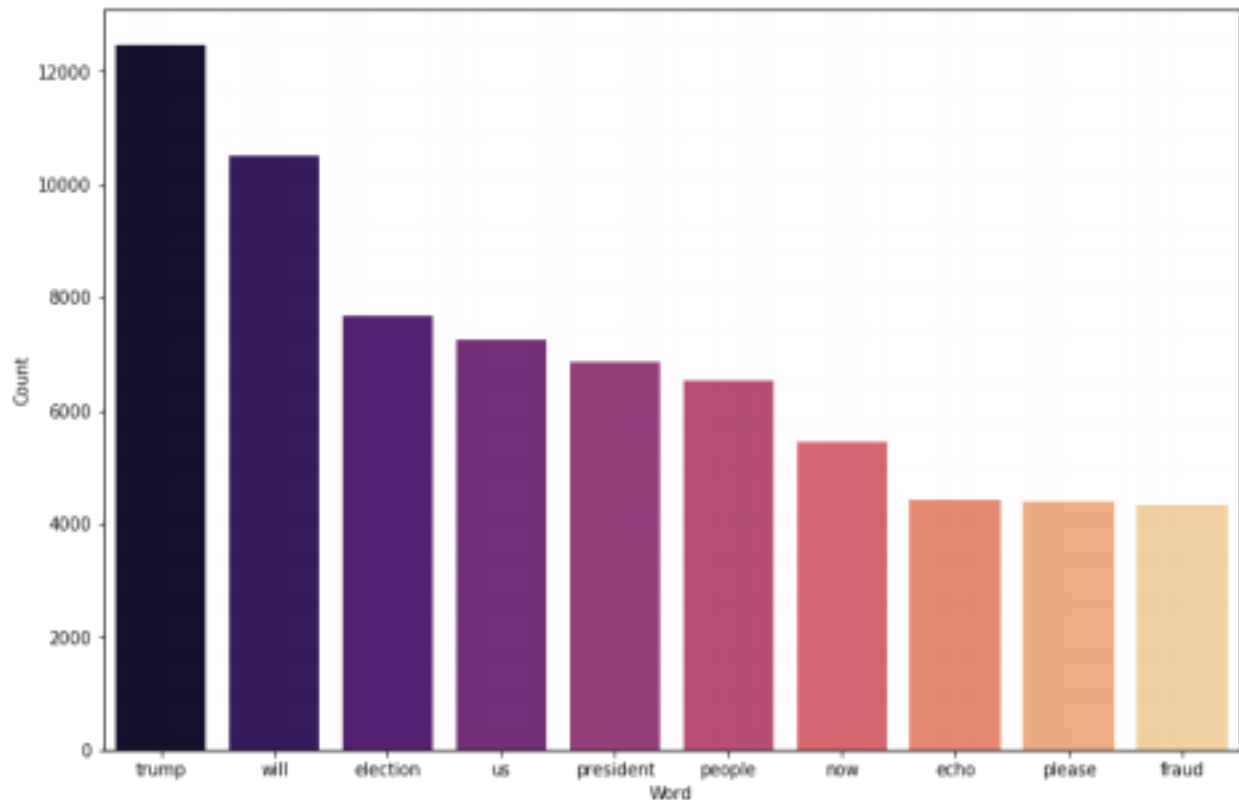
Here another interesting thing to notice is that the Parler platform have given Verified status to most of these accounts which may be a case that the owners of the Parler platform were also biased and were supporting Mr Trump.

b)

It can be observed from the word cloud that words like 'Parler, 'Levin', 'Investor','Official', 'Policy' , 'Free', 'dontletitgo' are highlighted well. Analyzing the word cloud closely, it shows that most of the users who show themselves as Official accounts including Parler's account and account users don't want the election to let go the way it was going. All these show that the accounts which had high interactions might have supported Mr Trump and are putting in their best efforts, so that Trump continues as the president by taking support from the other users on Parler.

Also a point to note is that the words like investor's,bitcoin, podcast (levin) show the background of the people who are associated with these things on parler, we can see this from the bios of

the people who have high interactionson parler.
Ans 3)

a)

From the above word cloud we can see prominent words like 'president', 'trump','people','now','democrat','today','right' all these words link up to highlight that there were several posts from various accounts which mentioned all these words and these words call for action from other people and maybe support for trump at the capitol building and other places where people planned to come together to show their support and all these posts on parler show that people need to act fast and come forward for support and act against the election.

From the graph we can observe words like trump, will, election, fraud, 'us' is (US : United states) which shows that there were a lot of mentions of these words and maybe claims by people of the elections being fraud and for the support to donald trump.
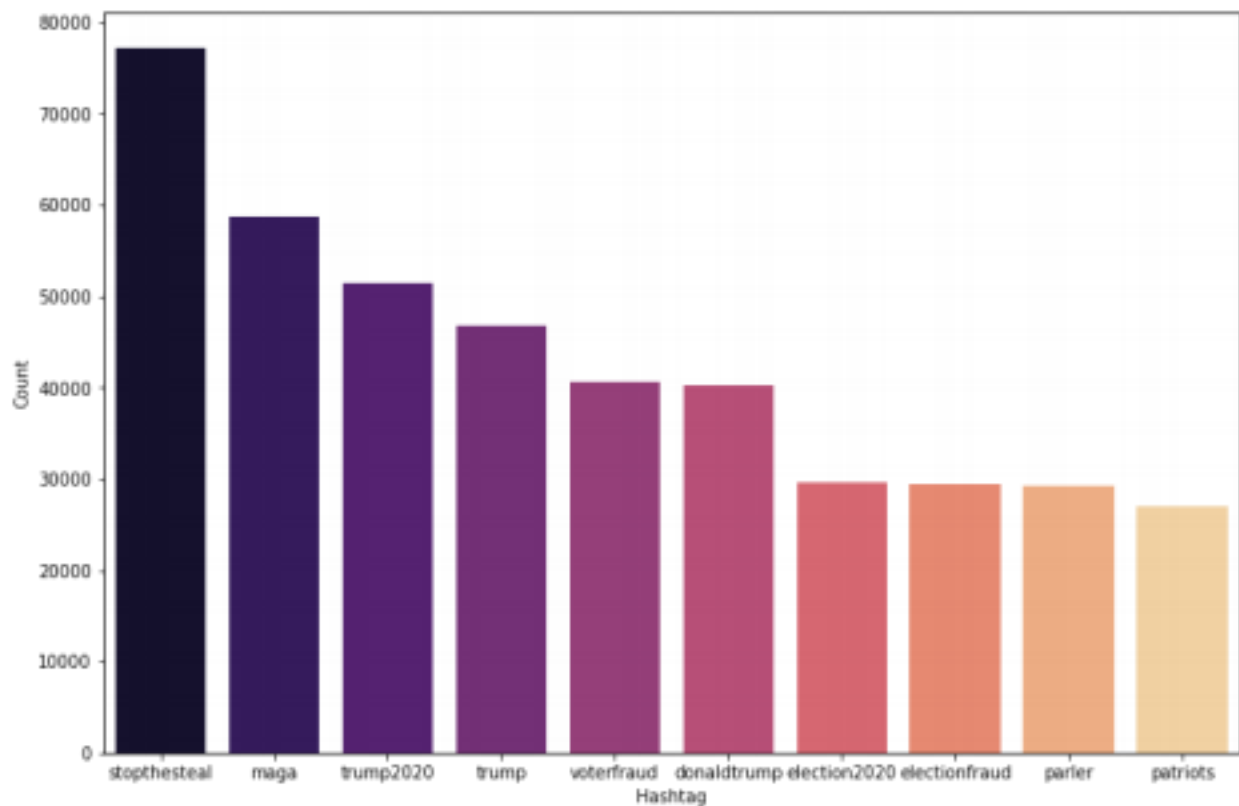
From the top 5 words, we can think that most of the people on the parler wanted Trump to be the US president.

I have used the stop words library in this question to remove the stopwords and have converted all the words to lowercase before processing them.
b)

      1) Top 10 Hashtag based on Number of occurrences

```
     Hashtag   Count
1   stopthesteal  77227
2          maga  58700
3     trump2020  51420
4         trump  46801
5     voterfraud  40541
6    donaldtrump  40238
7    election2020  29585
8    electionfraud  29387
9         parler  29244
10       patriots  26986
```
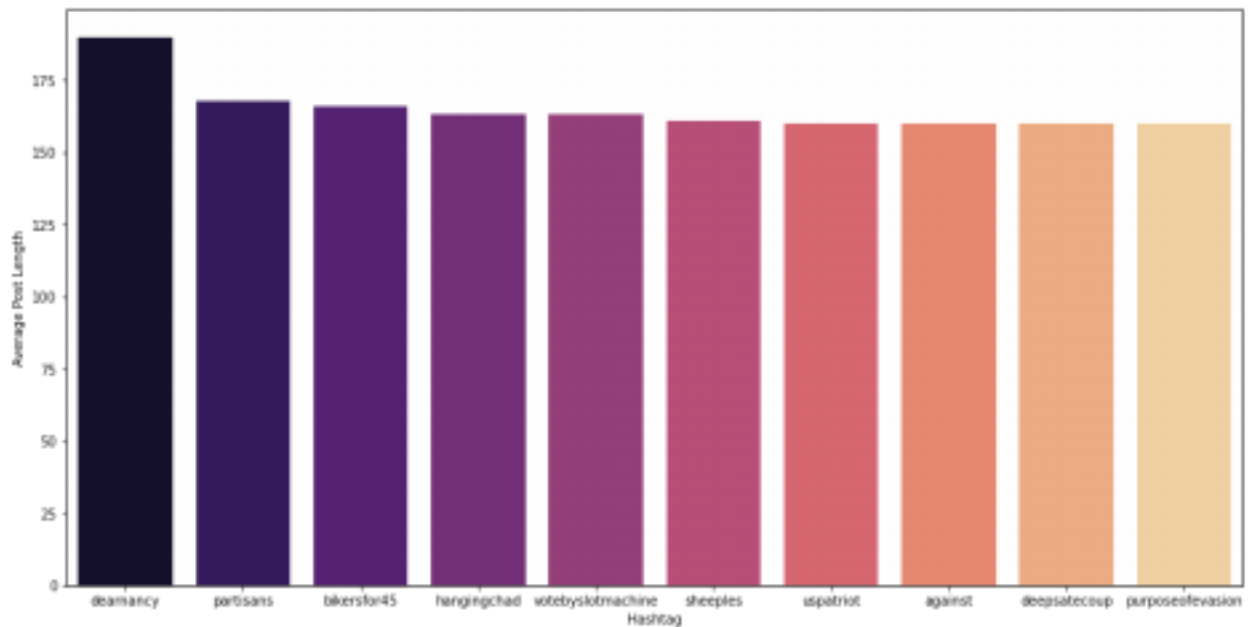

Here we can observe that words like 'stopthesteal','maga',trump,'trump2020','voterfraud' are some of the words from the top 10 hashtags based on the occurrences in the posts, here we can see from these words that these all are related to the US elections and Donald trump and allegations by the accounts on stealing of votes, election fraud etc.

Here in this question I have converted all the hashtags to lowercase before computation.

2)

	Hashtag	Average Post Length
1	dearnancy	190.0
2	partisans	168.0
3	bikersfor45	166.0
4	hangingchad	163.0
5	votebyslotmachine	163.0
6	sheeples	161.0
7	uspatriot	160.0
8	against	160.0
9	deepsatecoup	160.0
10	purposeofevasion	160.0

The above graph and table shows the top 10 hashtags based on Average post length (number of words)

dearnancy has the highest Average post length, Nancy Pelosi is a speaker to whom the user accounts write to., but as the post length was very high in the post which had dearnancy as the hashtag this hashtag is at the top even though it is not used much(1).
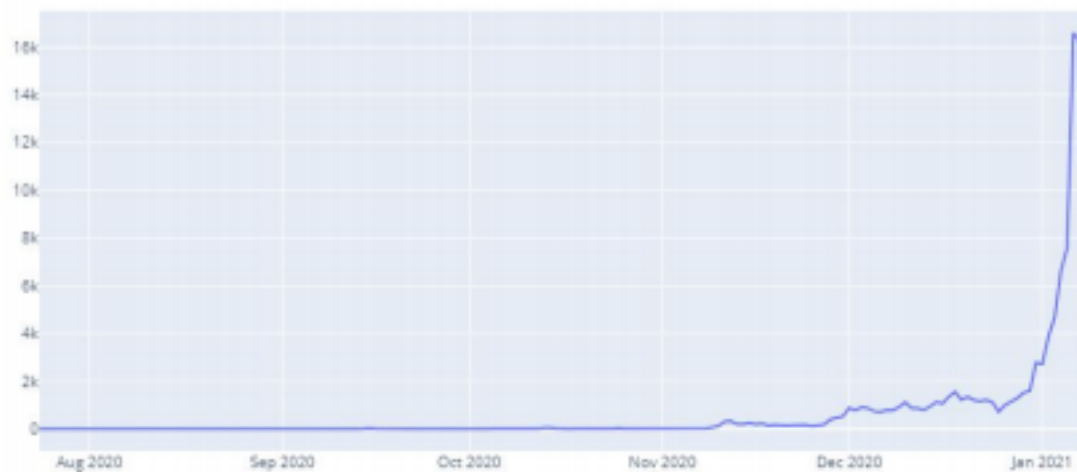
If we observe the top 10 hashtags with no. of occurrences and from the above average post

length table, We can see that these hashtags are not the same as the words which are mostly present in the post content words.

So, it is possible people used these particular sets of hashtags more to attract users to their posts by showing these hashtags as trending and popular and motivate other account users to support trump and right wing people.

Ans 4)

I have done the plot day wise which can be seen from the interactive graph in the Jupyter Notebook .
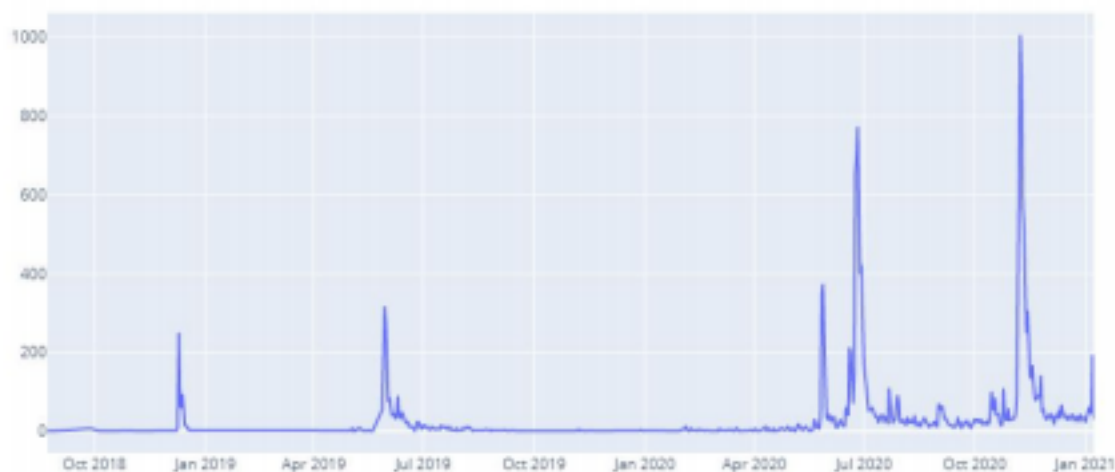

Numbers of posts for each day are shown in the interactive graph.

a) Content generation on Parler

It is clearly visible from the above graph that the content generated on the day of the attack at Capitol building 6th january 2021 is the highest as expected.

Number of posts done on 6th January : 16.593k
Here another thing which is to be noticed is that there was gradual increase in the posts from around 1st December and parler was mostly with Trump supporters as the election was going on and the number of posts were at its peak around the 6th January mark as Trump's social media account on Twitter was suspended and most of his posts were made on parler, so most of his followers also used Parler extensively during that period and it is highly evident from the

b) User account creation on Parler

Here from the above graph we can see that users who joined parler was maximum on November 8, 2020 with 1006 people joining parler, As Parler platform had majority of Trump supporters but on 8th November Joe Bidden addressed the nation for his win saw a sudden jump on users joining parler to show their support for trump and act accordingly. There was a spike on 26th June also when Trump accused Twitter for affecting his tweets which further affected the elections in the US, so a lot of people (773) joined parler on June 26 too.