

# Social Network Analysis - Amber Heard Case - Twitter (Aquaman Petition)

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## Introduction

Twitter (Aquaman Petition) - Social Network Analysis on Amber Heard's Case

```
In [1]:  
import pandas as pd  
import os  
pd.set_option('display.max_columns', 500)  
import numpy as np  
import matplotlib.pyplot as plt  
import seaborn as sb  
import matplotlib.dates as mdates  
import plotly.express as px  
import plotly.graph_objects as go  
import pickle  
import re  
import warnings  
import datetime  
warnings.filterwarnings('ignore')  
sb.set_style("darkgrid")  
%matplotlib inline  
  
import plotly.io as pio  
pio.renderers  
# pio.renderers.default = "svg"  
svg_renderer = pio.renderers["svg"]  
svg_renderer.width = 950  
svg_renderer.height = 550  
  
# To Apply helpers updates without restarting the kernel  
import importlib  
import helpers  
importlib.reload(helpers)  
  
from load_data import *  
  
## To keep track of any module updates  
# %load_ext autoreload  
# %autoreload  
  
%config InlineBackend.figure_format = 'retina'
```

## Exploratory Data Analysis

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```
In [2]:  
# Filtered Data on Aquaman petition Links  
print(aquaman_petition.shape)  
aquaman_petition.head(2)  
  
(55324, 30)  
Out[2]:  
   n_statuses  created_at user_description user_created_at      user_id  username  is_verified  user_location  n_followers  user_url lang  profile_banner  
4434     2860  2018-03-16 I pretend to be sophisticated,  
                    21:52:09          2016-06-29 18:06:35  748216104565235712 Morgan    False        NaN       177 https://t.co/7NIXfsBF9J en https://pbs.twimg.com/profile_banners/748216  
  
   4577     4654  2018-03-18 Daily film news,  
                    22:06:17 intellectually stimulating ed...          2018-02-17 08:29:20  964778778143555585 Le Cinéphiles    False  Le Cinéma       17786 https://t.co/TexAcEQbue en https://pbs.twimg.com/profile_banners/964778  
  
In [3]:  
aquaman_petition.created_at.dt.date.min(), aquaman_petition.created_at.dt.date.max()  
  
Out[3]:  
(datetime.date(2018, 3, 16), datetime.date(2022, 4, 28))  
  
In [4]:  
# Users Tweeted with "Aquaman Petition Links"  
print(aquaman_petition_u.shape)  
aquaman_petition_u.head(2)  
  
(38396, 13)
```

Out[4]:	user_id	user_created_at	username	user_screen_name	n_followers	n_friends	n_statuses	user_url	user_description	user_location	profile_banner_url
26	70083	2006-12-15 10:35:38	marul69	marul69	2952	1043	43859	NaN	Not here to please you.	Brunei Darussalam	<a href="https://pbs.twimg.com/profile_banners/70083/16...">https://pbs.twimg.com/profile_banners/70083/16...</a> <a href="http://pbs.twimg.com/profil">http://pbs.twimg.com/profil</a>
41	671883	2007-01-20 18:31:59	Martin Edelius	MartinNr5	51	36	5744	NaN	Life's too short.	In the Floda woodlands!	NaN <a href="http://pbs.twimg.com/profil">http://pbs.twimg.com/profil</a>

#### NOTE:

- 38396 users tweeted with "aquaman petition" related links

## Tweets Metrics

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- [Users Tweets Metrics](#)
- -----
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- [Tweets Created OVER TIME](#)
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- [Tweets on Peaks](#)
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## Tweets Metrics

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- [Top Retweeted Tweets](#)
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## Metrics Vs Time

- [Retweets](#)
- [Likes](#)
- [Replies](#)

## Daily Metrics (Peak Retweets)

```
In [5]: df_daily_metrics = (
    aquaman_petition.groupby(['date', 'year', 'month', 'dayofmonth'])
    .agg({'text': 'count', 'user_id': 'nunique', 'total_retweets': 'sum', 'like_count': 'sum', 'reply_count': 'sum'})
    .reset_index().rename(columns={'text': 'n_tweets', 'user_id': 'by_accounts'})
)
df_daily_metrics.sort_values('total_retweets', ascending=False).head(10)
```

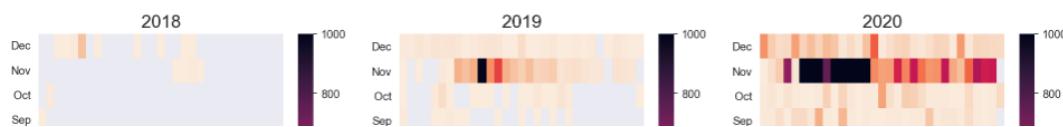
Out[5]:	date	year	month	dayofmonth	n_tweets	by_accounts	total_retweets	like_count	reply_count
1100	2022-04-28	2022	Apr	28	3231	3067	19208.0	129141.0	2035.0
694	2021-02-28	2021	Feb	28	494	470	14106.0	105434.0	954.0
586	2020-11-12	2020	Nov	12	3197	2902	7044.0	32154.0	1421.0
580	2020-11-06	2020	Nov	6	849	748	5442.0	10344.0	214.0
846	2021-07-30	2021	Jul	30	112	109	5256.0	14052.0	3051.0
302	2020-02-02	2020	Feb	2	1654	1597	3288.0	11527.0	187.0
224	2019-11-11	2019	Nov	11	179	175	3238.0	860.0	69.0
815	2021-06-29	2021	Jun	29	98	85	2510.0	8851.0	197.0
581	2020-11-07	2020	Nov	7	1565	1387	2345.0	7606.0	162.0
695	2021-03-01	2021	Mar	1	161	148	1945.0	3805.0	693.0

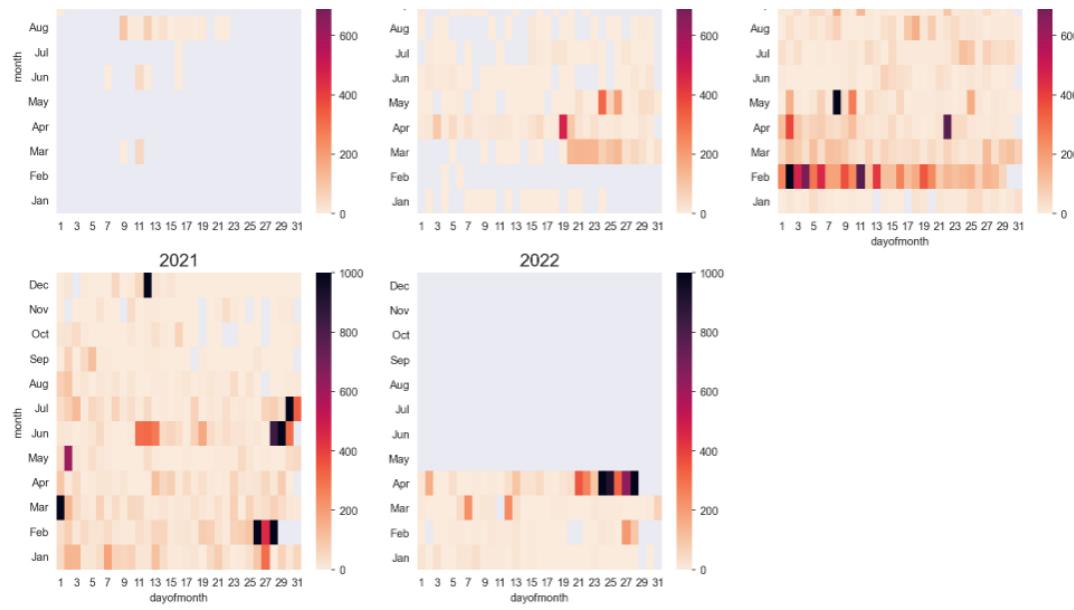
## HeatMap For "Aquaman Petition Links" Retweets

```
In [6]: # importlib.reload(helpers)
```

```
In [7]: title = 'A Heat Map for the Count of "Aquaman Petition" ReTweets in Each Day'
helpers.facet_heat(df_daily_metrics, title, heat_col='total_retweets', n_col=3, vmax=1000)
```

A Heat Map for the Count of "Aquaman Petition" ReTweets in Each Day



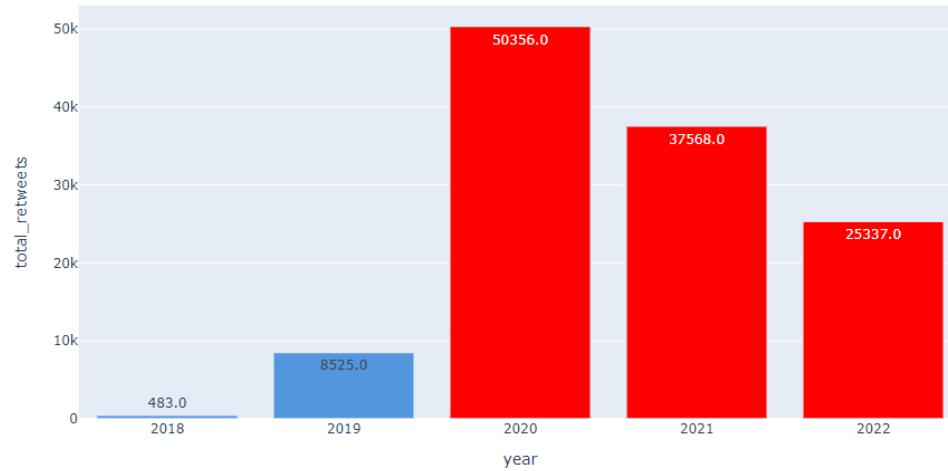


## "Aquaman Petition Links" Retweets Over Years

```
In [8]: df_years_retweet = df_daily_metrics.groupby('year')['total_retweets'].sum().reset_index()
```

```
In [9]: helpers.bar(df_years_retweet, "year", "total_retweets", "Number of 'Aquaman Petition Links' ReTweets over Years", text=0, margin=25000)
```

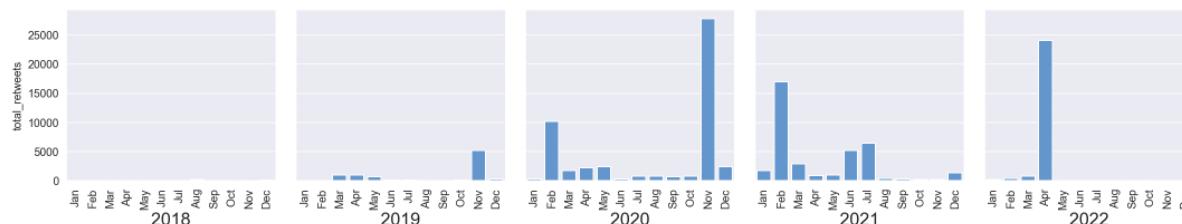
Number of 'Aquaman Petition Links' ReTweets over Years



## "Aquaman Petition Links" Retweets On Each Month

```
In [10]: df_metrics_month = (
    df_daily_metrics.groupby(['month', 'year'])[['total_retweets', 'like_count', 'reply_count']]
    .sum().reset_index()
)
helpers.facet_day_month(df_metrics_month, "month", "total_retweets", facet_on='year', n_col=5)
```

"Aquaman Petition" total\_retweets Created in Each Month



- Retweets
- Likes
- Replies

## Daily Metrics (Peak Likes)

In [11]: `df_daily_metrics.sort_values('like_count', ascending=False).head(10)`

Out[11]:

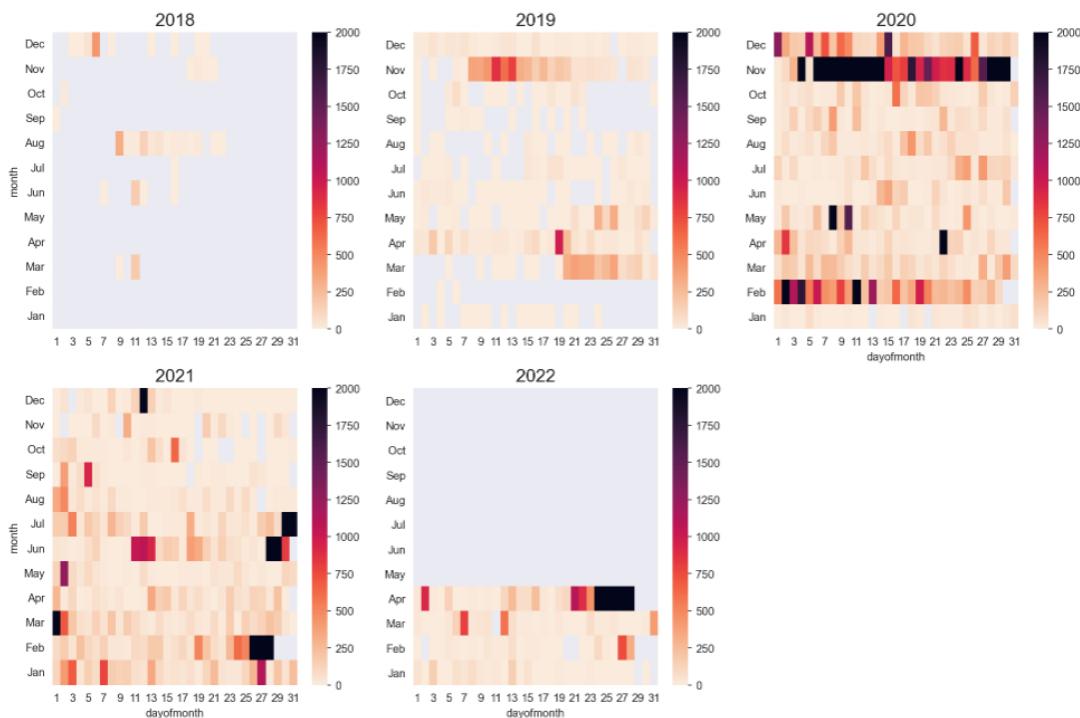
	date	year	month	dayofmonth	n_tweets	by_accounts	total_retweets	like_count	reply_count
1100	2022-04-28	2022	Apr	28	3231	3067	19208.0	129141.0	2035.0
694	2021-02-28	2021	Feb	28	494	470	14106.0	105434.0	954.0
586	2020-11-12	2020	Nov	12	3197	2902	7044.0	32154.0	1421.0
846	2021-07-30	2021	Jul	30	112	109	5256.0	14052.0	3051.0
302	2020-02-02	2020	Feb	2	1654	1597	3288.0	11527.0	187.0
1096	2022-04-24	2022	Apr	24	75	69	1706.0	11259.0	425.0
580	2020-11-06	2020	Nov	6	849	748	5442.0	10344.0	214.0
692	2021-02-26	2021	Feb	26	78	76	1513.0	9965.0	118.0
815	2021-06-29	2021	Jun	29	98	85	2510.0	8851.0	197.0
581	2020-11-07	2020	Nov	7	1565	1387	2345.0	7606.0	162.0

## HeatMap For "Aquaman Petition Links" Tweets Likes

In [12]: `# importlib.reload(helpers)`

In [13]: `title = 'A Heat Map for the Count of "Aquaman Petition" Tweets Likes in Each Day'  
helpers.facet_heat(df_daily_metrics, title, heat_col='like_count', n_col=3, vmax=2000)`

A Heat Map for the Count of "Aquaman Petition" Tweets Likes in Each Day



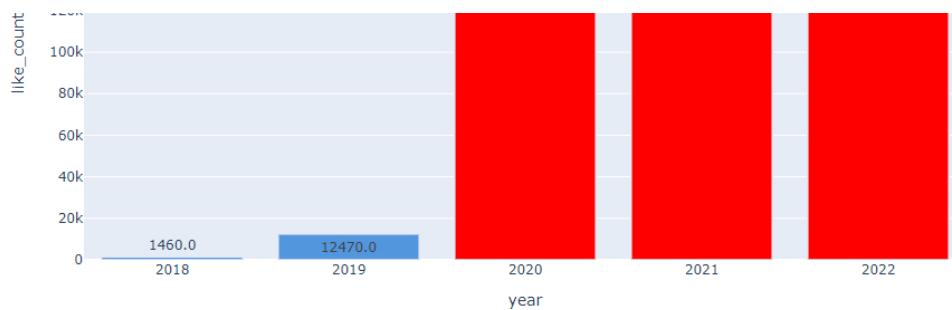
## "Aquaman Petition Links" Tweets Likes Over Years

In [14]: `df_years_likes = df_daily_metrics.groupby('year')[['like_count']].sum().reset_index()`

In [15]: `helpers.bar(df_years_likes, "year", "like_count", "Number of 'Aquaman Petition Links' Likes over Years", text=0, margin=25000)`

Number of 'Aquaman Petition Links' Likes over Years

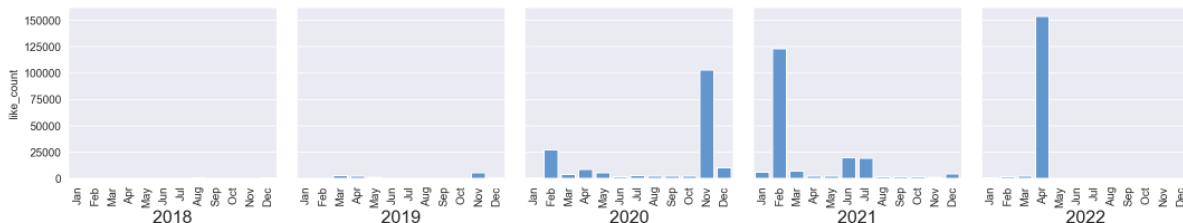




## "Aquaman Petition Links" Likes On Each Month

In [16]: `helpers.facet_day_month(df_metrics_month, "month", "like_count", facet_on='year', n_col=5)`

"Aquaman Petition" like\_count Created in Each Month



## Metrics Vs Time

- Retweets
- Likes
- Replies

## Daily Metrics (Peak Replies)

In [17]: `df_daily_metrics.sort_values('reply_count', ascending=False).head(10)`

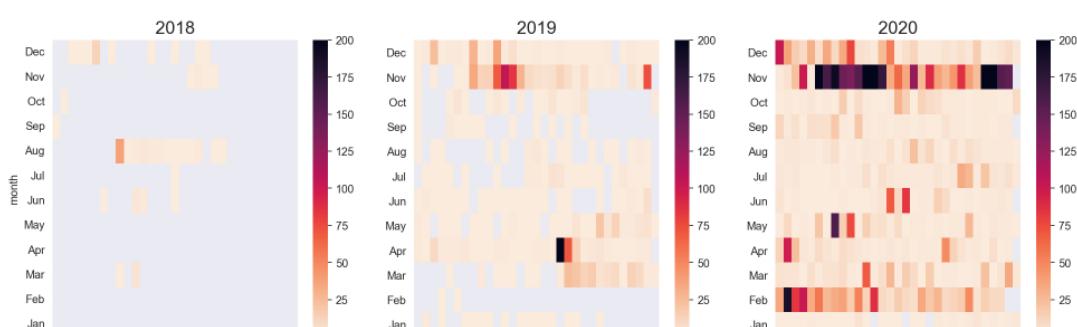
	date	year	month	dayofmonth	n_tweets	by_accounts	total_retweets	like_count	reply_count
846	2021-07-30	2021	Jul	30	112	109	5256.0	14052.0	3051.0
1100	2022-04-28	2022	Apr	28	3231	3067	19208.0	129141.0	2035.0
586	2020-11-12	2020	Nov	12	3197	2902	7044.0	32154.0	1421.0
694	2021-02-28	2021	Feb	28	494	470	14106.0	105434.0	954.0
695	2021-03-01	2021	Mar	1	161	148	1945.0	3805.0	693.0
587	2020-11-13	2020	Nov	13	2493	2292	1456.0	6018.0	509.0
1096	2022-04-24	2022	Apr	24	75	69	1706.0	11259.0	425.0
847	2021-07-31	2021	Jul	31	75	68	338.0	2003.0	417.0
601	2020-11-27	2020	Nov	27	339	316	326.0	1564.0	288.0
90	2019-04-19	2019	Apr	19	79	62	471.0	973.0	226.0

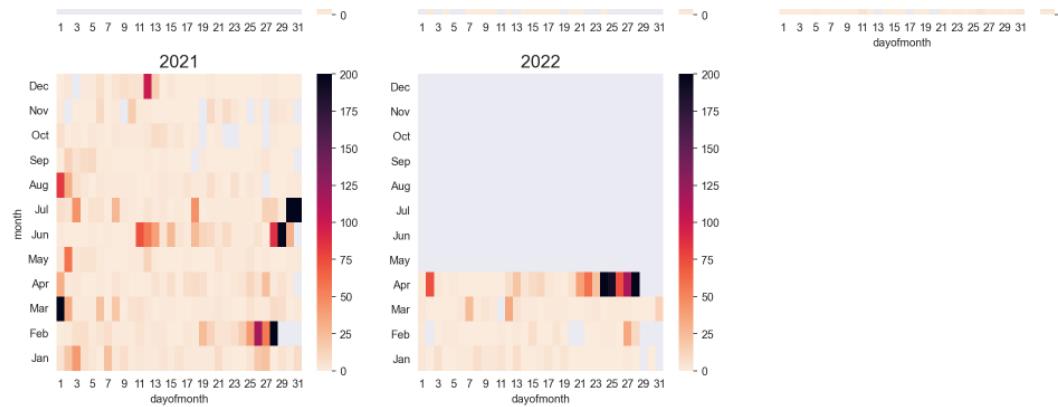
## HeatMap For "Aquaman Petition Links" Tweets Replies

In [18]: `# importlib.reload(helpers)`

In [19]: `title = 'A Heat Map for the Count of "Aquaman Petition" Tweets Replies in Each Day'`  
`helpers.facet_heat(df_daily_metrics, title, heat_col='reply_count', n_col=3, vmax=200)`

A Heat Map for the Count of "Aquaman Petition" Tweets Replies in Each Day



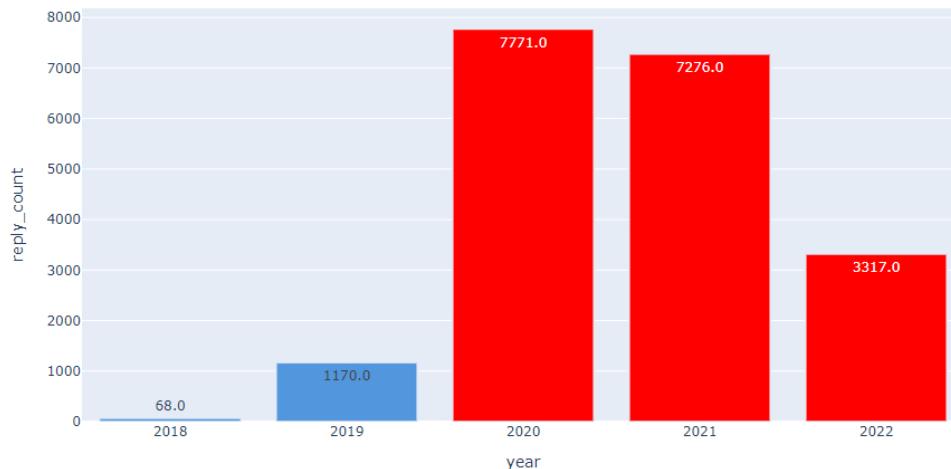


## "Aquaman Petition Links" Tweets Replies Over Years

```
In [20]: df_years_replies = df_daily_metrics.groupby('year')[['reply_count']].sum().reset_index()

In [21]: helpers.bar(df_years_replies, "year", "reply_count", "Number of 'Aquaman Petition Links' Replies over Years", text=0, margin=2000)
```

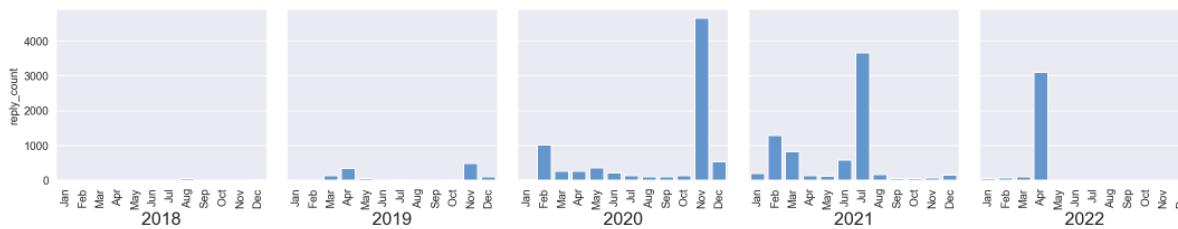
Number of 'Aquaman Petition Links' Replies over Years



## "Aquaman Petition Links" Replies On Each Month

```
In [22]: helpers.facet_day_month(df_metrics_month, "month", "reply_count", facet_on='year', n_col=5)
```

"Aquaman Petition" reply\_count Created in Each Month



## Tweets Metrics

- Metrics Vs Time
- Top Retweeted Tweets
- Tweets with Most Likes
- Tweets with Most Replies

### Retweets

A count of how many times the Tweet has been Retweeted.

Please note: This does not include Quote Tweets ("Retweets with comment").

### Quote Tweets

A count of how many times the Tweet has been Retweeted with a new comment (message).

Please note: This does not include Retweets.

To get the "Retweets and comments" total as displayed on the Twitter clients, simply add `retweet_count` and `quote_count`.

This will return the total count of Quote Tweets. There are no Quote Tweets from a paid context so all Quote Tweets are organic.

- `total_retweets`: is the total retweet count (Retweets + Quote Tweets)

In [23]:

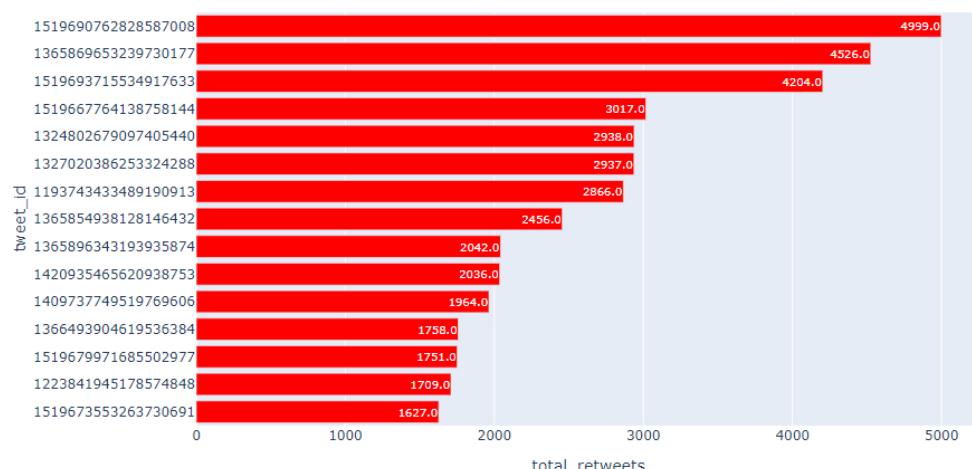
```
top_retweet = aquaman_petition.sort_values('total_retweets', ascending=False)
with pd.option_context('display.max_colwidth', None):
    display(top_retweet[['text', 'total_retweets', 'reply_count', 'like_count', 'date', 'username', 'days_diff']].head(15))
```

		text	total_retweets	reply_count	like_count	date	username	days_diff
1695958		la pétition pour exclure amber heard du second film aquaman a dépassé les 2 millions de signatures.\n\n🔗: https://t.co/dj3wftglqe https://t.co/yrjychnnlq	4999.0	299.0	35472.0	2022-04-28	Infos Séries	1937
836080		so if amber heard is really fired from aquaman 2 (and believe me, i really hope she is) may i suggest mera's replacement... https://t.co/lusgppgxwf	4526.0	274.0	33708.0	2021-02-28	Colin 🐾	3266
1696491		la pétition pour exclure amber heard de aquaman 2. déjà 2 millions de signatures. https://t.co/gcugpigrne	4204.0	160.0	37850.0	2022-04-28	Lesmeilleurescenes 🎬	2136
1692581		while remove amber heard is trending, a reminder that it is not just about her role in aquaman 2 & her endorsement of l'oréal.\n/global organisations like aclu & ue's human rights commission still support her. she's still on their official pages. think about that!#amberheardisliar https://t.co/5wb76ul4xb	3017.0	339.0	11492.0	2022-04-28	Ayesha	2470
485149		more than 500k people have signed a petition to have amber heard removed from aquaman for abusing johnny depp. yet warner bros. asked johnny to quit fantastic beasts and amber heard will be in aquaman 2. where is the justice?#justiceforjohnnydepp #boycottfantasticbeasts https://t.co/x8upg4y0t	2938.0	56.0	3824.0	2020-11-06	Mango	1433
593861		over 1m people have signed a petition to remove amber heard from 'aquaman 2' https://t.co/ma06smva6y	2937.0	506.0	13515.0	2020-11-12	Fandom	4989
124243		조니 멜 추종자들의 업비 허드를 &lt;아쿠아맨 2&gt;에서 빼라는 청원에 대응해, 업비 팬들이 업비 지지 청원을 올렸습니다. 이 메일만으로 잊혀질 가능성이 시간되시는 분들은 참여해주세요!#wearewithyou amberheard#we support amber heard in aquaman 2 - sign the petition! https://t.co/ataa77qnfi	2866.0	2.0	393.0	2019-11-11	justme	2232
836002		me when amber heard gets fired from #aquaman2: https://t.co/lwatooenpb	2456.0	76.0	15633.0	2021-02-28	Red Ranger Chris	1145
836273		just heard 'amber heard' has been fired from aquaman 2, anyway, all i wanna say is... https://t.co/0rtwvgyhxy	2042.0	48.0	17025.0	2021-02-28	Aakash Bhaduria	387
1088217		peter safran says amber heard was never going to be fired from 'aquaman and the lost kingdom'.\n\none is not unaware of what is going on in the twitter-verse, but that doesn't mean you have to react to it... you have to do what's right for the film.\n\n(source: deadline) https://t.co/kw0m1ebai	2036.0	884.0	3652.0	2021-07-30	DiscussingFilm	1767
1048149		johnny depp has been removed from his upcoming projects but amber heard is still leading actress in aquaman 2. @wbpictures don't be so partial atleast respect an actor for his acting skills. #justiceforjohnnydepp https://t.co/mcs55ufjrw	1964.0	106.0	7257.0	2021-06-29	Ankeshkumar sharma	419
844973		amber heard is still playing mera in 'aquaman 2' 🙏\nthe rumor that she was fired is false\n(via @theryanparker) https://t.co/lixftvkbt	1758.0	597.0	3070.0	2021-03-01	Culture Crave 🎬	1196
1693964		over 2 million signatures want to remove amber heard from aquaman 2 don't be shy keep it going https://t.co/iq6tfnglwk	1751.0	109.0	13794.0	2022-04-28	GRETCHEN ADELLE	3430
156986		me waiting for amber heard to be fired from playing mera in aquaman 2, then also knowing it's never going to happen because apparently men can't be abused too? 🤦 she ruined his career and now we are after hers. i hope she is arrested. #justiceforjohnnydepp https://t.co/s6gdtytrj5	1709.0	52.0	6709.0	2020-02-02	ImProbablyManic	1240
1693170		2 million sign petition seeking amber heard's removal from 'aquaman 2' https://t.co/kw94om3d7u https://t.co/yvvtrqyup	1627.0	332.0	10392.0	2022-04-28	NDTV News feed	4517

In [24]:

```
helpers.barch(top_retweet[['tweet_id', 'total_retweets']].head(15),
              'Top Retweeted Tweets with "aquaman petition links"', c='red')
```

### Top Retweeted Tweets with "aquaman petition links"



In [25]:

```
top_retweet.text.head(15).value_counts()
```

la pétition pour exclure amber heard du second film aquaman a dépassé les 2 millions de signatures.\n\n🔗: https://t.co/dj3wftglqe https://t.co/yrjychnnlq

```

In [25]: 1
so if amber heard is really fired from aquaman 2 (and believe me, i really hope she is) may i suggest mera's replacement... https://t.co/lusgppgxwf
1
la pétition pour exclure amber heard de aquaman 2. déjà 2 millions de signatures. https://t.co/gcugpisrre
1
while remove amber heard is trending, a reminder that it is not just about her role in aquaman 2 & her endorsement of l'oréal. \nglobal organisations like aclu & u
n's human rights commission still support her. she's still on their official pages. think about that\#amberheardisalair https://t.co/5wbt6u14xb 1
more than 500k people have signed a petition to have amber heard removed from aquaman for abusing johnny depp. yet warner bros. asked johnny to quit fantastic beasts and amb
er heard will be in aquaman 2. \nwhere is the justice?\n#justiceforjohnnydepp \n#boyboycottfantasticbeasts https://t.co/x8upg4yi0t 1
over 1m people have signed a petition to remove amber heard from 'aquaman 2' https://t.co/mab0smvaby
1
조니 딜 주종자들의 엠버 헤드를 <아쿠아맨>에서 빼라는 청원에 대응해, 엠버 팬들이 엠버 지지 청원을 올렸습니다. 이메일만으로 익명 참가 가능하니 시간되시는 분들은 참여해주세요! #wear
ewithyouamberheard\newe support amber heard in aquaman 2 - sign the petition! https://t.co/ataa77qnfi
1
me when amber heard gets fired from #aquaman2: https://t.co/lwatooenpb
1
just heard 'amber heard' has been fired from aquaman 2. anyway, all i wanna say is... https://t.co/0rtwvgyhxy
1
peter safran says amber heard was never going to be fired from 'aquaman and the lost kingdom'. \n\none is not unaware of what is going on in the twitter-verse, but that doe
sn't mean you have to react to it.. you have to do what's right for the film.\n\n(source: deadline) https://t.co/kvw0m1ebai 1
johnny depp has been removed from his upcoming projects but amber heard is still leading actress in aquaman 2. @wbpictures don't be so partial atleast respect an actor for h
is acting skills. #justiceforjohnnydepp https://t.co/mcs55ufjrw 1
amber heard is still playing mera in 'aquaman 2' 🙏\n\nthe rumor that she was fired is false\n\n(via @theryanparker) https://t.co/lixfxtvktb
1
over 2 million signatures want to remove amber heard from aquaman 2 don't be shy keep it going https://t.co/iq6tfnglkb
1
me waiting for amber heard to be fired from playing mera in aquaman 2, then also knowing it's never going to happen because apparently men can't be abused too? 🤦 she ruine
d his career and now we are after hers. i hope she is arrested. #justiceforjohnnydepp https://t.co/s6gdtyrji5 1
2 million sign petition seeking amber heard's removal from 'aquaman 2' https://t.co/kw94om3d7u https://t.co/yvwtrqywup
1
Name: text, dtype: int64

```

In [26]: top\_retweet.username.head(15)

```

Out[26]: 1695958 Infos Séries
836080 836080
1696491 836080 Colin 🐾
Lesmeilleurescenes® 836080
1692581 Ayesha
485149 Mango
593861 Fandom
124243 justme
836002 Red Ranger Chris
836273 Akash Bhaduria
1088217 DiscussingFilm
1048149 Ankeshkumar sharma
844973 Culture Crave 🎉
1693964 GRETCHEN ADELLE
156986 ImProbablyManic
1693170 NDTV News feed
Name: username, dtype: object

```

In [27]: tweets[tweets.username == 'Le Cinéphiles'].text.value\_counts().head()

```

Out[27]: breaking: amber heard reportedly grew a mustache after filming and is contractually obligated to keep it for her next film. the 'aquaman' reshoots will digitally remove her
mustache using cgi. https://t.co/sbm0khiixn 1
breaking: warner bros officially announces that johnny depp will play mera in 'aquaman 2,' replacing amber heard. https://t.co/fhywf8hqu0
1
breaking: amber heard has been cast as grindelwald in 'fantastic beasts 3.' https://t.co/wmgcjscena
1
Name: text, dtype: int64

```

In [28]: helpers.contr\_peaks(tweets, "Le Cinéphiles", n=30, threshold=0)

total number of tweets by "Le Cinéphiles": 3

"Le Cinéphiles" Top Contributions



In [29]: tweets[tweets.username == 'S'].text.value\_counts().head(20)

```

Out[29]: #justiceforjohnnydepp
3
amber heard
2
amber heard ni bodo gak ek. disebabkan kontroversi kau la johnny dah tak cast untuk fantastic beast.
1
amber heard trying to use "i did not punch you. i was just hitting you" as an excuse after repeatedly hitting her man in the face is hatty as hell

```

she's been trying to sue. i did not punch you, i was just hitting you. so on excuse after repeatedly hitting her man in the face is silly as hell

johnny depp's trial proves that society is uncomfortable with admitting that men are victims of domestic violence and that drugs, dysfunction & foul language doesn't always equate to wife beating. childhood trauma will make us normalize the worst behavior #justiceforjohnnydepp

her seye rağmen eskiden aşık olduğu kadın hakkında tek kötü bir şey bile söylemedi, başkalarının yapamadığını yapıp o mahkemedede duygularının arkasında olduğunu savundun ya h  
arika bir adamın sen #justiceforjohnnydepp

in this trial, even after recounting horrific instances of abuse he suffered, it took an audio of him being on the verge of self-harm to make him break. he knows how broken he was at the end of that abusive relationship. he never deserved that. #johnnydepp #justiceforjohnnydepp

that audio made him fucking cry. he was the one in pain. he was begging for a way out of that abuse. how dare she think recording a man in a vulnerable state is ever okay. d  
isgusting #johnnydepp #justiceforjohnnydepp

he's obviously upset by this audio. the fact she was recording him while he was emotionally destroyed. he was begging for a way out and nearly/did resort to self harming. sh  
e's horrible. #justiceforjohnnydepp

"officer square head" fuck off 🐶 🐶 🐶 🐶 🐶 🐶 🐶 🐶 🐶 🐶 🐶 🐶 🐶 🐶 🐶 🐶 🐶 🐶 🐶 🐶 🐶 🐶 #justiceforjohnnydepp

i'm sorry... if you want to see how innocent johnny depp is please watch his cross examination. they have out of context texts and audio of her admitting to hitting him. tha  
ts it. #justiceforjohnnydepp

on that audio johnny clearly says "what if i show them this... or this... or this..." i presume he was pointing to injuries. she's insane, her tone was crazy almost psychopa  
thic... \n\n#justiceforjohnnydepp

wait... that audio just confirms she did throw the can of mineral spirits at him!!! #justiceforjohnnydepp

amber heard is the reham khan of hollywood

je suis fascinée par ce procès ça paraît irréel #justiceforjohnnydepp

somebody called amber heard is promoting (unsuccessfully it appears) the multi-million dollar usaid-funded #regimechange ngo, sams; principal suspects behind the #omrandaqne  
esh scam, #khansheikoun and #douma. https://t.co/snaot44z1

amber heard is prime example of white women crocodile tears

fuck amber heard me and all my girls hate amber heard. yaa heard me

is this the moaning video?? #justiceforjohnnydepp

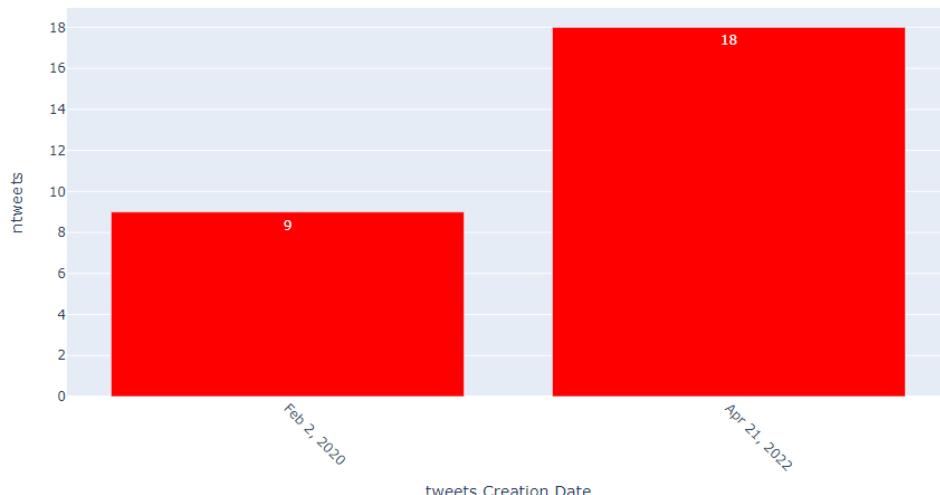
at the end of the day, truth always wins #justiceforjohnnydepp

Name: text, dtype: int64

In [30]: helpers.contr\_peaks(tweets, "S", n=2, threshold=0)

total number of tweets by "S": 124

### "S" Top Contributions



### Tweets Metrics

- Metrics Vs Time
- Top Retweeted Tweets
- Tweets with Most Likes
- Tweets with Most Replies

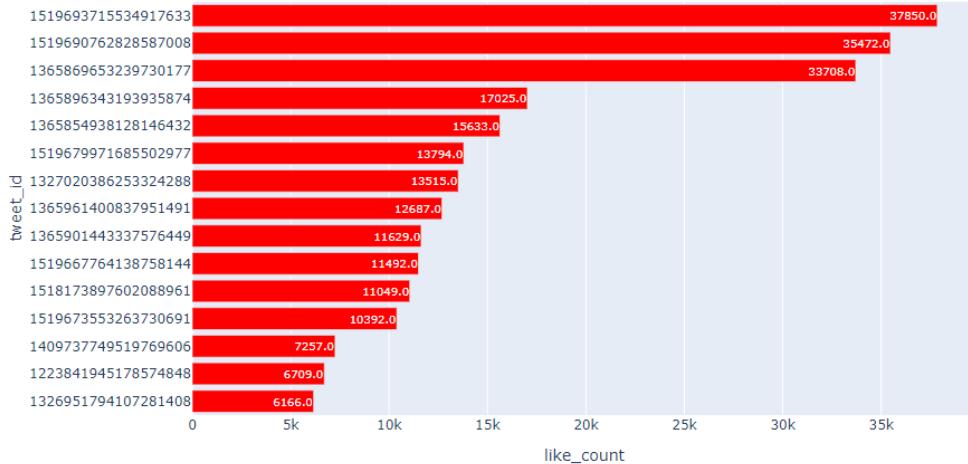
In [31]: top\_liked = aquaman\_petition.sort\_values('like\_count', ascending=False)  
with pd.option\_context('display.max\_colwidth', None):  
 display(top\_retweet[['text', 'like\_count', 'reply\_count', 'total\_retweets', 'date', 'username', 'days\_diff']].head(15))

			text	like_count	reply_count	total_retweets	date	username	days_diff
1695958	la pétition pour exclure amber heard du second film aquaman a dépassé les 2 millions de signatures.\n\n🔗: https://t.co/dj3wftglqe https://t.co/ijychnmlq			35472.0	299.0	4999.0	2022-04-28	Infos Séries	1937
836080	so if amber heard is really fired from aquaman 2 (and believe me, i really hope she is) may i suggest mera's replacement... https://t.co/usgpppxwf			33708.0	274.0	4526.0	2021-02-28	Colin 🦁	3266
1696491	la pétition pour exclure amber heard de aquaman 2. déjà 2 millions de signatures. https://t.co/gcugpisne			37850.0	160.0	4204.0	2022-04-28	Lesmeilleurescenes 🎬	2136
1692581	while remove amber heard is trending, a reminder that it is not just about her role in aquaman 2 & her endorsement of l'oréal. \nglobal organisations like aclu & un's human rights commission still support her. she's still on their official pages. think about that\n#amberheardisstill https://t.co/swb6ul4xb			11492.0	339.0	3017.0	2022-04-28	Ayesha	2470
485149	more than 500k people have signed a petition to have amber heard removed from aquaman for abusing johnny depp. yet warner bros. asked johnny to quit fantastic beasts and amber heard will be in aquaman 2. \nwhere is the justice?\n#justiceforjohnnydepp\n#boycottfantasticbeasts https://t.co/x8upg4yi0t			3824.0	56.0	2938.0	2020-11-06	Mango	1433
593861	over 1m people have signed a petition to remove amber heard from 'aquaman 2' https://t.co/m06smvab9y			13515.0	506.0	2937.0	2020-11-12	Fandom	4989

124243	조니 웰 추종자들의 엔버 헤드를 &lt;아루아면 2&gt;에서 빼라는 청원에 대응해, 엔버 팬들이 엔버 지지 청원을 올렸습니다. 이 메일만으로 익명 참가 가능하니 시간되시는 분들은 참여해주세요! #wearewithyouamberheard\wwe support amber heard in aquaman 2 - sign the petition! https://t.co/ataa77qnfj	393.0	2.0	2866.0	2019-11-11	justme	2232
836002	me when amber heard gets fired from #aquaman2: https://t.co/lwatooenpb	15633.0	76.0	2456.0	2021-02-28	Red Ranger Chris	1145
836273	just heard 'amber heard' has been fired from aquaman 2. anyway, all i wanna say is... https://t.co/0rtwwgyhxy	17025.0	48.0	2042.0	2021-02-28	Aakash Bhaduria	387
1088217	peter safran says amber heard was never going to be fired from 'aquaman and the lost kingdom'. \n\n"one is not unaware of what is going on in the twitter-verse, but that doesn't mean you have to react to it... you have to do what's right for the film."\\n\\n(source: deadline) https://t.co/kw0m1ebai	3652.0	884.0	2036.0	2021-07-30	DiscussingFilm	1767
1048149	johnny depp has been removed from his upcoming projects but amber heard is still leading actress in aquaman 2. @wbpictures don't be so partial atleast respect an actor for his acting skills. #justiceforjohnnydepp https://t.co/mcs55ufjrw	7257.0	106.0	1964.0	2021-06-29	Ankeshkumar sharma	419
844973	amber heard is still playing mera in 'aquaman 2' 🙏\n\nthe rumor that she was fired is false\n(via @theryanparker) https://t.co/lixftvktb	3070.0	597.0	1758.0	2021-03-01	Culture Crave 🎉	1196
1693964	over 2 million signatures want to remove amber heard from aquaman 2 don't be shy keep it going https://t.co/iq6tfngblk	13794.0	109.0	1751.0	2022-04-28	GRETCHEN ADELLE	3430
156986	me waiting for amber heard to be fired from playing mera in aquaman 2, then also knowing it's never going to happen because apparently men can't be abused too? 🙄 she ruined his career and now we are after hers. i hope she is arrested. #justiceforjohnnydepp https://t.co/s6gdtytrj5	6709.0	52.0	1709.0	2020-02-02	ImProbablyManic	1240
1693170	2 million sign petition seeking amber heard's removal from 'aquaman 2' https://t.co/kw94om3d7u https://t.co/yvvtrqywup	10392.0	332.0	1627.0	2022-04-28	NDTV News feed	4517

```
In [32]: helpers.bahr(top_liked[['tweet_id', 'like_count']].head(15),
                  'Top Liked Tweets with "aquaman petition links"', c='red')
```

Top Liked Tweets with "aquaman petition links"



```
In [33]: top_liked.username.head(15)
```

```
Out[33]: 1696491  🌸Lesmeilleurescenes🌸
1695958 Infos Séries
836080  🌸 Colin 🌸
836273 Akash Bhaduria
836002 Red Ranger Chris
1693964 GRETCHEN ADELLE
593861 Fandom
836821 LynneG
836306 Rishi⊗
1692581 Ayesha
1568820 _Rottl⊗
1693170 NDTV News feed
1048149 Ankeshkumar sharma
156986 ImProbablyManic
590329 Culture Crave 🎉
Name: username, dtype: object
```

## Tweets Metrics

- Metrics Vs Time
- Top Retweeted Tweets
- Tweets with Most Likes
- Tweets with Most Replies

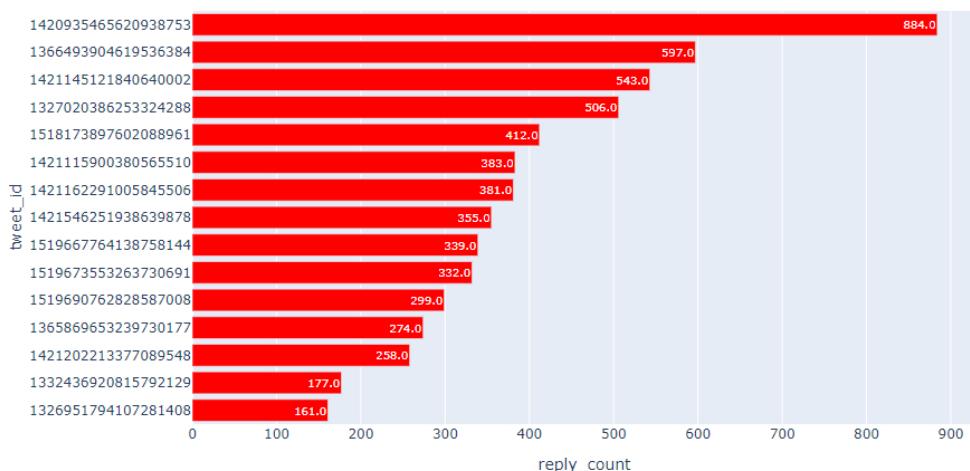
```
In [34]: top_replies = aquaman_petition.sort_values('reply_count', ascending=False)
with pd.option_context('display.max_colwidth', None):
    display(top_retweet[['text', 'reply_count', 'like_count', 'total_retweets', 'date', 'username', 'days_diff']].head(15))
```

text	reply_count	like_count	total_retweets	date	username	days_diff
------	-------------	------------	----------------	------	----------	-----------

1695958	la pétition pour exclure amber heard du second film aquaman a dépassé les 2 millions de signatures.\n\n: https://t.co/dj3wtglqe https://t.co/yrijchmnq	299.0	35472.0	4999.0	2022-04-28	Infos Séries	1937
836080	so if amber heard is really fired from aquaman 2 (and believe me, i really hope she is) may i suggest mera's replacement... https://t.co/usgppgxwf	274.0	33708.0	4526.0	2021-02-28	Colin 🐾	3266
1696491	la pétition pour exclure amber heard de aquaman 2. déjà 2 millions de signatures. https://t.co/gcugpisne	160.0	37850.0	4204.0	2022-04-28	Lesmeilleurescenes 🎬	2136
1692581	while remove amber heard is trending, a reminder that it is not just about her role in aquaman 2 & her endorsement of l'oréal. \nglobal organisations like aclu & un's human rights commission still support her. she's still on their official pages. think about that\#amberheardisalair https://t.co/5wbt6ul4xb	339.0	11492.0	3017.0	2022-04-28	Ayesha	2470
485149	more than 500k people have signed a petition to have amber heard removed from aquaman for abusing johnny depp. yet warner bros. asked johnny to quit fantastic beasts and amber heard will be in aquaman 2. \nwhere is the justice?!\#justiceforjohnnydepp \n#boycottfantasticbeasts https://t.co/x8upg4yi0t	56.0	3824.0	2938.0	2020-11-06	Mango	1433
593861	over 1m people have signed a petition to remove amber heard from 'aquaman 2' https://t.co/ma06smva6y	506.0	13515.0	2937.0	2020-11-12	Fandom	4989
124243	조니 엘 추종자들의 엘버 커드를 &lt;아루아면 2&gt;에서 빼라는 청원에 대응해, 엘버 팬들이 엘버 지지 청원을 올렸습니다. 이 메일만으로 익명 참가 가능하니 시간되시는 분들은 참여해주세요! #wearewithyouamberheard\we support amber heard in aquaman 2 - sign the petition! https://t.co/ataa77qnfi	2.0	393.0	2866.0	2019-11-11	justme	2232
836002	me when amber heard gets fired from #aquaman2: https://t.co/lwatoenpb	76.0	15633.0	2456.0	2021-02-28	Red Ranger Chris	1145
836273	just heard 'amber heard' has been fired from aquaman 2. anyway, all i wanna say is... https://t.co/0rtwvgyhxy	48.0	17025.0	2042.0	2021-02-28	Aakash Bhaduria	387
1088217	peter safran says amber heard was never going to be fired from 'aquaman and the lost kingdom'. \n\none is not unaware of what is going on in the twitter-verse, but that doesn't mean you have to react to it... you have to do what's right for the film.\n\n(source: deadline) https://t.co/kvw0m1ebai	884.0	3652.0	2036.0	2021-07-30	DiscussingFilm	1767
1048149	johnny depp has been removed from his upcoming projects but amber heard is still leading actress in aquaman 2. @wbpictures don't be so partial atleast respect an actor for his acting skills. #justiceforjohnnydepp https://t.co/mcc55ufjnw	106.0	7257.0	1964.0	2021-06-29	Ankeshkumar sharma	419
844973	amber heard is still playing mera in 'aquaman 2' 🙀\nthe rumor that she was fired is false\n\n(via @theryanparker) https://t.co/lixftvtkb	597.0	3070.0	1758.0	2021-03-01	Culture Crave 🎬	1196
1693964	over 2 million signatures want to remove amber heard from aquaman 2 don't be shy keep it going https://t.co/iq6tfnglwk	109.0	13794.0	1751.0	2022-04-28	GRETCHEN ADELLE	3430
156986	me waiting for amber heard to be fired from playing mera in aquaman 2, then also knowing it's never going to happen because apparently men can't be abused too? 🤦 she ruined his career and now we are after hers. i hope she is arrested. #justiceforjohnnydepp https://t.co/s6gdtyrj5	52.0	6709.0	1709.0	2020-02-02	ImProbablyManic	1240
1693170	2 million sign petition seeking amber heard's removal from 'aquaman 2' https://t.co/kw94om3d7u https://t.co/yvvtrqywup	332.0	10392.0	1627.0	2022-04-28	NDTV News feed	4517

```
In [35]: helpers.bahr(top_replies[['tweet_id', 'reply_count']].head(15),
                 '"aquaman petition links" Tweets with Most Replies', c='red')
```

"aquaman petition links" Tweets with Most Replies



```
In [36]: top_replies.username.head(15)
```

```
Out[36]: 1088217      DiscussingFilm
844973      Culture Crave 🎬
1089460      GameSpot
593861      Fandom
1568820      Rott! 🎬
1089241      Entertainment Weekly
1089717      Fandom
1092818      GameSpot
1692581      Ayesha
1693170      NDTV News feed
1695958      Infos Séries
836080      Colin 🐾
1090360      Pop Crave
660577      TheWrap
590329      Culture Crave 🎬
Name: username, dtype: object
```

```
In [37]: tweets[tweets.username == 'DiscussingFilm'].text.value_counts().head()
```

```

Out[37]: dc's 'aquaman' will reportedly diverge from comic canon, and will make dolph lundgren's king nereus and amber heard's mera father and daughter. (via @aquamanshrine) https://t.co/gpkbwztq2o
1
amber heard is set to join the cast of 'gully', with the film marking the directorial debut of nabil elderykin. the film is set in a dystopian version of los angeles and follows three teenagers, all victims of childhood trauma, who are running a riot. (source: @variety) https://t.co/itaqjyqxga
1
amber heard has joined the cast of bow and arrow entertainment's 'her smell'. (source: @variety) https://t.co/h6iktssshjr
1
amber heard has explained why she almost turned down playing mera in the dceu: "i had a limited experience, or exposure, to women in that world and then zack snyder explained this badass, kickass warrior queen to me and then i thought 'sword and a crown, okay'" (source: @etnow) https://t.co/mdqnqz0bca
1
amber heard has said she would love to team up with gal gadot's wonder woman in a future dc film. (source: https://t.co/llozrwobsu) https://t.co/6fqiezmicc
1
Name: text, dtype: int64

```

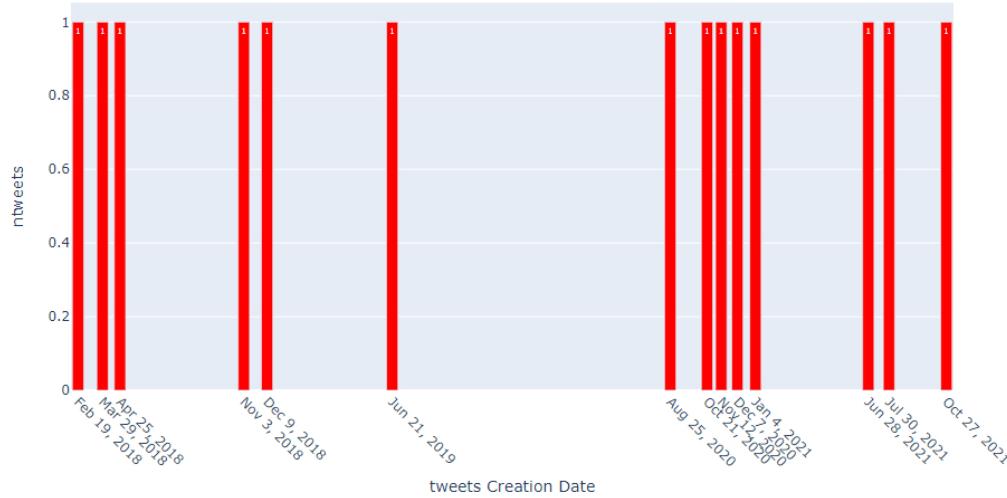
```

In [38]: helpers.contr_peaks(tweets, "DiscussingFilm", n=30, threshold=0)

total number of tweets by "DiscussingFilm": 14

```

"DiscussingFilm" Top Contributions



```

In [39]: tweets[tweets.username == 'Culture Crave 🎉'].text.value_counts().head()

```

```

Out[39]: amber heard says she wants to see mera and wonder woman team up and 'kick some ass'\n\n(via @celebfanfest) https://t.co/owkb7ne65m
1
amber heard is currently shooting new scenes for zack snyder's 'justice league' 🎉\n\n(via @thr) https://t.co/dbdnzj5fxe
1
over 1m people have signed a petition to remove amber heard from 'aquaman 2' https://t.co/yem8gxketd
1
amber heard confirms she will return for 'aquaman 2' 🎉\n\n(via @ew) https://t.co/dlzeqlnkwe
1
amber heard has wrapped reshoots on 'zack snyder's justice league' and is hyped for fans to see it 🎉\n\n'i just love nerds. i fucking love nerds'\n\n(via @comicbook) http://t.co/vfxmghkoyk
1
Name: text, dtype: int64

```

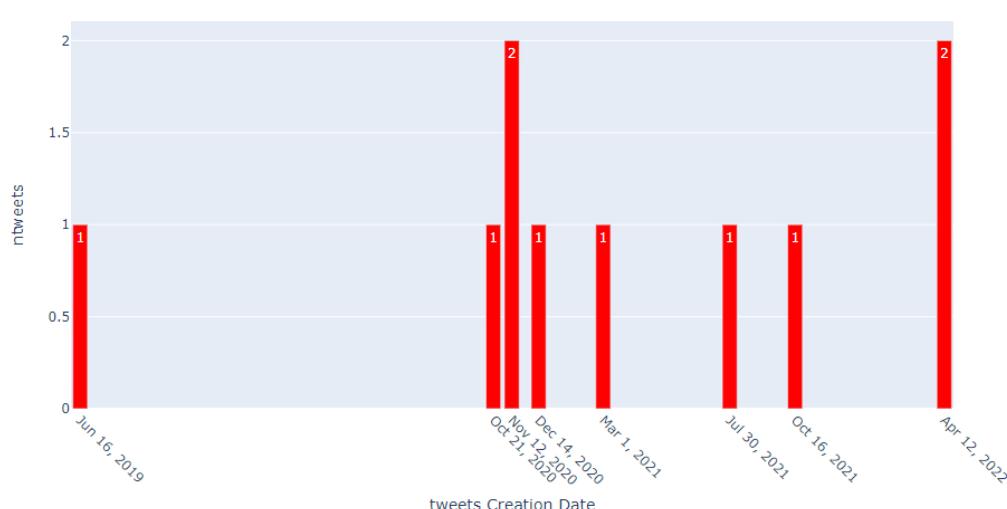
```

In [40]: helpers.contr_peaks(tweets, "Culture Crave 🎉", n=30, threshold=0)

total number of tweets by "Culture Crave 🎉": 10

```

"Culture Crave 🎉" Top Contributions



- Tweets Metrics
- **Users Tweets Metrics**
- -----
- Duration After Account Creation
- Tweets Created OVER TIME
- Peak Dates
- -----
- Tweets on Peaks
- Most Repeated Tweets
- Same Text Same Date
- -----
- Unverified Accounts
- Deleted or Banned
- Default Profile Image
- Users Metrics

## Users Tweets Metrics

- **Top Retweeted Users**
- Users with Most Likes
- Users with Most Replies

### Retweets

A count of how many times the Tweet has been Retweeted.

Please note: This does not include Quote Tweets ("Retweets with comment").

### Quote Tweets

A count of how many times the Tweet has been Retweeted with a new comment (message).

Please note: This does not include Retweets.

To get the "Retweets and comments" total as displayed on the Twitter clients, simply add `retweet_count` and `quote_count`.

This will return the total count of Quote Tweets. There are no Quote Tweets from a paid context so all Quote Tweets are organic.

- **total\_retweets:** is the total retweet count (Retweets + Quote Tweets)

In [41]: `aquaman_petition.head(1)`

	n_statuses	created_at	user_description	user_created_at	user_id	username	is_verified	user_location	n_followers	user_url	lang	profile_banner_u
4434	2860	2018-03-16 21:52:09	I pretend to be sophisticated, but really I'm ...	2016-06-29 18:06:35	748216104565235712	Morgan	False	NaN	177	https://t.co/7NIXfsBF9J	en	https://pbs.twimg.com/profile_banners/748216104565235712

In [42]: `top_retweet_u = (aquaman_petition.groupby(['user_id', 'username', 'user_created_at'], as_index=False)[['total_retweets', 'like_count', 'reply_count']].sum().sort_values('total_retweets', ascending=False))`  
`top_retweet_u.head(15)`

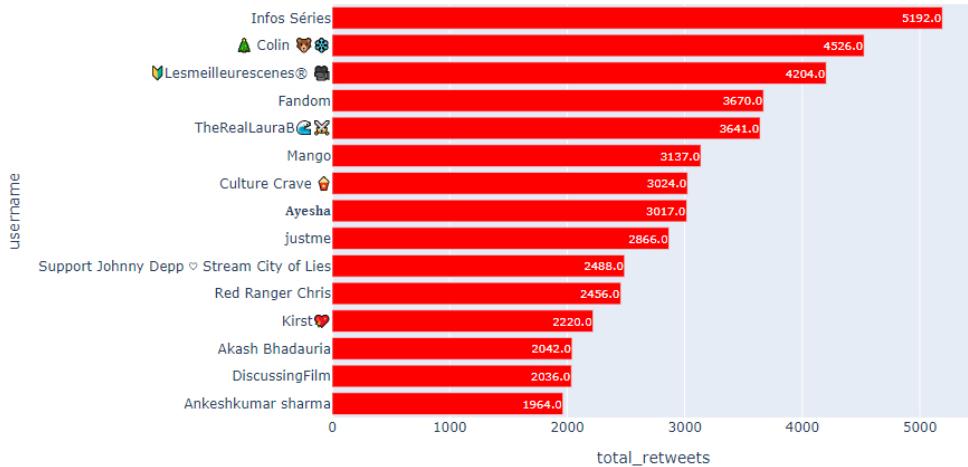
	user_id	username	user_created_at	total_retweets	like_count	reply_count
33507	817437085191827456	Infos Séries	2017-01-06 18:26:03	5192.0	35764.0	358.0
28953	531577673	Colin 🐾	2012-03-20 19:42:58	4526.0	33708.0	274.0
31622	745369183517548544	Lesmeilleurescenes	2016-06-21 21:33:56	4204.0	37850.0	160.0
12955	1332121	Fandom	2007-03-17 03:28:55	3670.0	15512.0	887.0
24480	3309371255	TheRealLauraB	2015-06-05 15:21:16	3641.0	10903.0	467.0
33179	805207070270259201	Mango	2016-12-04 00:28:20	3137.0	4858.0	132.0
36781	932786452739407872	Culture Crave	2017-11-21 01:43:15	3024.0	9236.0	758.0
24875	3389710995	Ayesha	2015-07-23 18:58:08	3017.0	11492.0	339.0
17039	1920027500	justme	2013-09-30 13:05:19	2866.0	393.0	2.0
27616	4583281223	Support Johnny Depp 💕 Stream City of Lies	2015-12-23 23:22:52	2488.0	11016.0	240.0
37264	950895831313510401	Red Ranger Chris	2018-01-10 01:03:27	2456.0	15633.0	76.0
1862	1063791963378315264	Kirst	2018-11-17 13:52:23	2220.0	6698.0	92.0
7843	1225378925594869761	Akash Bhaduria	2020-02-06 11:24:26	2042.0	17025.0	48.0
32561	780460754910732288	DiscussingFilm	2016-09-26 17:35:19	2036.0	3652.0	884.0
9209	1257551453628981248	Ankeshkumar sharma	2020-05-05 06:03:35	1964.0	7257.0	106.0

In [43]: `# # Check duplicates in user_id --> users that changed their usernames`  
`# top_retweet_u.duplicated(subset='user_id').sum()`

In [44]: `# top_retweet_u[top_retweet_u.user_id.duplicated()]`

```
In [45]: helpers.bahr(top_retweet_u[['username', 'total_retweets']].head(15),
    'Top Retweeted Users with "aquaman petition links"', c='red')
```

### Top Retweeted Users with "aquaman petition links"



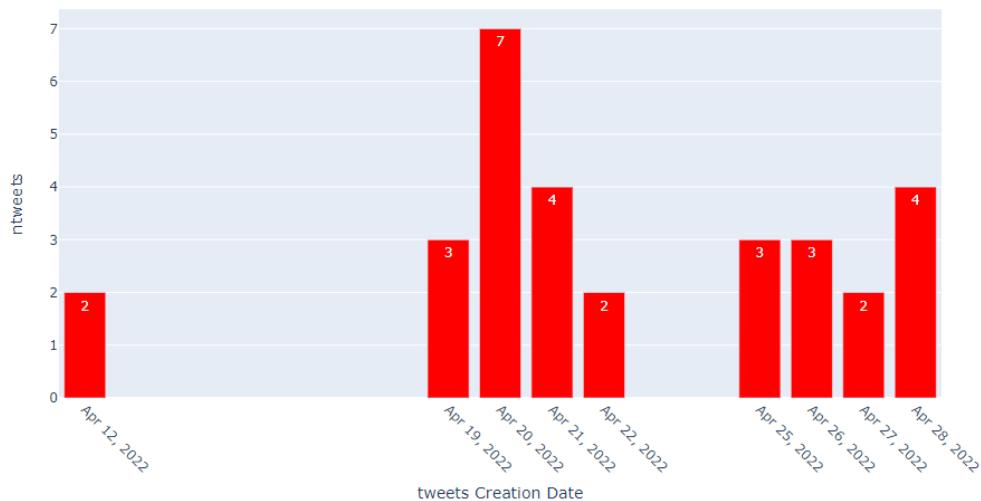
```
In [46]: aquaman_petition[aquaman_petition.username == 'Infos Séries'].text.value_counts().head()
```

```
Out[46]: amber heard s'exprime sur la pétition à plus d'un million de signatures pour demander son départ du film 'aquaman 2' :\\n\\n"les rumeurs et campagnes sur les réseaux sociaux ne dictent pas les décisions de casting car elles n'ont aucun fondement dans la réalité." https://t.co/0cqrneqqqe 1  
la pétition pour exclure amber heard du second film aquaman a dépassé les 2 millions de signatures.\\n\\n@: https://t.co/dj3wftglqe https://t.co/yrjychnmlq 1  
Name: text, dtype: int64
```

```
In [47]: helpers.contr_peaks(tweets, "Infos Séries", n=9, threshold=0)
```

total number of tweets by "Infos Séries": 63

### "Infos Séries" Top Contributions



⚠️ Colin 🐾❄️

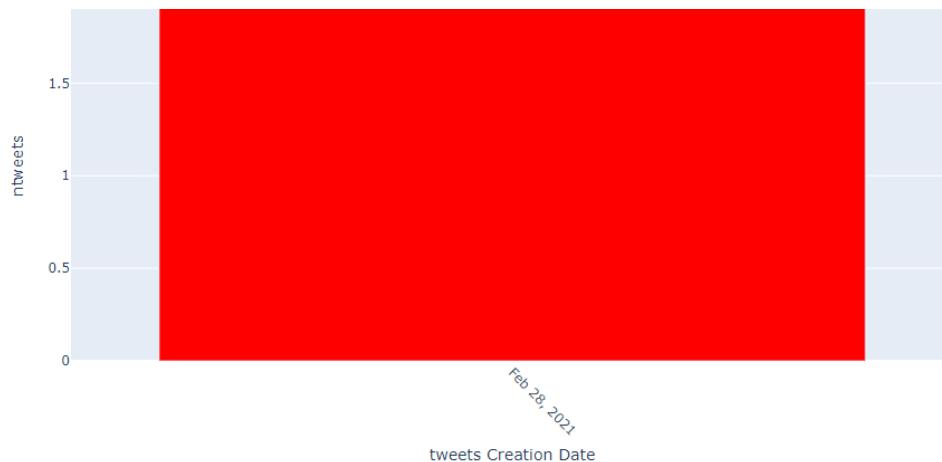
```
In [48]: tweets[tweets.username == '⚠️ Colin 🐾❄️'].text.value_counts().head(20)
```

```
Out[48]: so if amber heard is really fired from aquaman 2 (and believe me, i really hope she is) may i suggest mera's replacement... https://t.co/lusgppgxwf 1  
so i genuinely did not expect this tweet to do go beyond my handful of friends\\n\\ni never meant to start any arguments about johnny depp & amber heard\\n\\ni just really liked the idea of seeing jason momoa and emilia clarke back acting together \\n\\n❤️ please be kind to one another ❤️ 1  
Name: text, dtype: int64
```

```
In [49]: helpers.contr_peaks(tweets, "⚠️ Colin 🐾❄️", n=5, threshold=0)
```

total number of tweets by "⚠️ Colin 🐾❄️": 2

### "⚠️ Colin 🐾❄️" Top Contributions



### Lesmeilleurescenes® 🎬

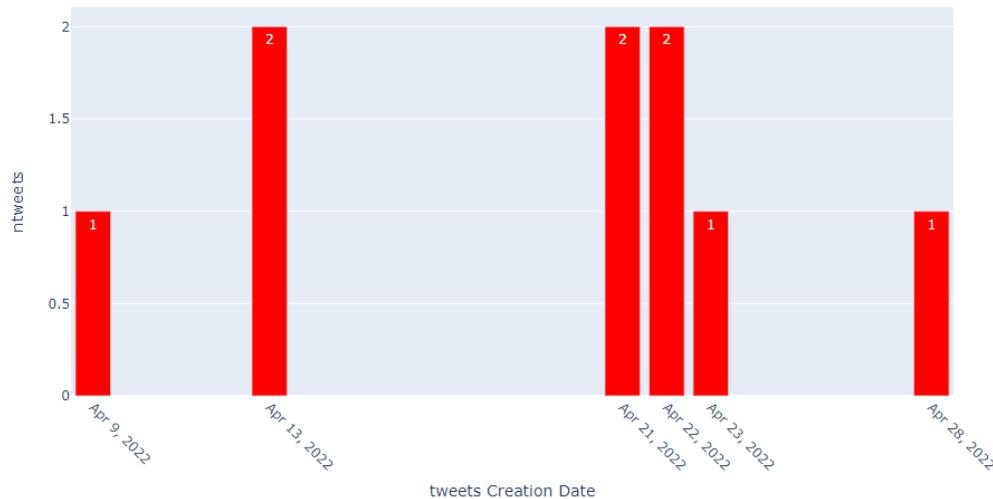
```
In [50]: aquaman_petition[aquaman_petition.username == 'Lesmeilleurescenes® 🎬'].text.value_counts().head(20)
```

```
Out[50]: la pétition pour exclure amber heard de aquaman 2. déjà 2 millions de signatures. https://t.co/gcugpigrne    1
Name: text, dtype: int64
```

```
In [51]: helpers.contr_peaks(tweets, "Lesmeilleurescenes® 🎬", n=10, threshold=0)
```

```
total number of tweets by "Lesmeilleurescenes® 🎬": 9
```

### "Lesmeilleurescenes® 🎬" Top Contributions



### Users Tweets Metrics

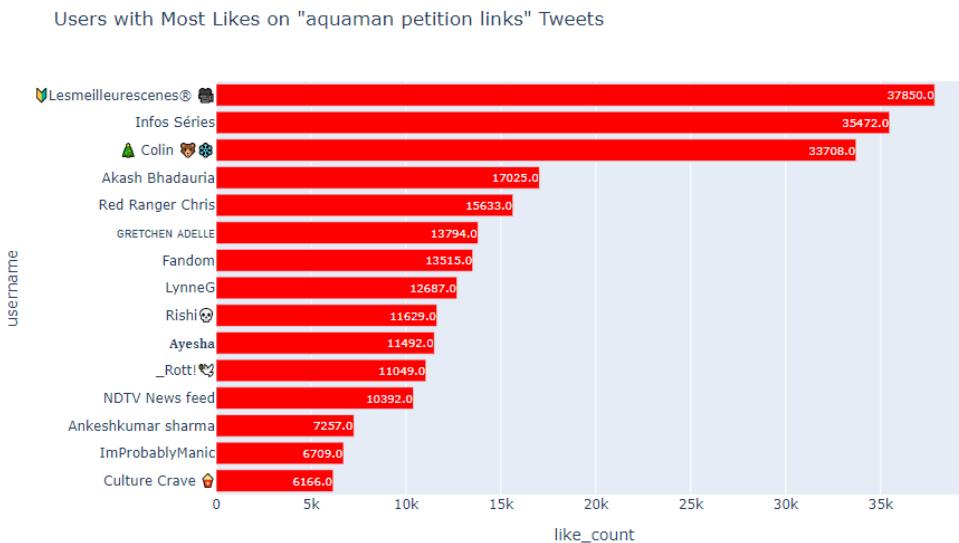
- Top Retweeted Users
- Users with Most Likes
- Users with Most Replies

```
In [52]: top_liked_u = top_retweet_u.sort_values('like_count', ascending=False)
top_liked_u.head(15)
```

	user_id	username	user_created_at	total_retweets	like_count	reply_count
31622	745369183517548544	Lesmeilleurescenes® 🎬	2016-06-21 21:33:56	4204.0	37850.0	160.0
33507	817437085191827456	Infos Séries	2017-01-06 18:26:03	5192.0	35764.0	358.0
28953	531577673	Colin 🐾	2012-03-20 19:42:58	4526.0	33708.0	274.0
7843	1225378925594869761	Akash Bhaduria	2020-02-06 11:24:26	2042.0	17025.0	48.0
37264	950895831313510401	Red Ranger Chris	2018-01-10 01:03:27	2456.0	15633.0	76.0
12955	1332121	Fandom	2007-03-17 03:28:55	3670.0	15512.0	887.0
38393	991924602	GRETCHEN ADELLE	2012-12-05 22:41:01	1751.0	13794.0	109.0
37195	948421868	LynneG	2012-11-14 20:15:43	1588.0	12687.0	133.0
28760	512966078	Rishi 🌟	2012-03-03 09:02:31	1227.0	11629.0	27.0
24875	3389710995	Ayesha	2015-07-23 18:58:08	3017.0	11492.0	339.0
13063	1337522797275459585	_Rott! 🐾	2020-12-11 22:21:56	1613.0	11049.0	412.0
27616	4583281223	Support Johnny Depp 💕 Stream City of Lies	2015-12-23 23:22:52	2488.0	11016.0	240.0
24480	3309371255	TheRealLauraB 🌸	2015-06-05 15:21:16	3641.0	10903.0	467.0

37803	96900937	NDTV News feed	2009-12-15 03:10:27	1627.0	10392.0	332.0
36781	932786452739407872	Culture Crave 🎉	2017-11-21 01:43:15	3024.0	9236.0	758.0

```
In [53]: helpers.bahr(top_liked[['username', 'like_count']].head(15),
    'Users with Most Likes on "aquaman petition links" Tweets', c='red')
```



## Infos Séries

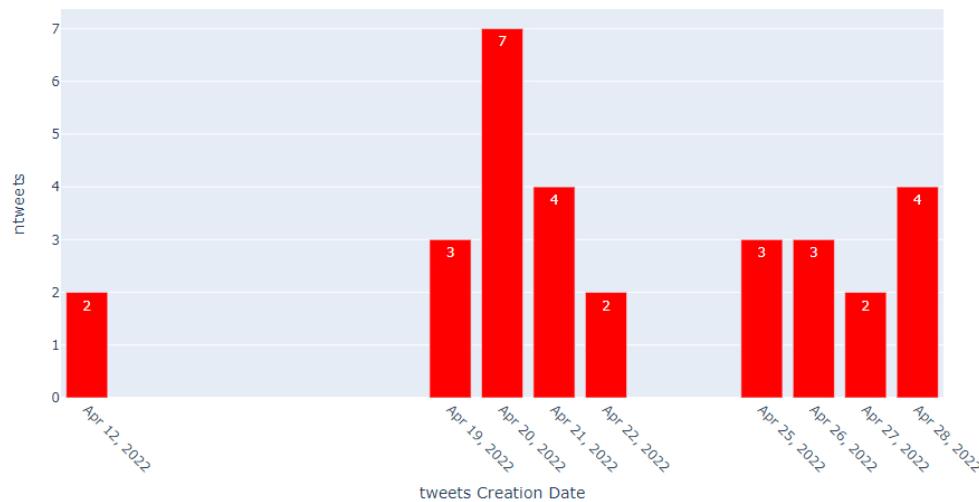
```
In [54]: aquaman_petition[aquaman_petition.username == 'Infos Séries'].text.value_counts().head(20)
```

```
Out[54]: amber heard s'exprime sur la pétition à plus d'un million de signatures pour demander son départ du film 'aquaman 2' :\n\n'les rumeurs et campagnes sur les réseaux sociaux ne dictent pas les décisions de casting car elles n'ont aucun fondement dans la réalité.' https://t.co/0qrneqqqe 1  
la pétition pour exclure amber heard du second film aquaman a dépassé les 2 millions de signatures.\n\n@: https://t.co/dj3wftglqe https://t.co/yrjyjchmn1q 1  
Name: text, dtype: int64
```

```
In [55]: helpers.contr_peaks(tweets, "Infos Séries", n=9, threshold=0)
```

total number of tweets by "Infos Séries": 63

### "Infos Séries" Top Contributions



## Akash Bhaduria

- This Account created on 2020-02-06

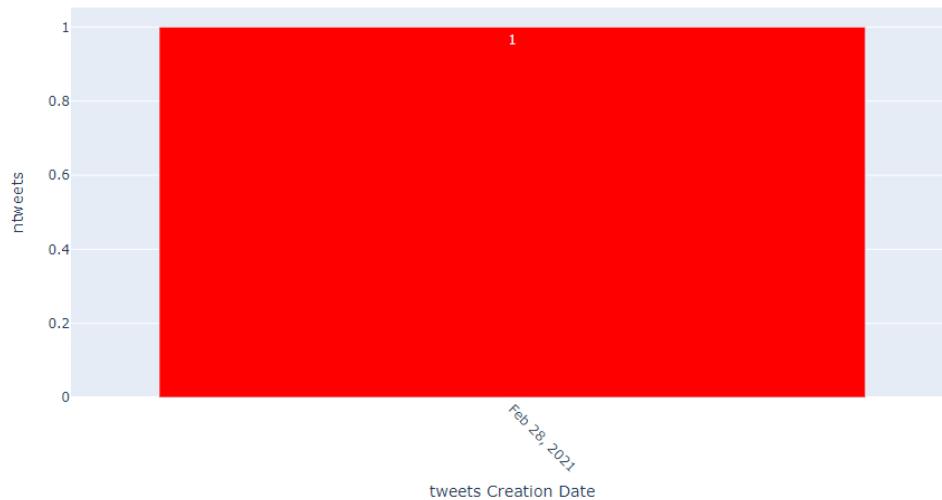
```
In [56]: aquaman_petition[aquaman_petition.username == 'Akash Bhaduria'].text.value_counts().head(20)
```

```
Out[56]: just heard 'amber heard' has been fired from aquaman 2. anyway, all i wanna say is... https://t.co/0rtwvgyhxy 1  
Name: text, dtype: int64
```

```
In [57]: helpers.contr_peaks(tweets, "Akash Bhaduria", n=9, threshold=0)
```

total number of tweets by "Akash Bhaduria": 1

## "Akash Bhaduria" Top Contributions



## Users Tweets Metrics

- Top Retweeted Users
- Users with Most Likes
- **Users with Most Replies**

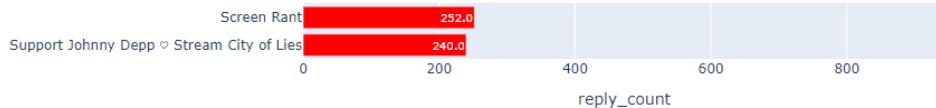
```
In [58]: top_replies_u = top_reweet_u.sort_values('reply_count', ascending=False)
top_replies_u.head(15)
```

	user_id	username	user_created_at	total_retweets	like_count	reply_count
30855	7157132	GameSpot	2007-06-29 17:54:14	789.0	3822.0	898.0
12955	1332121	Fandom	2007-03-17 03:28:55	3670.0	15512.0	887.0
32561	780460754910732288	DiscussingFilm	2016-09-26 17:35:19	2036.0	3652.0	884.0
36781	932786452739407872	Culture Crave 🍔	2017-11-21 01:43:15	3024.0	9236.0	758.0
24480	3309371255	TheRealLauraB 🎬	2015-06-05 15:21:16	3641.0	10903.0	467.0
13063	1337522797275459585	_Rott! 🎬	2020-12-11 22:21:56	1613.0	11049.0	412.0
15970	16312576	Entertainment Weekly	2008-09-16 16:13:23	713.0	599.0	383.0
33507	817437085191827456	Infos Séries	2017-01-06 18:26:03	5192.0	35764.0	358.0
24875	3389710995	Ayesha	2015-07-23 18:58:08	3017.0	11492.0	339.0
37803	96900937	NDTV News feed	2009-12-15 03:10:27	1627.0	10392.0	332.0
26246	3911239745	Perez	2015-10-09 18:29:57	90.0	480.0	309.0
28953	531577673	▲ Colin 🐾	2012-03-20 19:42:58	4526.0	33708.0	274.0
27329	4429003533	Pop Crave	2015-12-09 18:00:33	454.0	1571.0	258.0
14871	14892220	Screen Rant	2008-05-24 16:20:49	686.0	2487.0	252.0
27616	4583281223	Support Johnny Depp ❤ Stream City of Lies	2015-12-23 23:22:52	2488.0	11016.0	240.0

```
In [59]: helpers.bahr(top_replies_u[['username', 'reply_count']].head(15),
                  'Users with Most Replies on "aquaman petition links" Tweets', c='red')
```

## Users with Most Replies on "aquaman petition links" Tweets





## GameSpot

```
In [60]: tweets[tweets.username == 'GameSpot'].text.value_counts().head()
```

```
Out[60]: although aquaman 2 has not been officially greenlit by warner bros., amber heard says she'll return for the sequel, adding that the production hopes to get underway sometime in 2021. https://t.co/iikraoib5 1
aquaman 2 filmmakers won't remove amber heard from the movie because of johnny depp fans. https://t.co/nevlomaww0 https://t.co/p5eo00jdvt
1
aquaman 2 filmmakers won't remove amber heard from the movie because of johnny depp fans. https://t.co/ver63xlnct https://t.co/m3hvvhv0zx
1
amid controversy between johnny depp and amber heard, aquaman 2 filmmakers make it clear that the twitter-verse doesn't dictate the story they want to tell. https://t.co/eivblzy1e2 https://t.co/ggksgqm1x 1
the johnny depp and amber heard saga continues... https://t.co/edk1salcia
1
Name: text, dtype: int64
```

```
In [61]: helpers.contr_peaks(tweets, "GameSpot", n=5, threshold=0)
```

total number of tweets by "GameSpot": 8

"GameSpot" Top Contributions



## Fandom

```
In [62]: tweets[tweets.username == 'Fandom'].text.value_counts().head()
```

```
Out[62]: jason momoa & amber heard grace the @totalfilm november cover ahead of #aquaman release 🎉\n\n(via @creepypuppet)\nhttps://t.co/s7yyefytx9
1
#aquaman's amber heard is ready for a mera spinoff - 'i'd love to team up with wonder woman. that would be a kickass duo right there'\n\n(via @thr) https://t.co/k5bseckyim
1
amber heard shares a bts photo of mera above water while filming #aquaman https://t.co/p171ev6j1k
1
james marsden and amber heard are in talks to star in stephen king's 'the stand' series for cbs all access\n\n(via @collider | https://t.co/nbocbpoxby) https://t.co/eujew7r7
nu
'the stand' confirms four actors for the cbs all access series: james marsden, amber heard, odessa young, and henry zaga will join the 10-episode series, which stephen king
will write the finale for\n\n(via @ew | https://t.co/jgezpfdkhu) 1
Name: text, dtype: int64
```

```
In [63]: helpers.contr_peaks(tweets, "Fandom", n=30, threshold=0)
```

total number of tweets by "Fandom": 13

"Fandom" Top Contributions





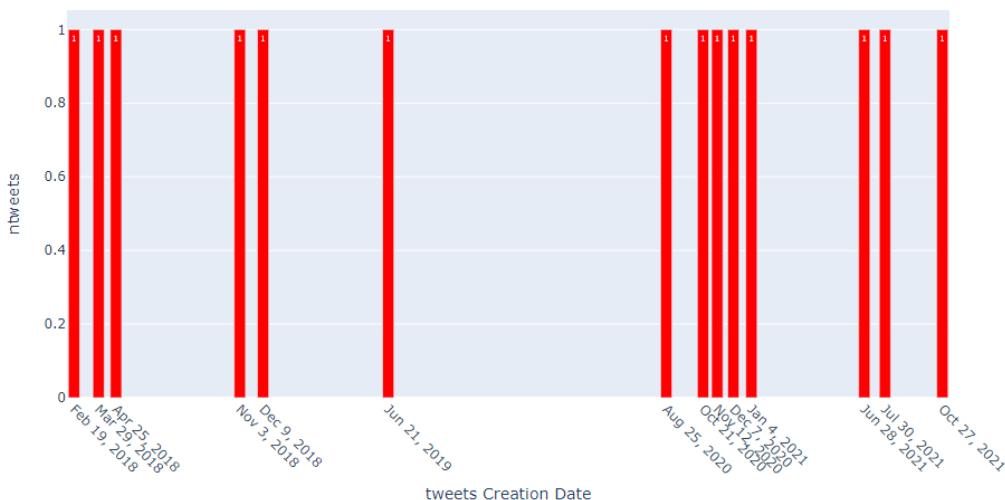
## Discussing Film

```
In [64]: tweets[tweets.username == 'DiscussingFilm'].text.value_counts().head()
```

```
Out[64]: dc's 'aquaman' will reportedly diverge from comic canon, and will make dolph lundgren's king nereus and amber heard's mera father and daughter. (via @aquamanshrine) https://t.co/gpkbwztq2o 1
amber heard is set to join the cast of 'gully', with the film marking the directorial debut of nabil elderkin. the film is set in a dystopian version of los angeles and follows three teenagers, all victims of childhood trauma, who are running a riot. (source: @variety) https://t.co/itaqjyqxga 1
amber heard has joined the cast of bow and arrow entertainment's 'her smell'. (source: @variety) https://t.co/h6iktsshjr
1
amber heard has explained why she almost turned down playing mera in the dceu:\n\n"had a limited experience, or exposure, to women in that world and then zack snyder explained this badass, kickass warrior queen to me and then i thought 'sword and a crown, okay'" (source: @etnow) https://t.co/mdqnqzbca 1
amber heard has said she would love to team up with gal gadot's wonder woman in a future dc film. (source: https://t.co/llozrwbosu) https://t.co/6fqiezmicc
1
Name: text, dtype: int64
```

```
In [65]: helpers.contr_peaks(tweets, "DiscussingFilm", n=30, threshold=0)
```

```
total number of tweets by "DiscussingFilm": 14
```



## Tweeting Duration After Account Creation

- Tweets Metrics
  - Users Tweets Metrics
  - -----
  - **Duration After Account Creation**
  - Tweets Created OVER TIME
  - Peak Dates
  - -----
  - Tweets on Peaks
  - Most Repeated Tweets
  - Same Text Same Date
  - -----
  - Unverified Accounts
  - Deleted or Banned
  - Default Profile Image
  - Users Metrics

## Days and Hours Distribution

- Distribution
  - Same Hour
  - Same Day
  - Same Week
  - Same Month

```
In [66]: # mask = (aquaman_petition.days_diff == 0) & (aquaman_petition.minutes_diff <= 60)
# aquaman_petition[mask].shape[0]
```

```
In [67]: # mask = (aquaman_petition.days_diff == 0) & (aquaman_petition.minutes_diff <= 120)
# aquaman_petition[mask].shape[0]
```

<https://stackoverflow.com/questions/69843435/python-how-to-create-bins-based-on-a-fixed-threshold>

```
In [68]: diff_d = aquaman_petition[aquaman_petition.days_diff == 0]
diff_d['cluster'] = diff_d['minutes_diff'].floordiv(60).astype(int) + 1 # .factorize()[0]

diff_d_counts = diff_d.groupby('cluster').size().reset_index(name='n_tweets')
# diff_d_counts['n_tweets'] = diff_d_counts['n_tweets'].cumsum()
# diff_d_counts['cluster'] = diff_d_counts['cluster'] + 1 # not needed as we summed up 1 above
diff_d_counts.head()
```

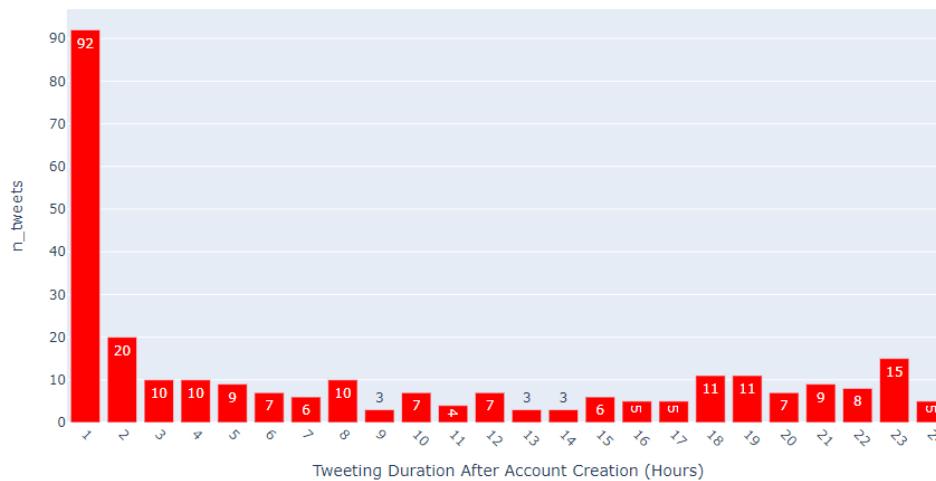
Out[68]:

	cluster	n_tweets
0	1	92
1	2	20
2	3	10
3	4	10
4	5	9

```
In [69]: print(f'\nTotal "aquaman petition" Tweets Within the same Day of Account Creation: {diff_d_counts.n_tweets.sum()}' ) # iloc[-1]
title = '"aquaman petition" Tweets Within the same Day of Account Creation'
helpers.bar_peaks(diff_d_counts, title, threshold=0, xlabel='Tweeting Duration After Account Creation (Hours)')
```

Total "aquaman petition" Tweets Within the same Day of Account Creation: 273

"aquaman petition" Tweets Within the same Day of Account Creation



#### NOTE:

- 109 tweets were tweeted in the same hour of account creation (by 100 new accounts)

```
In [70]: mask = (aquaman_petition.days_diff == 0) & (aquaman_petition.minutes_diff <= 60)
aquaman_petition[mask].user_id.nunique()
```

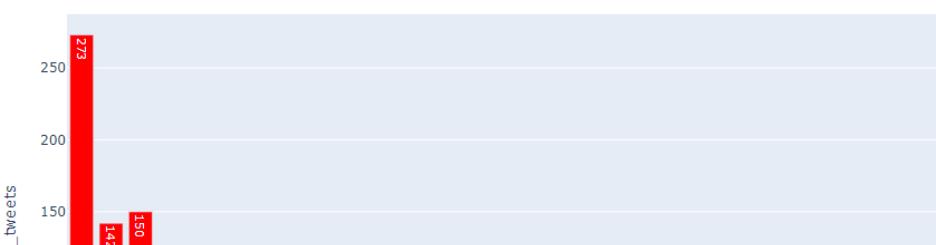
Out[70]: 83

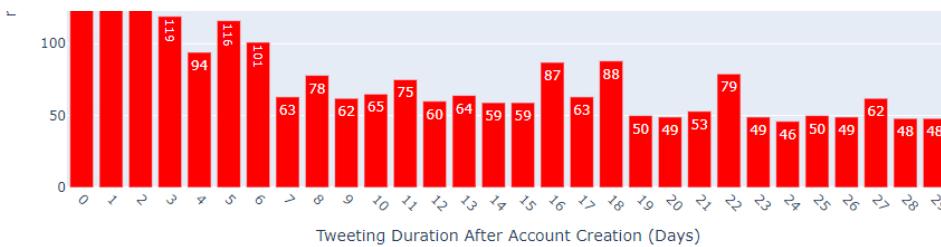
```
In [71]: petition_diff_m = aquaman_petition[aquaman_petition.days_diff < 30]
petition_diff_count = petition_diff_m.groupby('days_diff').size().reset_index(name='n_tweets')
# petition_diff_m
```

```
In [72]: print(f'\nTotal "aquaman petition" Tweets Within the same month of Account Creation: {petition_diff_count.n_tweets.sum()}' )
title = '"aquaman petition" Tweets Within the same month of Account Creation'
helpers.bar_peaks(petition_diff_count, title, threshold=0, xlabel='Tweeting Duration After Account Creation (Days)')
```

Total "aquaman petition" Tweets Within the same month of Account Creation: 2401

"aquaman petition" Tweets Within the same month of Account Creation





#### NOTE:

- 321 "aquaman petition" related tweets were tweeted in the same day of account creation (by 260 users)

```
In [73]: mask = (aquaman_petition.days_diff == 0)
aquaman_petition[mask].user_id.nunique()
```

Out[73]: 219

#### Same Hour

- Distribution
- Same Hour
- Same Day
- Same Week
- Same Month

```
In [74]: mask = (aquaman_petition.days_diff == 0) & (aquaman_petition.minutes_diff <= 60)
```

```
same_hour = aquaman_petition[mask]
n_users = same_hour.user_id.nunique()
n_tweets = same_hour.shape[0]
print(f'The number of accounts tweeted with "aquaman petition links" the same hour they was created! ({n_users}) \nTweeted ({n_tweets}) Tweets')
```

The number of accounts tweeted with "aquaman petition links" the same hour they was created! (83)  
Tweeted (92) Tweets

```
In [75]: same_hour.head()
```

	n_statuses	created_at	user_description	user_created_at		user_id	username	is_verified	user_location	n_followers	user_url	lang	profile_banner_url
127443	1	2019-11-29 03:40:59	NaN	2019-11-29 03:00:44	1200248042290601985	jenneb7	False	NaN	1	NaN	es	NaN	http://
128607	313	2019-12-04 13:37:24	NaN	2019-12-04 13:19:41	1202215838616559618	mary_fakhoury	False	NaN	2	NaN	en	NaN	htt
132551	102	2020-01-11 13:41:09	NaN	2020-01-11 13:01:27	1215981952387440642	DCU TV	False	NaN	2	NaN	en	https://pbs.twimg.com/profile_banners/12159819... http://	
174786	9	2020-02-02 15:27:40	NaN	2020-02-02 15:26:56	1223990659809341441	啾啾	False	NaN	0	NaN	en	NaN	http://
178281	2	2020-02-02 17:25:35	双子少女	2020-02-02 17:11:28	1224017463622266880	酷儿橙	False	浙江 中华人民共和国	3	NaN	en	https://pbs.twimg.com/profile_banners/12240174... http://	

```
In [76]: same_hour.username.isnull().sum()
```

Out[76]: 0

#### NOTE:

- these accounts are not banned.

```
In [77]: image = "http://abs.twimg.com/sticky/default_profile_images/default_profile_normal.png"
same_hour_def = same_hour[same_hour['profile_image_url'] == image]
n_tweets = same_hour_def.shape[0]
n_users_def = same_hour_def.user_id.nunique()

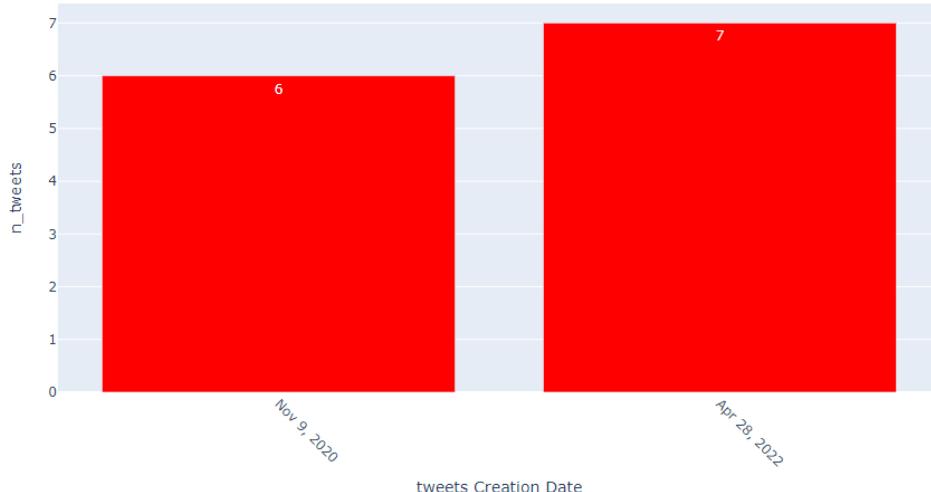
print(f'\n{n_users_def} users (with the default profile image) made a total of {n_tweets} "aquaman petition" tweets,\n in the same hour of account creation\n')
```

(21) users (with the default profile image) made a total of (23) "aquaman petition" tweets,  
in the same hour of account creation

```
In [78]: title = 'Peak contributions of the accounts tweeted "aquaman petition links" the same hour they were created'
```

```
df = same_hour.groupby('date').size().reset_index(name='n_tweets')
df.sort_values('n_tweets', ascending=False, inplace=True)
helpers.bar_peaks(df.head(2), title, threshold=0, xlabel='tweets Creation Date')
```

Peak contributions of the accounts tweeted "aquaman petition links" the same hour they were created



```
In [79]: helpers.bar_peaks(df[2:].head(3), title, threshold=0, xlabel='tweets Creation Date')
```

Peak contributions of the accounts tweeted "aquaman petition links" the same hour they were created



```
In [80]: same_hour.text.value_counts().head()
```

```
Out[80]: dc entertainment: remove amber heard from aquaman 2 - ¡firma la petición! https://t.co/4gijaruou vía @changeorglatino 1
remove amber heard from aquaman 2 https://t.co/cxvhva82fh 1
warner brothers: keep amber heard in aquaman - sign the petition! https://t.co/psg2sg8ms8 via @change 1
change.org : petitions to remove amber heard from aquaman perpetuates abuse towards women who speak up - sign the petition! https://t.co/atrvnruc8a via @change 1
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/11imskko2c via @cdnchange 1
Name: text, dtype: int64 1
```

Top users tweeted with "aquaman petition links" the same hour they were created!

```
In [81]: same_hour_users = same_hour.username.value_counts().reset_index().rename(columns={'index': 'username', 'username': 'n_tweets'})
title = 'Top users tweeted with "aquaman petition links" the same hour they were created!'
helpers.barch(same_hour_users.head(15), title, c='red') # , c=colors
```

Top users tweeted with "aquaman petition links" the same hour they were created!





```
In [82]: same_hour.username.value_counts().head()
```

```
Out[82]:
```

username	count
Wonder Woman RSVP	5
Queen Mera	2
Winston Churchill aka Ralph White	2
CrisM	2
Janet	2

Name: username, dtype: int64

```
In [83]: same_hour.user_screen_name.value_counts().head()
```

```
Out[83]:
```

user_screen_name	count
RSVP85596737	5
MeraQueenDC	2
SirWChurchill11	2
CrisM53748301	2
Janet40877868	2

Name: user\_screen\_name, dtype: int64

## CrisM

- This account was created on 2020-11-06
- and tweeted 2 tweets on the same account creation hour (all contains aquaman petition links)

```
In [84]: tweets[(tweets['username'] == 'CrisM') & (tweets['date'] == '2020-11-06')].text.value_counts()
```

```
Out[84]:
```

text	count
#justiceforjohnnydepp #johnnydeppisinnocent #johnnydeppismygrindelwald	1
all decent human beings who believe in justice: boycott warner brothers for removing johnny depp but keeping amber heard - sign the petition! https://t.co/mbjavpsucb via @change	1
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/edf26tjxjd via @change	1
#boycottwarnerbrothers #justiceforjohnnydepp #amberheardisanabuser #amberheardisaliar	1
#justiceforjohnnydepp \n#johnnydeppismygrindelwald \n#johnnydeppisasurvivor \n#amberheardisanabuser \n#amberheardisaliar #amberhearddoesnotspeakforme	1
#amberheardisaliar	1

Name: text, dtype: int64

```
In [85]: df_CrisM = tweets[tweets['username'] == 'CrisM']
df_CrisM.created_at.min(), df_CrisM.created_at.max()
```

```
Out[85]: (Timestamp('2020-11-06 17:59:02'), Timestamp('2021-02-12 19:11:06'))
```

```
In [86]: df_CrisM.user_created_at.iloc[0]
```

```
Out[86]: Timestamp('2020-11-06 17:50:35')
```

```
In [87]: df_CrisM.text.value_counts().head(60)
```

```
Out[87]:
```

text	count
#justiceforjohnnydepp	3
#justiceforjohnnydepp #goshjohnnydepp	2
#justiceforjohnnydepp #istandwithjohnnydepp	2
#thankyoudior #justiceforjohnnydepp	2
#justiceforjohnnydepp #johnnydeppisinnocent #johnnydeppismygrindelwald	1
#amberheardisanabuser \naclu: to remove an unsuitable proven abuser from being an advocate for domestic violence - sign the petition! https://t.co/q9wosxg5vp via @change	1
this ridiculous woman. is no one allowed to have their own thoughts anymore? instead, we must be bots or paid. 🤖 #wejustdontlikeyouamber #justiceforjohnnydepp #amberheardisalier	1
#wejustdontlikeyouamber #amberheardisaliar #amberheardisanabuser #justiceforjohnnydepp	1
@samjrkrah @adam_waldman @thesun @timesoflondon she had a voice. and she used it in a completely inappropriate and destructive way. she doesn't deserve a platform anymore. #wejustdontlikeyouamber #abuseisabuse #justiceforjohnnydepp #amberheardisaliar #amberheardisanabuser	1
#justiceforjohnnydepp #fireamberheard #amberheardisanabuser \nl'oréal: remove amber heard as l'oreal spokesperson - sign the petition! https://t.co/etczfzjz	1
joh via @change	1
well. this explains so much as to how an actress that can't actually act can keep getting roles... #justiceforjohnnydepp #boycottwarnerbros #amberheardisanabuser	1
#justiceforjohnnydepp #wewillnotbesilenced #amberheardisanabuser	1
comments are back up on the petition. not sure if all of them are, but there are some. #justiceforjohnnydepp #amberheardisanabuser #fireamberheard #boycottaquaman2 \ndc ente	1
rtainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/edbfrkdud6 via @change	1
#amberheardisanabuser \namerican civil liberties union: aclu: revoke your title of ambassador for women's rights from amber heard! - sign the petition! https://t.co/yyhpstpc	1
bn via @change	1
#justiceforjohnnydepp \nthe people: warner bros, bring johnny depp back as gellert grindelwald!!! update: sign it to show your support to johnny and screw the movie!!! - sig	1
n the petition! https://t.co/svoqsdloel via @change	1
#boycottwarnerbros #boycottwarnerbrothers #justiceforjohnnydepp	1
great news!!! well deserved! #justiceforjohnnydepp #istandwithjohnnydepp	1
damn right!!! #justiceforjohnnydepp #istandwithjohnnydepp #istandwithabusesurvivors	1

```

1
#boycottwarnerbrothers #justiceforjohnnydepp
1
#boycottwarnerbrothers #wearewithyoujohnnydepp\n#justiceforjohnnydepp #amberheardisanabuser
1
absolutely disgusting! #boycottwarnerbrothers #justiceforjohnnydepp #amberheardisanabuser
1
@adam_waldman @thesun @timesoflondon #wejustdontlikeyouamber #justiceforjohnnydepp
1
#justiceforjohnnydepp they want to silence johnny, and now everyone that supports him!! #johnnydeppisinnocent #amberheardisanabuser #amberheardisalier #istandwithjohnnydepp
#mentoo #abusehasnogender
#justiceforjohnnydepp #wewontbesilenced #istandwithjohnnydepp\ndc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/st8ysxbquh via @change
1
meanwhile in the bahamas... i hope johnny can be at peace and enjoy this moment knowing the whole internet is standing with him. #justiceforjohnnydepp #wearewithyoujohnnydepp
#boycottwarnerbrothers #amberheardisanabuser
@wpictures #istandwithjohnnydepp #amberheardisalier #justiceforjohnnydepp #boycottwarnerbros #boycottamberheard #boycottfantasticbeasts #boycottaquaman2 #fireamberheard
@warnerbros hear me out... maybe you should listen to her, since you aren't listening to the public. just a thought. #fireamberheard #amberheardisanabuser #amberheardisalier
#thankyoujdior #justiceforjohnnydepp #abusehasnogender
worth watching!\n#justiceforjohnnydepp #amberheardisanabuser #amberheardisalier #mencanbevictimstoo #mentoo #abusehasnogender \n\nhttps://t.co/aziohrqg9m
lol!!! that's why i didn't believe her from the start! #amberheardisanabuser #amberheardisalier #justiceforjohnnydepp
good lord. i bet he's thinking the same thing! #amberheardisanabuser #justiceforjohnnydepp
@theinfamousone6 she probably kicked something in anger and broke her foot. or it could just be a sprained ankle and she's milking it for press. either way, sounds about right.
@head80s exactly! #justiceforjohnnydepp #amberheardisanabuser
#amberheardisalier #amberheardisanabuser #justiceforjohnnydepp
@tralalalumbum crying does that to me. or when i take a super hot shower/bath, or when i work out. redness means absolutely nothing. and i have an olive skin complexion. so i would assume, it'd be more visible on someone that wasn't as dark. 😊 #amberheardisanabuser #amberheardisalier
@theinfamousone6 i get so many bruises, and usually don't even know how. the bruise on her arm looks like she ran into a door. imo #amberheardisanabuser #amberheardisalier
#justiceforjohnnydepp #mencanbevictimstoo
#boycottwarnerbros #boycottaquaman2 #boycottfantasticbeasts #justiceforjohnnydepp
which is it? i'm dying to know!?!? lol #justiceforjohnnydepp #amberheardisalier #amberheardisanabuser
wow! something shady going on. #justiceforjohnnydepp #amberheardisanabuser #amberheardisalier
comments are suddenly missing from the petition. are they trying to silence us? #justiceforjohnnydepp #amberheardisanabuser #fireamberheard
brilliant. lol. #amberheardisanabuser #amberheardisalier #justiceforjohnnydepp
#justiceforjohnnydepp #amberheardisanabuser #boycottwarnerbrothers #boycottthesun #abusehasnogender\n#wearewithyoujohnnydepp
#justiceforjohnnydepp i want nothing to do with any narrative amber is pushing. she is a liar. #amberheardisanabuser
exactly! #amberheardisanabuser #amberheardisalier #justiceforjohnnydepp
lol! says it all! #amberheardisanabuser #justiceforjohnnydepp
#amberheardisanabuser #amberheardisalier #mencanbevictimstoo #amberhearddoesnotspeakforme\n#justiceforjohnnydepp
#justiceforjohnnydepp #amberheardisanabuser #istandwithjohnnydepp #mentoo #wearewithyoujohnnydepp\n\ndc entertainment: remove amber heard from aquaman 2 - sign the petition!
https://t.co/bpexmtswd via @change
@britfanofdepp absolutely!!! my son and i will watch the puffins shorts collection on prime tonight. can't wait! #justiceforjohnnydepp #puffins \n#istandwithjohnnydepp
@dailymailceleb not all are fans you know. some just believe in facts and concrete evidence. and most support actual abuse victims. #amberheardisanabuser #justiceforjohnnydepp
@whatisthehapps @change and, i can tell you, no real victim speaks to their abuser the way she spoke to johnny. #justiceforjohnnydepp #amberheardisanabuser
#justiceforjohnnydepp #fireamberheard #amberheardisanabuser #amberheardisalier #istandwithjohnnydepp #wearewithyoujohnnydepp\n\ndc entertainment: remove amber heard from aquaman 2 - sign the petition!
https://t.co/bpexmtswd via @change
#justiceforjohnnydepp #amberheardisanabuser #amberheardisalier
@iamshelbysoup will be less painful than watching the turd try to act... #cancelamberheard #boycottthestand #justiceforjohnnydepp
#justiceforjohnnydepp #amberheardisanabuser #amberheardisalier \ndc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/bpexmtswd via @change
@thr lol! this is a crock of sh*%. #justiceforjohnnydepp \n#amberheardisanabuser
#amberheardisanabuser #amberhearddoesnotspeakforme\n#justiceforjohnnydepp \n\namber heard: a public letter to amber heard - sign the petition! https://t.co/a9k8i0c7fk via @change
#justiceforjohnnydepp #amberheardisanabuser \n#westandwithjohnnydepp \n\ndc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/acq8sgr3ep via @change
#notabot #justiceforjohnnydepp #amberheardistherealabuser #amberheardisalier #westandwithjohnnydepp \n\ndc entertainment: remove amber heard from aquaman 2 - sign the petition!
https://t.co/6jqrjkgtb8 via @change
#amberheardisalier #amberheardisanabuser #amberheardididnotdonate #justiceforjohnnydepp #westandwithjohnnydepp \n\ndc entertainment: remove amber heard from aquaman 2 - sign the petition!
https://t.co/orjphvi3bh via @change
Name: text, dtype: int64

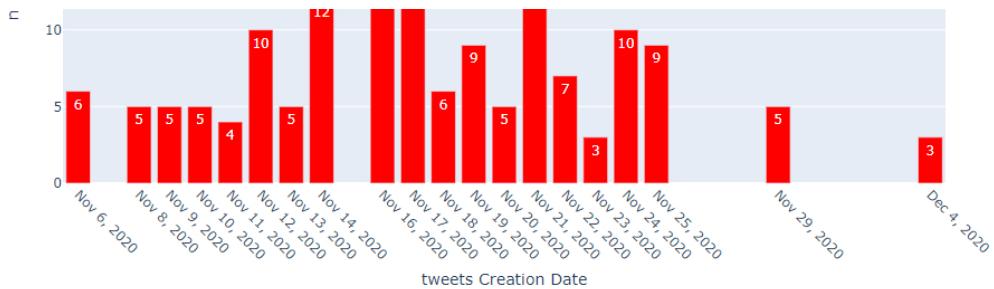
```

In [88]: helpers.contr\_peaks(tweets, "CrisM", n=20, threshold=0)

total number of tweets by "CrisM": 174

### "CrisM" Top Contributions





```
In [89]: print(df_CrisM.shape)
df_CrisM.head()
```

	n_statuses	created_at	user_description	user_created_at	user_id	username	is_verified	user_location	n_followers	user_url	lang	profile_banner_url	profile_i
475903	378	2020-11-06 17:59:02	NaN	2020-11-06 17:50:35	1324771137788792834	CrisM	False	NaN	6	NaN	und	NaN http://abs.twimg.com/sticky/default_p	
477761	378	2020-11-06 18:19:22	NaN	2020-11-06 17:50:35	1324771137788792834	CrisM	False	NaN	6	NaN	en	NaN http://abs.twimg.com/sticky/default_p	
477958	378	2020-11-06 18:21:46	NaN	2020-11-06 17:50:35	1324771137788792834	CrisM	False	NaN	6	NaN	en	NaN http://abs.twimg.com/sticky/default_p	
489414	378	2020-11-06 21:02:15	NaN	2020-11-06 17:50:35	1324771137788792834	CrisM	False	NaN	6	NaN	und	NaN http://abs.twimg.com/sticky/default_p	
495859	378	2020-11-06 23:07:02	NaN	2020-11-06 17:50:35	1324771137788792834	CrisM	False	NaN	6	NaN	und	NaN http://abs.twimg.com/sticky/default_p	

## Wonder Woman RSVP

- Positive Tweets

```
In [90]: # df_Wonder = tweets[tweets['username'] == 'Wonder Woman RSVP']
# df_Wonder.created_at.min(), df_Wonder.created_at.max()
```

```
In [91]: # df_Wonder.user_created_at.iloc[0]
```

```
In [92]: # df_Wonder.text.value_counts().head(60)
```

```
In [93]: # helpers.contr_peaks(tweets, "Wonder Woman RSVP", n=7, threshold=10)
```

```
In [94]: # df_Wonder
```

## The SAME DAY

- Distribution
- Same Hour
- Same Day
- Same Week
- Same Month

```
In [95]: mask = (aquaman_petition.days_diff == 0)

same_day = aquaman_petition[mask]
n_users = same_day.user_id.unique()
n_tweets = same_day.shape[0]
print(f'The number of accounts tweeted with "aquaman petition links" the same Day they was created! ({n_users}) \nTweeted ({n_tweets}) Tweets')
```

The number of accounts tweeted with "aquaman petition links" the same Day they was created! (219)  
Tweeted (273) Tweets

```
In [96]: same_day.head()
```

	n_statuses	created_at	user_description	user_created_at	user_id	username	is_verified	user_location	n_followers	user_url	lang	profile_banner_url
69955	14	2019-03-24 13:29:17	NaN	2019-03-23 18:26:42	1109521870120984576	Richard McClure	False	NaN	0	NaN	en	NaN http://
127443	1	2019-11-29 03:40:59	NaN	2019-11-29 03:00:44	1200248042290601985	jenneb7	False	NaN	1	NaN	es	NaN http://

128607	313	2019-12-04 13:37:24	NaN	2019-12-04 13:19:41	1202215838616559618	mary fakhoury	False	NaN	2	NaN	en	NaN	htt
128704	313	2019-12-05 06:37:05	NaN	2019-12-04 13:19:41	1202215838616559618	mary fakhoury	False	NaN	2	NaN	en	NaN	htt
132551	102	2020-01-11 13:41:09	NaN	2020-01-11 13:01:27	1215981952387440642	DCU TV	False	NaN	2	NaN	en	<a href="https://pbs.twimg.com/profile_banners/1215981952387440642">https://pbs.twimg.com/profile_banners/1215981952387440642</a>	http://

```
In [97]: same_day.username.isnull().sum()
```

```
Out[97]: 0
```

#### NOTE:

- these accounts are not banned.

```
In [98]: image = "http://abs.twimg.com/sticky/default_profile_images/default_profile_normal.png"
same_day_def = same_day[same_day['profile_image_url'] == image]
n_tweets = same_day_def.shape[0]
n_users_def = same_day_def.user_id.nunique()

print(f'\n{n_users_def} users (with the default profile image) made a total of ({n_tweets}) "aquaman petition" tweets,\non the same day of account creation\n')

(37) users (with the default profile image) made a total of (44) "aquaman petition" tweets,
```

on the same day of account creation

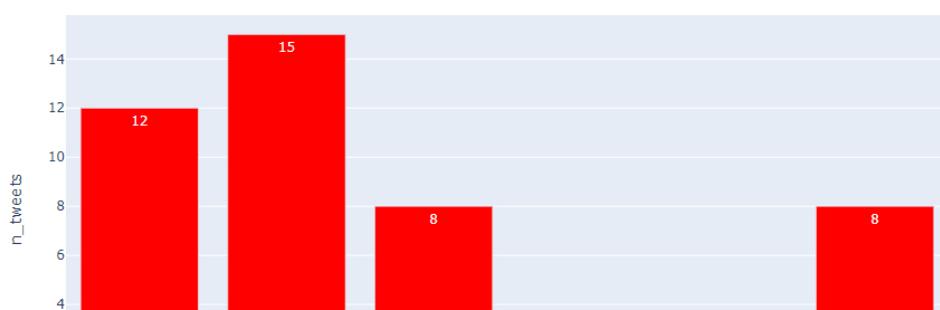
```
In [99]: title = 'Peak contributions of the accounts tweeted "aquaman petition links" the same day they were created'
df = same_day.groupby('date').size().reset_index(name='n_tweets')
df.sort_values('n_tweets', ascending=False, inplace=True)
helpers.bar_peaks(df.head(2), title, threshold=0, xlabel='tweets Creation Date')
```

Peak contributions of the accounts tweeted "aquaman petition links" the same day they were created



```
In [100]: helpers.bar_peaks(df[2:4].head(4), title, threshold=0, xlabel='tweets Creation Date')
```

Peak contributions of the accounts tweeted "aquaman petition links" the same day they were created





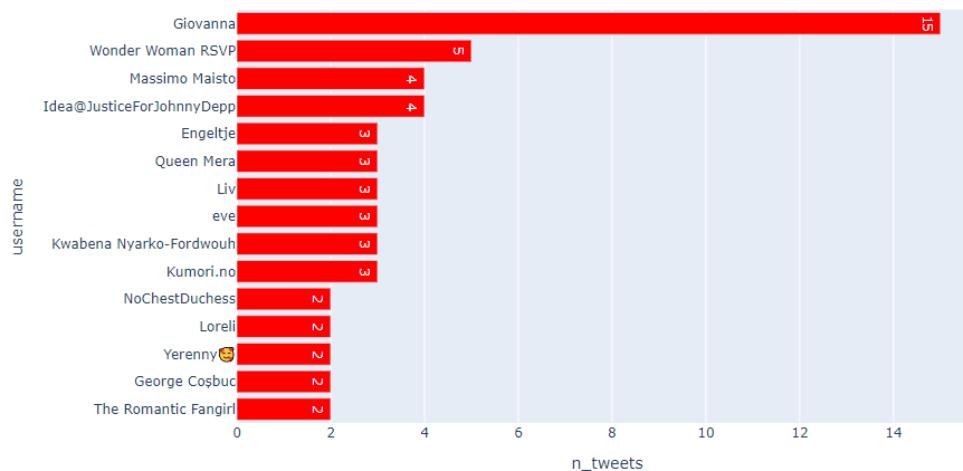
```
In [101... same_day.text.value_counts().head()
```

```
Out[101... dc entertainment: remove amber heard from aquaman 2 - ¡firma la petición! https://t.co/4nz9ko0fpf vía @change_es
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/8opjbvknu via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/kxq16qeSua via @change
l'oréal: remove amber heard as l'oreal spokesperson - sign the petition! https://t.co/2dnjluywmc via @ukchange sign it!😊
dc entertainment: remove amber heard from aquaman 2 - ¡firmá la petición! https://t.co/nvf6zwmca5 vía @changeorgar
Name: text, dtype: int64
```

Top users tweeted with "aquaman petition links" the same Day they were created!

```
In [102... same_day_users = same_day.username.value_counts().reset_index().rename(columns={'index':'username', 'username':'n_tweets'})
title = 'Top users tweeted with "aquaman petition links" the same Day they were created!'
helpers.bahr(same_day_users.head(15), title, c='red') # , c=colors
```

Top users tweeted with "aquaman petition links" the same Day they were created!



```
In [103... same_day.username.value_counts().head()
```

```
Out[103... Giovanna          15
Wonder Woman RSVP      5
Massimo Maisto        4
Idea@JusticeForJohnnyDepp  4
Engeltje              3
Name: username, dtype: int64
```

```
In [104... same_day.user_screen_name.value_counts().head()
```

```
Out[104... Giovann50640315    15
RSVP85596737            5
massimo_maisto           4
Idea07231843             4
Engelterost              3
Name: user_screen_name, dtype: int64
```

## Giovanna

- This account was created on 2020-11-07
- and tweeted 25 tweets (15 of them contains aquaman petition links)
- and has only tweeted from 2020-11-07 to 2020-11-17

```
In [105... mask = (tweets['user_screen_name'] == 'Giovann50640315') & (tweets['date'] == '2020-11-07')
tweets[mask].shape[0]
```

```
Out[105... 25
```

```
In [106... df_Giovanna = tweets[tweets['user_screen_name'] == 'Giovann50640315']
df_Giovanna.created_at.min(), df_Giovanna.created_at.max()
```

```
Out[106... (Timestamp('2020-11-07 12:37:54'), Timestamp('2020-11-17 07:08:35'))
```

```
In [107... df_Giovanna.user_created_at.iloc[0]
```

```
Out[107... Timestamp('2020-11-07 12:36:11')
```

```
Tn [108... ]
```

```
dt_Giovanna.text.value_counts().head(60)

Out[108]:
#justiceforjohnnydepp\nsign this petition please!\nhttps://t.co/a6m1qbfjov
3
#justiceforjohnnydepp\n#amberheardisanabuser \n#amberheardisalair \nhttps://t.co/bzjbv8tksx
2
grandissima idiozia quella di cacciare #jhonnydepp dal ruolo di grindelwald. penso proprio che salterò il prossimo film #justiceforjohnnydepp
1
#justiceforjohnnydeep\nsign this petition to kick her out! #amberheardisanabuser #amberheardisalair \n\nhttps://t.co/bzjbv8tksx
1
#justiceforjohnnydepp\n#amberheardisalair #amberheardisalair \n#boycottwarnerbros https://t.co/wetuvxeg1g
1
#justiceforjohnnydepp\ncome donna mi vergogno di essere associata a mostri come #amberheard . di donne da ammirare ce ne sono tante, lei non è fra queste. boicottiamo sia ac
quaman2 che animali fantastici 🦸\n#amberheardisalair \n#amberheardistherealabuser 1
#justiceforjohnnydepp\nkick her out! #amberheard no one likes you, and no one wants to watch your movies.\nhttps://t.co/bzjbv8tksx
1
@realamberheard @lorealparis @hollyccri @ccrinitiative abuser... #amberheardisanabuser #justiceforjhohnydepp \n#justiceforjohnnydepp
1
@realamberheard @lorealparis @hollyccri @ccrinitiative sign this petition to kick her out from #aquaman2! we're already at 800k + people!\n#justiceforjhohnydepp \n#justicefo
rjhohnydepp\nhttps://t.co/bzjbv8tksx 1
#justiceforjohnnydeep\nwe support you! keep fighting king! ❤️\n#justiceforjohnny \n#boycottfantasticbeasts \n#boycottwarnerbros \n#amberheardisanabuser
1
#justiceforjohnnydepp\n@therealamberheard and @warnerbros \n#amberheardisalair \n#amberheardistherealabuser \n#boycottwarnerbros https://t.co/bfq2xhaunn
1
#justiceforjohnnydepp \n#boycottwarnerbros \n#boycottfantasticbeasts \n#boycottaquaman2 \n#amberheardisanabuser \nhttps://t.co/a6m1qbfjov
1
#justiceforjohnnydepp\nno matter what i'm not going to see this movie. i'm not going to support someone who supports and abuser.\n@wpictures \n#amberheardisalair \n#amberhe
ardistherealabuser \n#boycottfantasticbeasts 1
#justiceforjhohnydepp\nplease sign this petition! \n#boycottfantasticbeasts \n#boycottaquaman2 \n#boycottwarnerbros \n#amberheardisalair \n#amberheardistherealabuser \nhttps://t.co/a6m1qbfjov
1
#boycottfantasticbeasts\n#justiceforjhohnydepp \n#justiceforjhohny \nhttps://t.co/a6m1qbfjov
1
#justiceforjhohnydepp\n#boycottfantasticbeasts \n#boycottwarnerbros \n#amberheardisanabuser \n#amberheardisanabuser \nhttps://t.co/bzjbv8tksx
1
he's a great actor but no one should watch the movie because you're supporting @warnerbros who supports an abuser. please don't watch it!\n#justiceforjhohnydepp \n#amberhear
disanabuser \n#boycottfantasticbeasts \n#boycottwarnerbros 1
#justiceforjhohnydepp\n#justiceforjhohnydepp \nbe careful you're spelling is name wrong! the first # is correct! https://t.co/3ltgdj42by
1
#justiceforjhohnydepp\nkick her out! no one likes her #amberheardisalair #amberheardistherealabuser #boycottaquaman2 #boycottwarnerbrothers #boycottwarnerbros \nhttps://t.c
o/bzjbv8tksx 1
#justiceforjhohnydepp\nwe have to be serious about all of this! no one is going to watch @whomeent movies until they rehire depp! that's it
1
#justiceforjhohnydepp\nplease sign this petition! we need your help! \nhttps://t.co/a6m1qbfjov
1
@eiprofeta non avranno di sicuro i miei soldi. #justiceforjhohnydepp
1
#justiceforjhohnydepp\ni hope this guy doesn't have social media because he's a monster. he fired depp! https://t.co/volohlo9ov
1
keep going king! we are here to support you!💪\n@warnerbros lost 8mlx~20€ minimum\n#justiceforjhohnydepp \n#boycottwarnerbros \n#amberheardisanabuser \n#savejhohnydepp
1
@drrossgeller_ @zfitz8 @laurabockov they get paid before working, no worker will be damaged by this :)\n#justiceforjhohnydepp
1
#justiceforjhohnydepp\n#amberheard flash news! no one likes you! we are supporting the real victim and you better confess and go to jail abuser!\n#amberheardisanabuser \n#bo
ycottaquaman2 \n#boycottwarnerbros 1
#justiceforjhohnydepp\nhe needs our help everyone! spread the petition!\nhttps://t.co/a6m1qbfjov
1
#justiceforjhohnydepp\nsign this please! #amberheardisanabuser \n#amberheardisalair \nhttps://t.co/a6m1qbfjov
1
#justiceforjhohnydepp\n"magic blooms only in rare souls" #amberheard is not one of them.\n#amberheardisanabuser https://t.co/irqb2hytr9
1
@el_traslador spero che @warnerbros fallisca. a livello economico non ha senso la scelta che hanno preso e ancora meno a livello umano. \n#justiceforjhohnydepp
1
#justiceforjhohnydepp\n#amberheardisanabuser \n#amberheardisalair \nsign this petition please!\nhttps://t.co/a6m1qbfjov
1
#justiceforjhohnydepp\nsign this petition please! we are already 800k💪\nhttps://t.co/bzjbv8tksx
1
#justiceforjhohnydepp\nplease sign this petition! we need more support!\nhttps://t.co/a6m1qbfjov\n#amberheardisanabuser \n#boycottaquaman2 \n#boycottwarnerbrothers
1
#boycottwarnerbrothers \n#boycottwarnerbros \n#justiceforjhohnydepp \n#nojhonnynopirates \n#nojhonnynofantasticbeasts \n@warnerbros @whomeent
1
shame on them! they are trying to make us pass like trolls when we are fighting for justice!\n#justiceforjhohnydepp \n#amberheardisalair \n#amberheardisanabuser
1
#justiceforjhohnydepp\nsign! sign! we need your help and support!\nhttps://t.co/a6m1qbfjov
1
#justiceforjhohnydepp\nplease remember to sign! \n#amberheardisanabuser \n#amberheardisalair \n#boycottfantasticbeasts \n#nojhonnynofantasticbeasts \n#boycottwarnerbros \nht
tps://t.co/a6m1qbfjov 1
#justiceforjhohnydepp\nwe hit 900k guys! @warnerbros we don't like her! \n#amberheardisanabuser \n#amberheardisalair \n#boycottaquaman2 \nhttps://t.co/bzjbv8tksx
1
#justiceforjhohnydepp\n#nojhonnynofantasticbeats \n#boycottfantasticbeasts \n#boycottwarnerbros \n@warnerbros
1
boycott warner bros\nboycott warner bros\n#boycottfantasticbeasts \n#boycottwarnerbros \n#justiceforjhohnydepp \n@warnerbros \n@wpictures
1
#justiceforjhohnydepp\n#amberheardisanabuser \n#nojhonnynofantasticbeats \nhttps://t.co/a6m1qbfjov
1
#justiceforjhohnydepp\n#fireamberheard \n#boycottfantasticbeasts \n@wpictures @warnerbros
1
#fireamberheard \n#amberheardisanabuser \n#justiceforjhohnydepp \n#boycottfantasticbeasts \n#boycottamberheard
1
ops maybe you're taking us seriously now! fire @realamberheard! @wpictures @warnerbros \n#justiceforjhohnydepp \n#boycottaquaman2 \n#boycottfantasticbeasts \n#amberheardisa
nabuser 1
#justiceforjhohnydepp\nplease remember to sign this petition, we.want.him.back @wpictures @warnerbros \n#amberheardisanabuser \n#fireamberheard \nhttps://t.co/a6m1qbfjov
1
#justiceforjhohnydepp\nplease sign and share this petition! #amberheardisanabuser #amberheardisalair https://t.co/a6m1qbfjov
1
#justiceforjhohnydepp\n#amberheardisanabuser \n#amberheardistherealabuser \n#boycottfantasticbeasts \n#boycottaquaman2 \nhttps://t.co/a6m1qbfjov
1
magari mi pagasserò! nessuno ci ha pagato per detestarti @realamberheard. sei solamente la donna più disgustosa esistente (al momento) 😊 @warnerbros \n#justiceforjhohnydep
p\n#fireamberheard\n#amberheardisanabuser 1
#justiceforjhohnydepp\n#fireamberheard \n#amberheardisanabuser \n#amberheardisalair \nhttps://t.co/a6m1qbfjov
1
#justiceforjhohnydepp \n#amberheardisanabuser \n#amberheardistherealabuser \n@realamberheard @wpictures @warnerbros
1
#justiceforjhohny \n#justiceforjhohnydepp \n#boycottaquaman2 \n#boycottfantasticbeasts3 \n#amberheardisanabuser
1
#amberheardisanabuser \n#amberheardisalair \n#fireamberheard \n#notabot\n#justiceforjhohnydepp \n#boycottaquaman2
1
#justiceforjhohnydepp\nimmagina essere odiata da 1.333.000 persone @realamberheard. e non siamo bot😊\n#amberheardisanabuser \n#amberheardisalair https://t.co/nanzm5l6xj
1
#justiceforjhohnydepp\n#amberheardisanabuser \n#amberheardistherealabuser \n#fireamberheard \nhttps://t.co/bzjbv8tksx
1
#justiceforjhohnydepp\n#amberheardisanabuser \n#amberheardisalair \n#fireamberheard \n@theouttaquaman? \nhttps://t.co/k7thu8tksx
1
#justiceforjhohnydepp\n#amberheardisanabuser \n#amberheardisalair \n#fireamberheard \n@theouttaquaman? \nhttps://t.co/k7thu8tksx
```

```

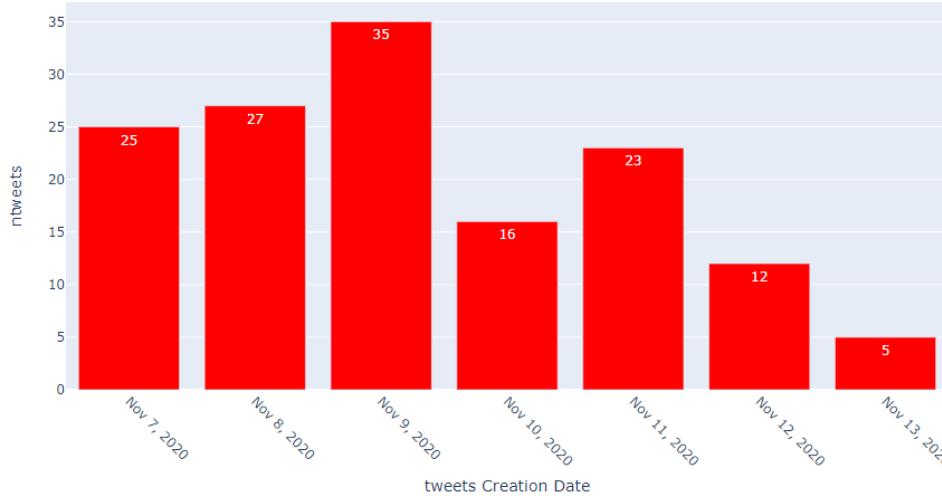
1
1'oréal: remove amber heard as l'oreal spokesperson - firma la petizione! https://t.co/hodurniu8q via @changeitalia \n#justiceforjohnny \n#amberheardisanabuser \n#justiceforjohnnydeep
1
@wbpictures @realamberheard @warnerbrostv \n#justiceforjohnny \n#amberheardisanabuser \n#justiceforjohnnydepp\n#boycottaquaman2
1
congratulazioni! 🎉 abbiamo raggiunto 1.000.000 di firme! n\o \n#justiceforjohnny \n#justiceforjohnnydepp\n#amberheardisanabuser \n@warnerbros @warnerbrostv \nhttps://t.c
o/bzjbv8tksx
1
#amberheardisanabuser \n@wbpictures @warnerbros \n#justiceforjohnnydepp \n#nojohnnynofantasticbeasts
1
#justiceforjohnnydepp\n@warnerbros be prepared to bankrupt🎉 \n#amberheardisanabuser \n#amberlurd \n#amberheardistherealabuser https://t.co/aky2wursze
1
Name: text, dtype: int64

```

In [109]: helpers.contr\_peaks(tweets, "Giovanna", n=7, threshold=0)

total number of tweets by "Giovanna": 186

"Giovanna" Top Contributions



In [110]: df\_Giovanna

	n_statuses	created_at	user_description	user_created_at	user_id	username	is_verified	user_location	n_followers	user_url	lang	profile_banner_url
517517	231	2020-11-07 12:37:54	IT \nMedicina Veterinaria UnimInLodi 🐾 📚	2020-11-07 12:36:11	1325054376315117569	Giovanna	False	NaN	3	NaN	it	https://pbs.twimg.com/profile_banners/13250543...
517891	231	2020-11-07 12:58:16	IT \nMedicina Veterinaria UnimInLodi 🐾 📚	2020-11-07 12:36:11	1325054376315117569	Giovanna	False	NaN	3	NaN	und	https://pbs.twimg.com/profile_banners/13250543...
517923	231	2020-11-07 13:00:01	IT \nMedicina Veterinaria UnimInLodi 🐾 📚	2020-11-07 12:36:11	1325054376315117569	Giovanna	False	NaN	3	NaN	en	https://pbs.twimg.com/profile_banners/13250543...
518077	231	2020-11-07 13:09:53	IT \nMedicina Veterinaria UnimInLodi 🐾 📚	2020-11-07 12:36:11	1325054376315117569	Giovanna	False	NaN	3	NaN	en	https://pbs.twimg.com/profile_banners/13250543...
518881	231	2020-11-07 13:46:13	IT \nMedicina Veterinaria UnimInLodi 🐾 📚	2020-11-07 12:36:11	1325054376315117569	Giovanna	False	NaN	3	NaN	en	https://pbs.twimg.com/profile_banners/13250543...
...	...	...	...	...	...	...	...	...	...	...	...	...
610158	231	2020-11-14 20:22:46	IT \nMedicina Veterinaria UnimInLodi 🐾 📚	2020-11-07 12:36:11	1325054376315117569	Giovanna	False	NaN	3	NaN	und	https://pbs.twimg.com/profile_banners/13250543...
613030	231	2020-11-15 10:22:46	IT \nMedicina Veterinaria UnimInLodi 🐾 📚	2020-11-07 12:36:11	1325054376315117569	Giovanna	False	NaN	3	NaN	it	https://pbs.twimg.com/profile_banners/13250543...
615639	231	2020-11-15 21:55:20	IT \nMedicina Veterinaria UnimInLodi 🐾 📚	2020-11-07 12:36:11	1325054376315117569	Giovanna	False	NaN	3	NaN	und	https://pbs.twimg.com/profile_banners/13250543...
617691	231	2020-11-16 07:07:43	IT \nMedicina Veterinaria UnimInLodi 🐾 📚	2020-11-07 12:36:11	1325054376315117569	Giovanna	False	NaN	3	NaN	und	https://pbs.twimg.com/profile_banners/13250543...
622264	231	2020-11-17 07:08:35	IT \nMedicina Veterinaria UnimInLodi 🐾 📚	2020-11-07 12:36:11	1325054376315117569	Giovanna	False	NaN	3	NaN	en	https://pbs.twimg.com/profile_banners/13250543...

149 rows × 30 columns

## The SAME Week

- Distribution
- Same Hour
- Same Day
- **Same Week**
- Same Month

```
In [111]: mask = (aquaman_petition.days_diff <= 7)

same_week = aquaman_petition[mask]
n_users = same_week.user_id.nunique()
n_tweets = same_week.shape[0]
print(f'The number of accounts tweeted with "aquaman petition links" the same Day they was created ({n_users}) \nTweeted ({n_tweets}) Tweets')

The number of accounts tweeted with "aquaman petition links" the same Day they was created (723)
Tweeted (1058) Tweets
```

```
In [112]: same_week.head()
```

```
Out[112]:
```

	n_statuses	created_at	user_description	user_created_at	user_id	username	is_verified	user_location	n_followers	user_url	lang	profile_banner_url
68637	443	2019-03-20 15:42:06	Hello, I'm a person. I'm 14. I use they/them p...	2019-03-13 20:12:29	1105924613660438529	Robyn	False	Bromsgrove, England	1290	NaN	en	<a href="https://pbs.twimg.com/profile_banners/11059246...">https://pbs.twimg.com/profile_banners/11059246...</a> http://
69372	4668	2019-03-22 20:03:52	NaN	2019-03-16 21:45:37	1107035213186695168	sashunyasid	False	NaN	201	NaN	und	NaN http://
69560	105	2019-03-23 14:27:24	Gemini, that's all you need to know	2019-03-15 21:49:51	1106673890233864194	Donlyn	False	NaN	58	NaN	en	<a href="https://pbs.twimg.com/profile_banners/11066738...">https://pbs.twimg.com/profile_banners/11066738...</a> http://
69616	25	2019-03-23 17:24:20	ແອຄຫລມເລວພັນ ຈົບດວກນາໄໝ ເວລາເພື່ອໂຄນຮູມ...	2019-03-20 17:56:46	1108427172320952320	ຕິສີ້ສາຍແວ ດົກທຸນນິ້ນ ເນຊີງ	False	NaN	0	NaN	en	<a href="https://pbs.twimg.com/profile_banners/11084271...">https://pbs.twimg.com/profile_banners/11084271...</a> http://
69955	14	2019-03-24 13:29:17	NaN	2019-03-23 18:26:42	1109521870120984576	Richard McClure	False	NaN	0	NaN	en	NaN http://

```
In [113]: same_week.username.isnull().sum()
```

```
Out[113]: 0
```

### NOTE:

- these accounts are not banned.

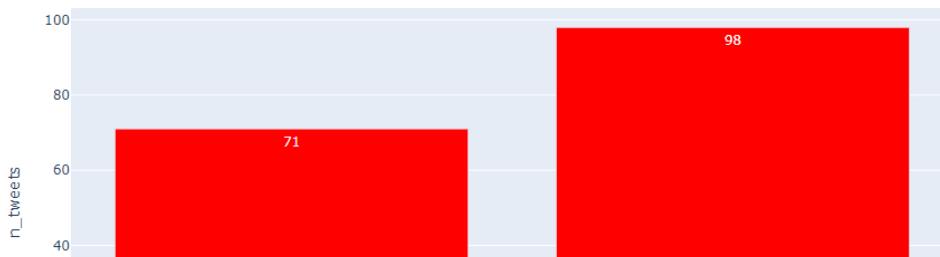
```
In [114]: image = "http://abs.twimg.com/sticky/default_profile_images/default_profile_normal.png"
same_week_def = same_week[same_week['profile_image_url'] == image]
n_tweets = same_week_def.shape[0]
n_users_def = same_week_def.user_id.nunique()

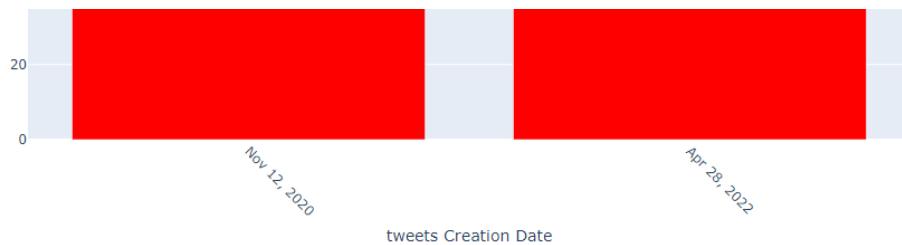
print(f'\n{n_users_def} users (with the default profile image) made a total of ({n_tweets}) "aquaman petition" tweets,\non the same week of account creation\n')

(105) users (with the default profile image) made a total of (139) "aquaman petition" tweets,
```

```
In [115]: title = 'Peak contributions of the accounts tweeted "aquaman petition links" the same week they were created'
df = same_week.groupby('date').size().reset_index(name='n_tweets')
df.sort_values('n_tweets', ascending=False, inplace=True)
helpers.bar_peaks(df.head(2), title, threshold=0, xlabel='tweets Creation Date')
```

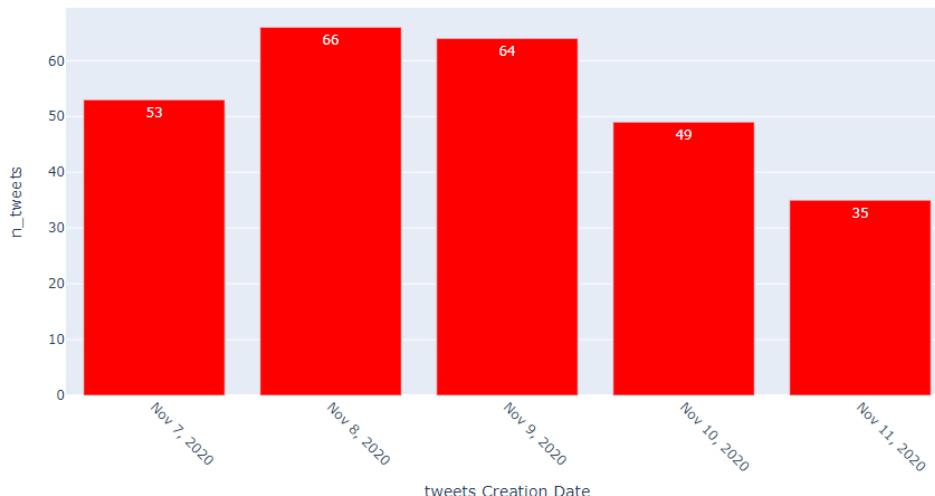
Peak contributions of the accounts tweeted "aquaman petition links" the same week they were created





```
In [116]: helpers.bar_peaks(df[2:].head(), title, threshold=0, xlabel='tweets Creation Date')
```

Peak contributions of the accounts tweeted "aquaman petition links" the same week they were created



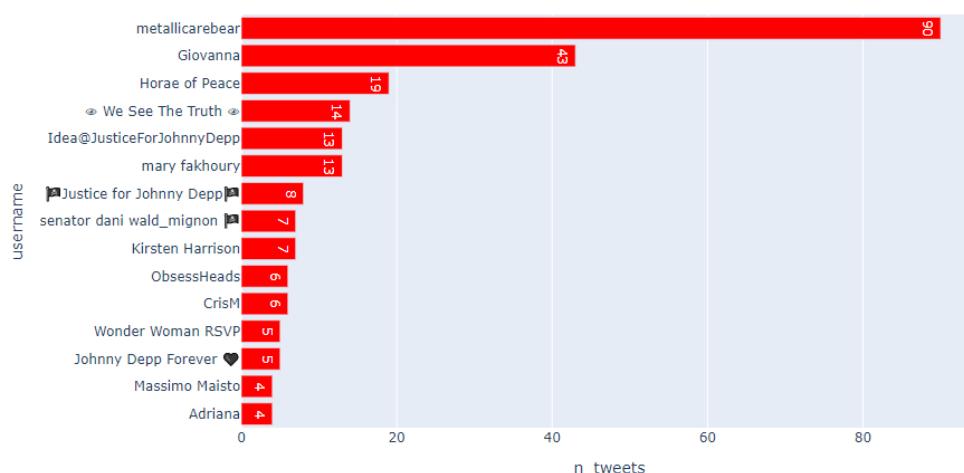
```
In [117]: same_week.text.value_counts().head()
```

```
Out[117]: dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/s2ngnta5md via @cdnchange \n\n#justiceforjohnnydepp 8
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/j6ecforj53 via @cdnchange \n\n#justiceforjohnnydepp 6
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/2v6mnnewq1 via @change 4
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/yyajryxz via @cdnchange \n\n#justiceforjohnnydepp 4
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/w3ysifztwe via @cdnchange \n\n#justiceforjohnnydepp 4
Name: text, dtype: int64
```

Top users tweeted with "aquaman petition links" the same Week they were created!

```
In [118]: same_week_users = same_week.username.value_counts().reset_index().rename(columns={'index':'username', 'username':'n_tweets'})
title = 'Top users tweeted with "aquaman petition links" the same Week they were created!'
helpers.barch(same_week_users.head(15), title, c='red') # , c=colors
```

Top users tweeted with "aquaman petition links" the same Week they were created!



```
In [119]: same_week.username.value_counts().head()
```

```
Out[119]: metallicarebear      90
Giovanna          43
Horae of Peace     19
We See The Truth (@)    14
Idea@JusticeForJohnnyDepp  13
mary fakhoury       13
Justice for Johnny Depp (@)  9
senator dani wald_mignon (@)  7
Kirsten Harrison      7
ObsessHeads          6
CrisM                6
Wonder Woman RSVP      5
Johnny Depp Forever ❤️    5
Massimo Maisto         4
Adriana               4
```

```
* we see the truth *          14
Idea@JusticeForJohnnyDepp 13
Name: username, dtype: int64
```

```
In [120..
```

```
same_week.user_screen_name.value_counts().head()
```

```
Out[120..
```

```
metallicarebear    90
Giovanni50640315   43
Horaeof           19
WeSeeTheTruth      14
Idea07231843       13
Name: user_screen_name, dtype: int64
```

## metallicarebear

- This account was created on 2020-11-06
- and tweeted 90 "aquaman petition links" tweets

```
In [121..
```

```
# mask = (aquaman_petition['username'] == 'metallicarebear')
# print(aquaman_petition[mask].shape[0])
```

```
In [122..
```

```
print('\nTweets made on the same day of account Creation')

mask = (tweets['username'] == 'metallicarebear') & (tweets['date'] == '2020-11-06')
print(tweets[mask].shape)
tweets[mask]
```

Tweets made on the same day of account Creation  
(11, 30)

```
Out[122..
```

	n_statuses	created_at	user_description	user_created_at	user_id	username	is_verified	user_location	n_followers	user_url	lang	profile_banner_url
467076	372	2020-11-06 02:52:01	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	en	NaN http://pbs.twimg.com/profile_im
467080	372	2020-11-06 02:54:59	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	en	NaN http://pbs.twimg.com/profile_im
467750	372	2020-11-06 12:46:57	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	en	NaN http://pbs.twimg.com/profile_im
467768	372	2020-11-06 12:59:18	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	und	NaN http://pbs.twimg.com/profile_im
467787	372	2020-11-06 13:11:24	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	und	NaN http://pbs.twimg.com/profile_im
467857	372	2020-11-06 13:57:07	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	en	NaN http://pbs.twimg.com/profile_im
488514	372	2020-11-06 20:49:21	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	en	NaN http://pbs.twimg.com/profile_im
488829	372	2020-11-06 20:54:00	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	und	NaN http://pbs.twimg.com/profile_im
489153	372	2020-11-06 20:58:34	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	it	NaN http://pbs.twimg.com/profile_im
490718	372	2020-11-06 21:29:54	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	en	NaN http://pbs.twimg.com/profile_im
491303	372	2020-11-06 21:43:28	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	und	NaN http://pbs.twimg.com/profile_im

```
In [123..
```

```
tweets[mask].text.value_counts()
```

```
Out[123..
```

```
#justiceforjohnnydepp
2
had a friend tell me he was beaten by his wife for 26 yrs. only shared this when i told him i was mad that amber is getting away with abusing johnny depp. friend didn't thin
k he would be believed because he is a man. #justiceforjohnnydepp
1
on a side note, that friend's niece was a roadie for a few of johnny depps gigs and said he was the kindest, gentlest and most genuine person she met there. #justiceforjohn
nydepp
1
#justiceforjohnnydepp\nwas reminded of another challenger of preconcieved notions today and his immortal words..... https://t.co/pdg7vhbjgm
1
#justiceforjohnnydepp https://t.co/8in6sbqr
1
thought this myself, but couldn't have said it as eloquently! ☺\n\n#justiceforjohnnydepp
1
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/lwak93p988 via @cdnchange \n\n#justiceforjohnnydepp
1
@warnerbros \n\n#justiceforjohnnydepp
1
@wbpictures \n\n#justiceforjohnnydepp \n#fuckamberheard
1
please all actors everywhere, if someone at wb asks u to play grindelwald, stand by male victims of dv and just say no! \n#justiceforjohnnydepp\n#mentoo
1
Name: text, dtype: int64
```

```
In [124..
```

```
df_meta = tweets[tweets['username'] == 'metallicarebear']
df_meta.created_at.min(), df_meta.created_at.max()
```

```
Out[124..
```

```
(Timestamp('2020-11-06 02:52:01'), Timestamp('2022-04-28 17:47:57'))
```

```
In [125..] df_meta.user_created_at.iloc[0]
Out[125..] Timestamp('2020-11-06 01:54:27')

In [126..] df_meta.text.value_counts().head(60)
Out[126..] #justiceforjohnnydepp
24
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/s2ngnta5md via @cdnchange \n\n#justiceforjohnnydepp
10
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/j6ecforj53 via @cdnchange \n\n#justiceforjohnnydepp
6
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/w3ysifztwe via @cdnchange \n\n#justiceforjohnnydepp
5
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/yyyajryxz via @cdnchange \n\n#justiceforjohnnydepp
4
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/s2ngnta5md via @cdnchange \n\n#justiceforjohnnydepp \n#justiceforjohnnydepp
4
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/j6ecforj53 via @cdnchange \n#justiceforjohnnydepp
3
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/zsofaxwy8c via @cdnchange \n\n#justiceforjohnnydepp
3
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/yyyajryxz via @cdnchange \n\n#justiceforjohnnydepp \n#justiceforjohnnydepp
3
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/j6ecforj53 via @cdnchange \n\n#justiceforjohnnydepp \n#justiceforjohnnydepp
3
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/s2ngnta5md via @cdnchange \n#justiceforjohnnydepp
3
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/w3ysifztwe via @cdnchange \n#justiceforjohnnydepp
3
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/yyyajryxz via @cdnchange \n#justiceforjohnnydepp
3
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/j6ecforj53 via @cdnchange \n#justiceforjohnnydepp \n#justiceforjohnnydepp
3
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/s2ngnta5md via @cdnchange \n#justiceforjohnnydepp
3
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/w3ysifztwe via @cdnchange \n#justiceforjohnnydepp
3
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/yyyajryxz via @cdnchange \n#justiceforjohnnydepp
3
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/j6ecforj53 via @cdnchange \n#justiceforjohnnydepp \n#justiceforjohnnydepp
2
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/zdthdzkhml via @cdnchange \n\n#justiceforjohnnydepp
2
#justiceforjohnnydepp\n\nthe people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/j6ecforj53 via @cdnchange
2
#justiceforjohnnydepp\n\ndc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/s2ngnta5md via @cdnchange
2
#justiceforjohnnydepp\n\nthe people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/w3ysifztwe via @cdnchange
2
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/pcrv49qd9a via @cdnchange \n\n#justiceforjohnnydepp
2
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/muilsagvqd via @cdnchange \n\n#justiceforjohnnydepp
2
@maralauracristi @deppmovienight i'm trying to figure out how watch mortdecai twice today (once for just me and then the family). its silly and fun and probably my favourit
e comedic piece since men in tights. tights, for me, never gets old! \n\n#deppmovienight \n#justiceforjohnnydepp \n#johnnydepp \n#johnuary
1
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/zsofaxwy8c via @cdnchange \n\n#justiceforjohnnydepp \n#johnnydepp \n#deppmovienight \n#d
eppember \n#johnuary
1
@deppsbroad @laurabockov i believe there is another event planned for jan. 3 2021 when the stand premieres in the uk. or do like i do and make every thursday (when new epis
odes of the stand are released in na) #deppmovienight.\n\n#justiceforjohnnydepp \n#deppember
1
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/zsofaxwy8c via @cdnchange \n#justiceforjohnnydepp \n#johnnydepp \n#amberherard\n#amberh
eardisiliar \n#amberheardisanabuser
1
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/zsofaxwy8c via @cdnchange \n\n#justiceforjohnnydepp \n#johnnydepp \n#amberheardisanabus
er \n#amberheardisiliar
1
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/zsofaxwy8c via @cdnchange \n\n#justiceforjohnnydepp \n#johnnydepp \n#amberheardisanabuse
r \n#amberheardisiliar
1
maybe she should be questioned about these events on the stand to show the lengths she'll go to for some pr....would love to hear the tale she would tell...\n\n#justiceforj
ohnnydepp
1
asked for googleplay cards for christmas so i can rent what i can't stream for #johnuary!\n\n#justiceforjohnnydepp \n#johnnydepp \n#deppmovienight \n#deppember
1
so far i've watched lone ranger and the first two potc. i'll finish the pirates series when the sils kiddies arrive so on to todays first screening of mortdecai for me!\n\n#
justiceforjohnnydepp \n#johnnydepp \n#deppmovienight \n#johnuary
1
@truth950272741 where are you watching city of lies? i have been trying to find it for days so i could work it into my line-up for today. i couldn't even find it for purch
ase in canada.\n\n#justiceforjohnnydepp \n#deppmovienight \n#johnuary
1
happy holidays everyone!\n\n#justiceforjohnnydepp \n#johnnydepp \n#deppmovienight \n#deppember
1
@029_mb maybe we need to trend #johnnydeppisgomez ?\n\n#justiceforjohnnydepp \n#deppmovienight \n#johnuary
1
new to social media so just asking a question...does instagram auto archive old posts? went to io's instagram and nothing before 2015 is showing up anymore. would these 201
3 posts have been deleted a few days ago when his account was offline?\n\n#justiceforjohnnydepp \n#johnnydepp
1
starting #deppmovienight with the lone ranger\n\n#justiceforjohnnydepp \n#johnuary https://t.co/33ufkv7jqf
1
good point! ah is right handed is she not? self inflicted perhaps?\n\n#justiceforjohnnydepp \n#johnnydepp
1
new year, new deletions for io....now down to 314 posts....maybe just shutting down his ig would have been easier....all the deleted info is still on a server somewhere so
deleting that many post does nothing but make you look guilty.\n\n#justiceforjohnnydepp \n#johnnydepp https://t.co/jqgax8mssr
1
@realmberheard @aperturewines @thesettingwines but i don't drink a lot....\n\n#justiceforjohnnydepp
1
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/zsofaxwy8c via @cdnchange \n\n#justiceforjohnnydepp \n#johnnydepp \n#johnuary \n#deppmovi
enight
1
@029_mb my understanding is that tim burton has come out and said he will not do addams family if jd is not gomez. seems to me if netflix wants burton for the series, then
then they have to take jd too. that's friendship!\n\n#justiceforjohnnydepp \n#deppmovienight \n#johnuary https://t.co/bke4maasn
1
@029_mb i know people have been gunning for eva greene as morticia for the netflix series, but my vote is for helenabonhamcarter!\n\n#justiceforjohnnydepp \n#deppmovienight
1
@brockpaige i would like to give a nod to the spirit horse as well! \n\n#justiceforjohnnydepp \n#johnnydepp \n#deppmovienight \n#johnuary https://t.co/dvquhxrsz8
1
@realmberheard @aperturewines @thesettingwines @realmberheard not gonna lie, was creeping your twitter to see if you were deleting like io and saw this scariness @adriaand
elanges unfolding. i have reported him even though i support #justiceforjohnnydepp. i hate your lies & fight against them but no one deserves this creep.
1
 @_missyc97_i hope they realize that some survived this massacre and are alive to this day...talk about triggering extremely abused victims....i wonder if a holocaust recre
ation pic is next....\n\n#justiceforjohnnydepp
1
had a friend tell me he was beaten by his wife for 26 yrs. only shared this when i told him i was mad that amber is getting away with abusing johnny depp. friend didn't thin
k he would be believed because he is a man. #justiceforjohnnydepp
1
and now for a little once upon a time in mexico... \n\n#deppember \n#deppmovienight \n#justiceforjohnnydepp \n#johnnydepp
1
its 5 am on dec. 18 here and its not #deppember anymore? tell my tv that, its still streaming jd!!! 🎉🎉 \n\n#deppember \n#deppmovienight \n#johnnydepp \n#justiceforjohnn
ydepp
1
watched @ellisgreg last night. he said he gets more likes from us than @thr got for their article so we shouldn't be too worried. most people know the truth it is futile t
o debate with the rest. \n\n#justiceforjohnnydepp
1
how does a bed "splinter" like that unless you are under the bed, get dragged out from under it and catch the wood on the way out. the shard has been pulled forward from und
erneath. damage should be to the top not the bottom....but oh, wait! a jack knife!\n\n#justiceforjohnnydepp
1
just in case anyone missed this yesterday, please vote....\n\n#justiceforjohnnydepp \n#johnnydepp \n#amberheardisanabuser \n#mentoo
1
a big thank you to everyone who has voted so far. thank you as well for those who have shared your experiences. its heart breaking to know so many have suffered from abuse
or know someone who has.\n\n#justiceforjohnnydepp \n#justiceforall
1
@andykrollock @moonwalkerkerkari you don't have to be a survivor to support survivors. whatever the reason, we're glad you're here. \n\n#justiceforjohnnydepp
1
```

```

just for general curiosity, why do you support the #justiceforjohnnydepp movement?
1
in my opinion, the only difference between them is that i like freddy krueger\n\n#justiceforjohnnydepp
1
a quick, back of the envelope calculation gives:\n\n2 million jd fans boycotting x $10 a movie ticket = $20 million loss at the box office\n\n#justiceforjohnnydepp
1
so, in 24 hours, i've watched:\n\npotc 1 thru 5\n\nmorddecai\n\nbenny and joon\nfear and loathing\nonce upon a time in mexico\nalice in wonderland\nsecret window\nwhat a day and
a short list! 😊 i could do a few more movie nights. so many more to see.\n\n#deppember \n#justiceforjohnnydepp
as a trained philosopher (and a woman not living under a rock) i have been seeing the feminist shift from equality to exceptionalism for years so i can't help but agree.\n\n
#mento\n#justiceforjohnnydepp
just so we are all clear, if jd's suit is revenge, then this is an implicit admission that ah wronged jd! #justiceforjohnnydepp https://t.co/xxmv2pl9u
1
can't help but feel that if jd wins in va, ah will say the jury were made up of bots..... #justiceforjohnnydepp
1
this precedent will only help criminals get away with things in the future! got someone raping a victim in an alleyway on cctv? no good since neither the victim or perpetrator
or was under oath during the rape!\n\n#justiceforjohnnydepp
1
actually, the real nightmare is that thanks to nichols' judgement, audio confessions are no longer evidence. this ruling has created a very dangerous legal precedent.\n\n#j
usticeforjohnnydepp
Name: text, dtype: int64

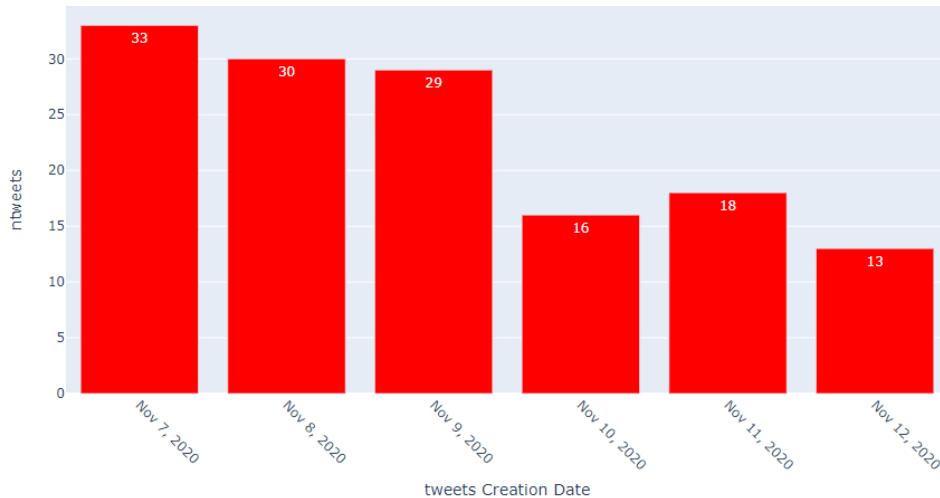
```

In [127...]

```
helpers.contr_peaks(tweets, "metallicarebear", n=6, threshold=0)
```

total number of tweets by "metallicarebear": 328

### "metallicarebear" Top Contributions



In [128...]

```
df_meta.head()
```

Out[128...]

	n_statuses	created_at	user_description	user_created_at	user_id	username	is_verified	user_location	n_followers	user_url	lang	profile_banner_url
467076	372	2020-11-06 02:52:01	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	en	NaN http://pbs.twimg.com/profile_im
467080	372	2020-11-06 02:54:59	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	en	NaN http://pbs.twimg.com/profile_im
467750	372	2020-11-06 12:46:57	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	en	NaN http://pbs.twimg.com/profile_im
467768	372	2020-11-06 12:59:18	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	und	NaN http://pbs.twimg.com/profile_im
467787	372	2020-11-06 13:11:24	NaN	2020-11-06 01:54:27	1324530506642477056	metallicarebear	False	NaN	12	NaN	und	NaN http://pbs.twimg.com/profile_im

### The SAME Month

- Distribution
- Same Hour
- Same Day
- Same Week
- **Same Month**

In [129...]

```

mask = (aquaman_petition.days_diff <= 30)

same_month = aquaman_petition[mask]
n_users = same_month.user_id.unique()
n_tweets = same_month.shape[0]
print(f'The number of accounts tweeted with "aquaman petition links" the same Day they were created ({n_users}) \nTweeted ({n_tweets}) Tweets')

```

The number of accounts tweeted with "aquaman petition links" the same Day they were created (1584)  
Tweeted (2460) Tweets

Tn [130...]

In [130]:

```
same_month.head()
```

Out[130...]

	n_statuses	created_at	user_description	user_created_at	user_id	username	is_verified	user_location	n_followers	user_url	lang
4577	4654	2018-03-18 22:06:17	Daily film news, intellectually stimulating ed...	2018-02-17 08:29:20	964778778143555585	Le Cinéphiles	False	Le Cinéma	17786	https://t.co/TexAcEQbue	en https://pbs.twimg.com/pr...
11046	4	2018-06-23 13:10:28	Avid book reader. Makeup artist. Face painter...	2018-06-06 13:07:34	1004349077243514881	Treenthemakeupmaven	False	Dallas	0	NaN	en
17049	40	2018-08-16 10:05:30	#ibelievehim ; #johnnydeppisinnocent	2018-08-03 08:58:01	1025304773220814850	Pikova Dama	False	Bosna i Hercegovina	13	NaN	en https://pbs.twimg.com/pr...
17586	1753	2018-08-18 08:36:53	Whatever you do in life, surround yourself wit...	2018-08-02 17:06:39	1025065350537392128	FadeArgent	False	NaN	49	NaN	en https://pbs.twimg.com/pr...
68500	1102	2019-03-20 03:55:51	NaN	2019-02-21 12:57:47	1098567458741538816	unknown	False	Canada	33	NaN	en

In [131...]

```
same_month.username.isnull().sum()
```

Out[131...]

```
0
```

#### NOTE:

- these accounts are not banned.

In [132...]

```
image = "http://abs.twimg.com/sticky/default_profile_images/default_profile_normal.png"
same_month_def = same_month[same_month['profile_image_url'] == image]
n_tweets = same_month_def.shape[0]
n_users_def = same_month_def.user_id.unique()

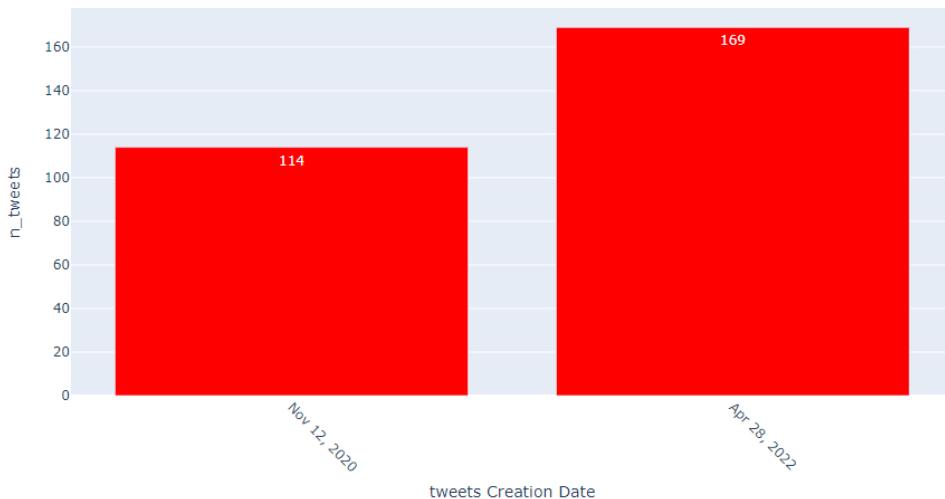
print(f'\n{n_users_def} users (with the default profile image) made a total of ({n_tweets}) "aquaman petition" tweets,\n in the same month of account creation\n')

(225) users (with the default profile image) made a total of (356) "aquaman petition" tweets,
in the same month of account creation
```

In [133...]

```
title = 'Peak contributions of the accounts tweeted "aquaman petition links" the same Month they were created'
df = same_month.groupby('date').size().reset_index(name='n_tweets')
df.sort_values('n_tweets', ascending=False, inplace=True)
helpers.bar_peaks(df.head(2), title, threshold=0, xlabel='tweets Creation Date')
```

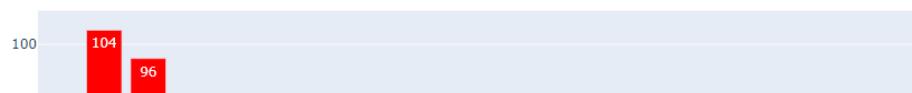
Peak contributions of the accounts tweeted "aquaman petition links" the same Month they were created

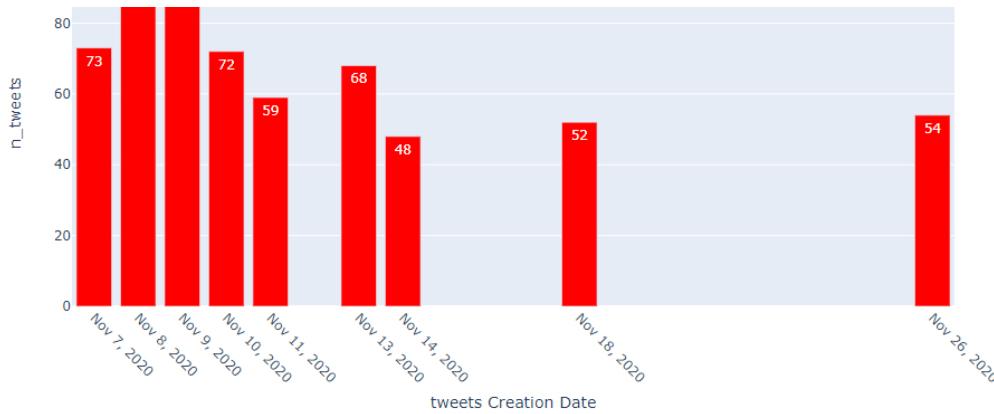


In [134...]

```
helpers.bar_peaks(df[2:].head(9), title, threshold=0, xlabel='tweets Creation Date')
```

Peak contributions of the accounts tweeted "aquaman petition links" the same Month they were created





```
In [135]: same_month.text.value_counts().head()
```

```
Out[135]: dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/s2ngnta5md via @cdnchange \n\n#justiceforjohnnydepp
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/vq7lnk6xq8 via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/2v6mnewq1 via @change
please sign the petition! https://t.co/n4oyifjxozi\#johnnydepp #justiceforjohnnydepp #boycottwarnerbros #boycottfantasticbeasts3 #fantasticbeasts
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/j6ecforj53 via @cdnchange \n\n#justiceforjohnnydepp
Name: text, dtype: int64
```

Top users tweeted with "aquaman petition links" the same Month they were created!

```
In [136]: same_month.username.value_counts().head()
```

```
Out[136]: metallicarebear      115
Andriana Pavlidou     107
Giovanna            44
Horae of Peace       38
Jeff                35
Name: username, dtype: int64
```

```
In [137]: same_month.user_screen_name.value_counts().head()
```

```
Out[137]: metallicarebear    115
A80577549          107
Giovann50640315    44
HoraeOf             38
Nomadjeff1         35
Name: user_screen_name, dtype: int64
```

## Exploring Tweets Created OVER TIME

- Tweets Metrics
- Users Tweets Metrics
- -----
- Duration After Account Creation
- **Tweets Created OVER TIME**
- Peak Dates
- -----
- Tweets on Peaks
- Most Repeated Tweets
- Same Text Same Date
- -----
- Unverified Accounts
- Deleted or Banned
- Default Profile Image
- Users Metrics

### "Aquaman Petition" Tweets Created in Each Year

- **Tweets Created in Each Year**
- Tweets Created in Each Month
- Tweets Created in Each Day
- Tweets Created in Each Day of 2018
- Tweets Created in Each Day of 2019
- Tweets Created in Each Day of 2020
- Tweets Created in Each Day of 2021
- Tweets Created in Each Day of 2022

Twitter was officially launched on December 15, 2006

```
In [138]: df_creations.date.min(), df_creations.date.max()
```

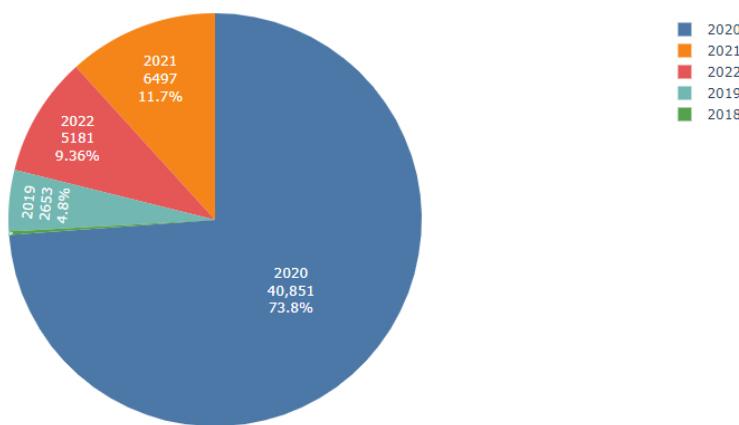
```
Out[138]: (Timestamp('2018-03-16 00:00:00'), Timestamp('2022-04-28 00:00:00'))
```

```
In [139]: df_years = df_creations.groupby('year')[['n_tweets']].sum().reset_index()
```

```
In [140]: ...
```

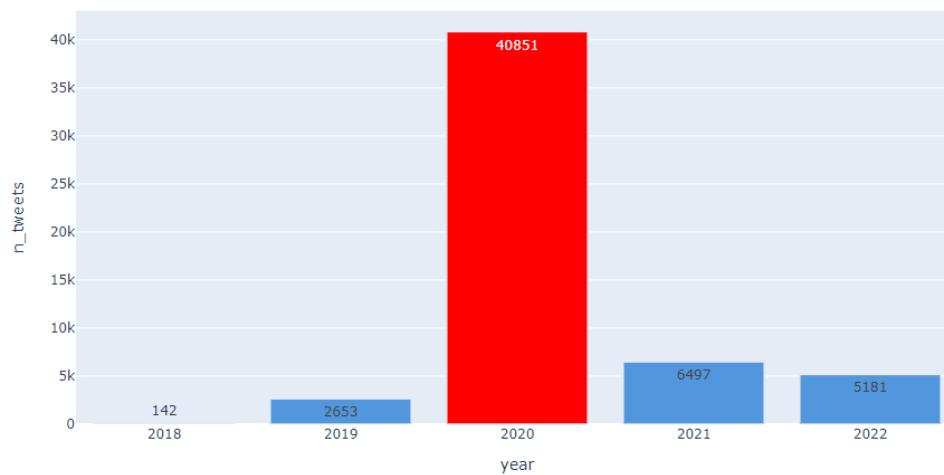
```
helpers.pie(dt_years, "Number of 'Aquman Petition' Tweets over Years")
```

Number of 'Aquman Petition' Tweets over Years



```
In [141]: helpers.bar(df_years, "year", "n_tweets", "Number of Tweets over Years", text=0, margin=25000)
```

Number of Tweets over Years

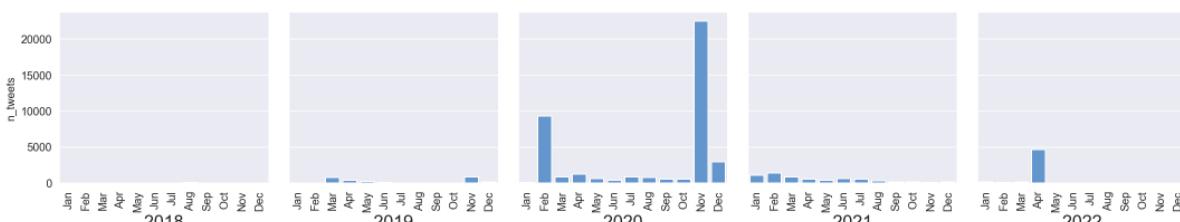


#### "Aquman Petition" Tweets Created in Each Month

- Tweets Created in Each Year
- **Tweets Created in Each Month**
- Tweets Created in Each Day
- Tweets Created in Each Day of 2018
- Tweets Created in Each Day of 2019
- Tweets Created in Each Day of 2020
- Tweets Created in Each Day of 2021
- Tweets Created in Each Day of 2022

```
In [142]: df_month = df_creations.groupby(['month', 'year'])['n_tweets'].sum().reset_index()  
helpers.facet_day_month(df_month, "month", "n_tweets", facet_on='year', n_col=5)
```

"Aquman Petition" n\_tweets Created in Each Month



NOTE:

- 2020 Peaks --> Feb, Nov

### "Aquman Petition" Tweets Created in Each Day

- Tweets Created in Each Year
- Tweets Created in Each Month
- **Tweets Created in Each Day**
- Tweets Created in Each Day of 2018
- Tweets Created in Each Day of 2019
- Tweets Created in Each Day of 2020
- Tweets Created in Each Day of 2021
- Tweets Created in Each Day of 2022

```
In [143... df_creations.head(1)
```

	date	year	month	dayofmonth	hour	n_tweets	by_accounts	#created_accounts
0	2022-04-28	2022	Apr	28	16	276	267	4.0

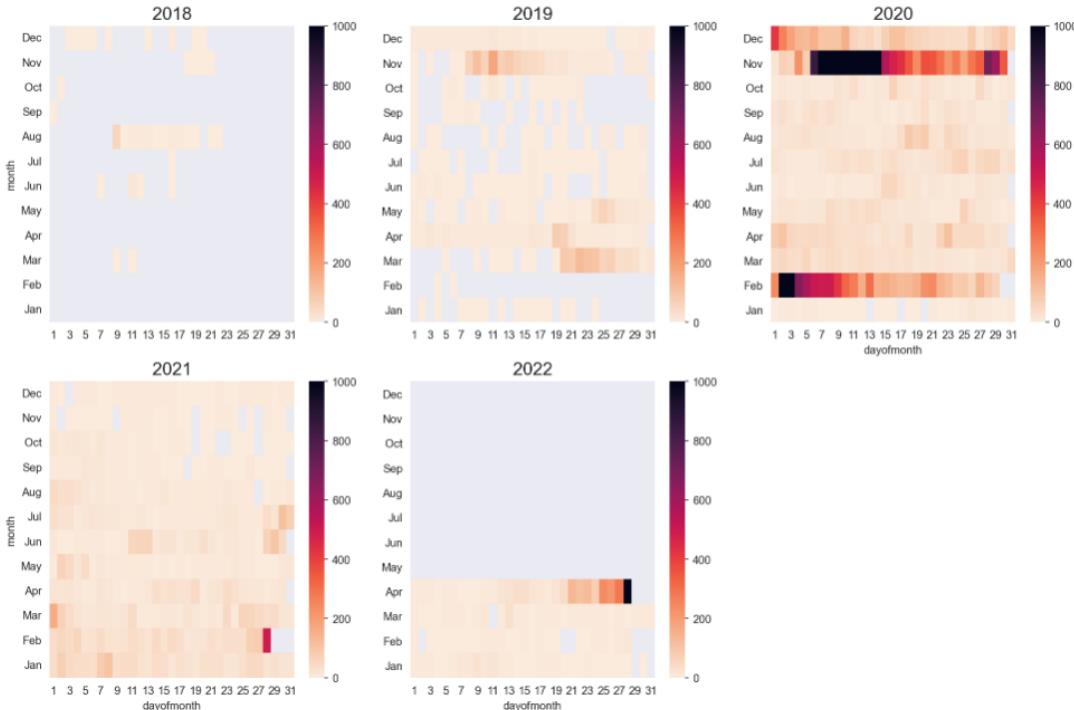
```
In [144... df_daily = (
    df_creations.groupby(['date', 'year', 'month', 'dayofmonth'])
    [[n_tweets, by_accounts, '#created_accounts']].sum().reset_index()
)
df_daily.head(1)
```

	date	year	month	dayofmonth	n_tweets	by_accounts	#created_accounts
0	2018-03-16	2018	Mar	16	1	1	3.0

```
In [145... # importlib.reload(helpers)
```

```
In [146... title = 'A Heat Map for the Count of "Aquman Petition" Tweets in Each Day'
helpers.facet_heat(df_daily, title, n_col=3, vmax=1000)
```

A Heat Map for the Count of "Aquman Petition" Tweets in Each Day



```
In [147... df_daily_18 = df_daily[df_daily['year'] == 2018]
df_daily_19 = df_daily[df_daily['year'] == 2019]
df_daily_20 = df_daily[df_daily['year'] == 2020]
df_daily_21 = df_daily[df_daily['year'] == 2021]
df_daily_22 = df_daily[df_daily['year'] == 2022]
```

### "Aquman Petition" Tweets Created in Each Day of 2018

- Tweets Created in Each Year
- Tweets Created in Each Month
- Tweets Created in Each Day
- **Tweets Created in Each Day of 2018**
- Tweets Created in Each Day of 2019
- Tweets Created in Each Day of 2020
- Tweets Created in Each Day of 2021
- Tweets Created in Each Day of 2022

In [148]:

```
helpers.facet_day_month(df_daily_18, "dayofmonth", "n_tweets", facet_on='month', n_col=4, year_str='2018')
```

"Aquman Petition" n\_tweets Created in Each Day of 2018



"Aquman Petition" Tweets Created in Each Day of 2019

- Tweets Created in Each Year
- Tweets Created in Each Month
- Tweets Created in Each Day
- Tweets Created in Each Day of 2018
- **Tweets Created in Each Day of 2019**
- Tweets Created in Each Day of 2020
- Tweets Created in Each Day of 2021
- Tweets Created in Each Day of 2022

In [149]:

```
helpers.facet_day_month(df_daily_19, "dayofmonth", "n_tweets", facet_on='month', n_col=4, year_str='2019')
```

"Aquman Petition" n\_tweets Created in Each Day of 2019



"Aquman Petition" Tweets Created in Each Day of 2020

#### Aquman Petition - Tweets Created in Each Day of 2020

- Tweets Created in Each Year
- Tweets Created in Each Month
- Tweets Created in Each Day
- Tweets Created in Each Day of 2018
- Tweets Created in Each Day of 2019
- **Tweets Created in Each Day of 2020**
- Tweets Created in Each Day of 2021
- Tweets Created in Each Day of 2022

In [150]:

```
helpers.facet_day_month(df_daily_20, "dayofmonth", "n_tweets", facet_on='month', n_col=4, year_str='2020')
```

"Aquman Petition" n\_tweets Created in Each Day of 2020



#### "Aquman Petition" Tweets Created in Each Day of 2021

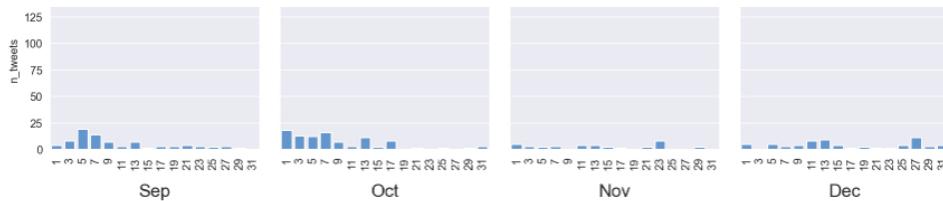
- Tweets Created in Each Year
- Tweets Created in Each Month
- Tweets Created in Each Day
- Tweets Created in Each Day of 2018
- Tweets Created in Each Day of 2019
- Tweets Created in Each Day of 2020
- **Tweets Created in Each Day of 2021**
- Tweets Created in Each Day of 2022

In [151]:

```
helpers.facet_day_month(df_daily_21, "dayofmonth", "n_tweets", facet_on='month', n_col=4, year_str='2021')
```

"Aquman Petition" n\_tweets Created in Each Day of 2021





### "Aquman Petition" Tweets Created in Each Day of 2022

- Tweets Created in Each Year
- Tweets Created in Each Month
- Tweets Created in Each Day
- Tweets Created in Each Day of 2018
- Tweets Created in Each Day of 2019
- Tweets Created in Each Day of 2020
- Tweets Created in Each Day of 2021
- Tweets Created in Each Day of 2022

In [152]

```
helpers.facet_day_month(df_daily_22, "dayofmonth", "n_tweets", facet_on='month', n_col=4, year_str='2022')
```

### "Aquman Petition" n\_tweets Created in Each Day of 2022



### Investigate Peaks

- Tweets Metrics
- Users Tweets Metrics
- -----
- Duration After Account Creation
- Tweets Created OVER TIME
- Peak Dates
- -----
- Tweets on Peaks
- Most Repeated Tweets
- Same Text Same Date
- -----
- Unverified Accounts
- Deleted or Banned
- Default Profile Image
- Users Metrics

#### NOTE:

- 2020 Peaks --> Feb, Nov
- 2022 Peaks --> Apr

In [153]

```
df_peaks = df_daily.sort_values('n_tweets', ascending=False)
df_peaks.head(10)
```

Out[153...]

date	year	month	dayofmonth	n_tweets	by_accounts	#created_accounts
------	------	-------	------------	----------	-------------	-------------------

1100	2022-04-28	2022	Apr	28	3231	3128	94.0
586	2020-11-12	2020	Nov	12	3197	3015	174.0
587	2020-11-13	2020	Nov	13	2493	2340	173.0
582	2020-11-08	2020	Nov	8	2094	1929	261.0
583	2020-11-09	2020	Nov	9	1752	1590	245.0
302	2020-02-02	2020	Feb	2	1654	1607	297.0
581	2020-11-07	2020	Nov	7	1565	1432	384.0
585	2020-11-11	2020	Nov	11	1482	1394	163.0
584	2020-11-10	2020	Nov	10	1447	1266	196.0
588	2020-11-14	2020	Nov	14	1134	1072	143.0

In [154]:

```
# filter on dates with peaks
df_peaks = df_peaks[['date', 'n_tweets']]
df_peaks_18 = df_peaks[df_peaks.date.dt.year == 2018]
df_peaks_19 = df_peaks[df_peaks.date.dt.year == 2019]
df_peaks_20 = df_peaks[df_peaks.date.dt.year == 2020]
df_peaks_21 = df_peaks[df_peaks.date.dt.year == 2021]
df_peaks_22 = df_peaks[df_peaks.date.dt.year == 2022]
```

In [155]:

```
df_feb_20 = df_peaks[(df_peaks.date.dt.year == 2020) & (df_peaks.date.dt.month == 2)]
df_nov_20 = df_peaks[(df_peaks.date.dt.year == 2020) & (df_peaks.date.dt.month == 11)]
df_dec_20 = df_peaks[(df_peaks.date.dt.year == 2020) & (df_peaks.date.dt.month == 12)]
df_apr_22 = df_peaks[(df_peaks.date.dt.year == 2022) & (df_peaks.date.dt.month == 4)]
```

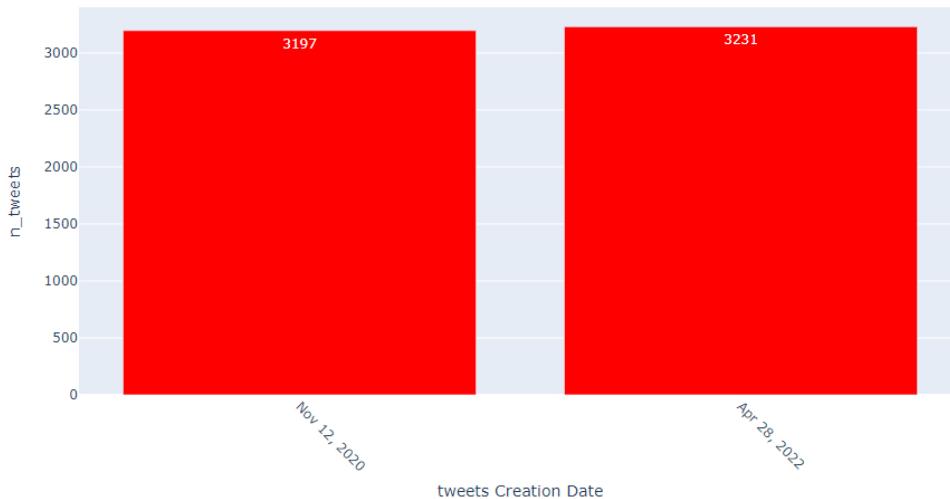
## Peaks in All Years

- All Years
- 2018
- 2019
- 2020
- 2021
- 2022

In [156]:

```
helpers.bar_peaks(df_peaks.head(2), "Dates with the Highest Number of 'Aquaman Petition' Tweets in All Years", threshold=0)
```

Dates with the Highest Number of 'Aquaman Petition' Tweets in All Years



In [157]:

```
helpers.bar_peaks(df_peaks[2:].head(3), "Dates with the Highest Number of 'Aquaman Petition' Tweets in All Years")
```

Dates with the Highest Number of 'Aquaman Petition' Tweets in All Years



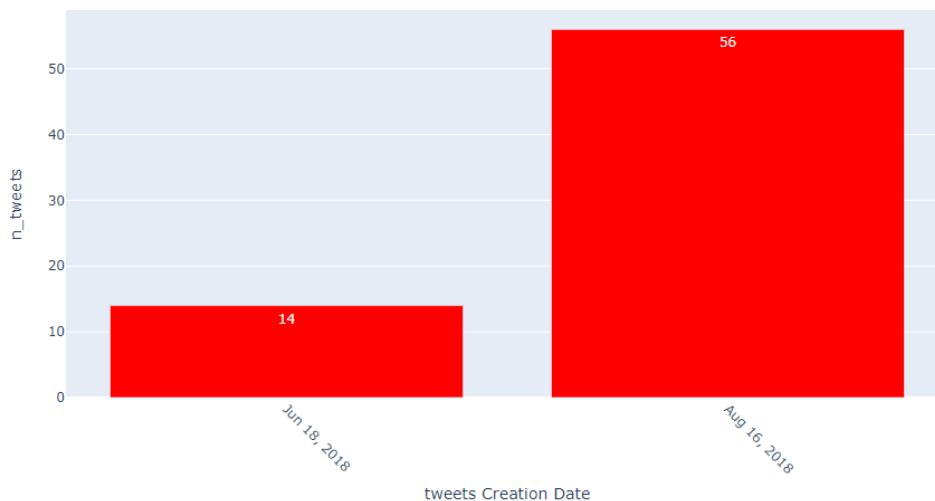


### 2018 Peaks

- All Years
- 2018
- 2019
- 2020
- 2021
- 2022

```
In [158]: helpers.bar_peaks(df_peaks_18.head(2), "Dates with the Highest Number of 'Aquaman Petition' Tweets in 2018")
```

Dates with the Highest Number of 'Aquaman Petition' Tweets in 2018

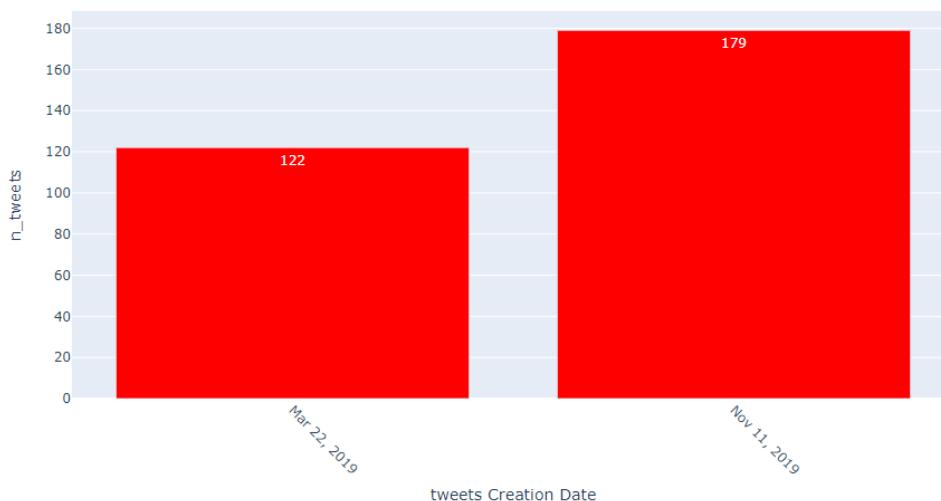


### 2019 Peaks

- All Years
- 2018
- 2019
- 2020
- 2021
- 2022

```
In [159]: helpers.bar_peaks(df_peaks_19.head(2), "Dates with the Highest Number of 'Aquaman Petition' Tweets in 2019")
```

Dates with the Highest Number of 'Aquaman Petition' Tweets in 2019



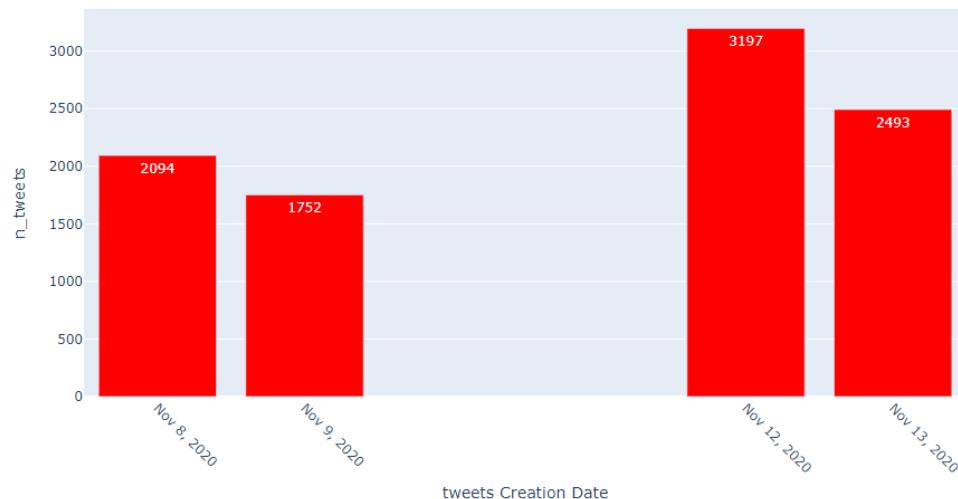
## 2020 Peaks

- All Years
- 2018
- 2019
- **2020**
- 2021
- 2022

In [160]

```
helpers.bar_peaks(df_peaks_20.head(4), "Dates with the Highest Number of 'Aquaman Petition' Tweets in 2020")
```

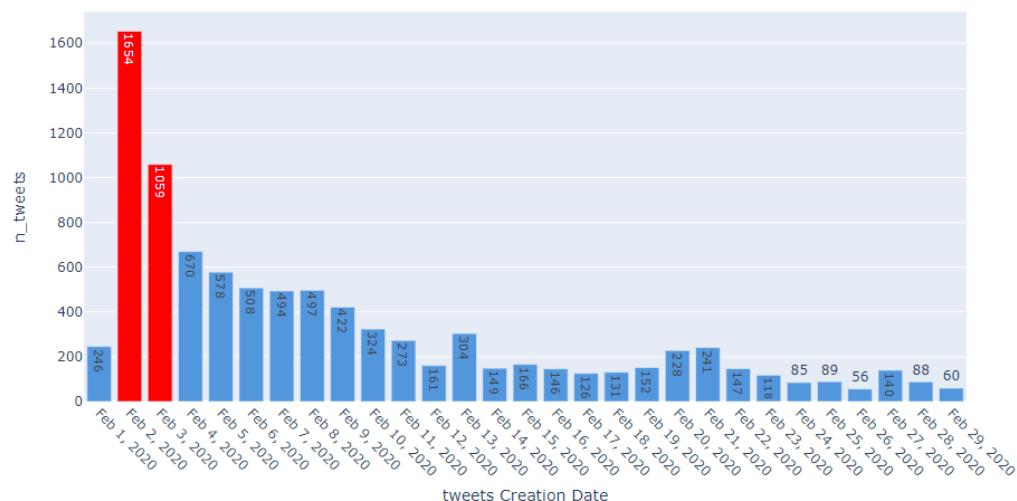
Dates with the Highest Number of 'Aquaman Petition' Tweets in 2020



In [161]

```
helpers.bar_peaks(df_feb_20, "'Aquaman Petition' Tweets Created in Each Day of Feb 2020", 1000)
```

'Aquaman Petition' Tweets Created in Each Day of Feb 2020

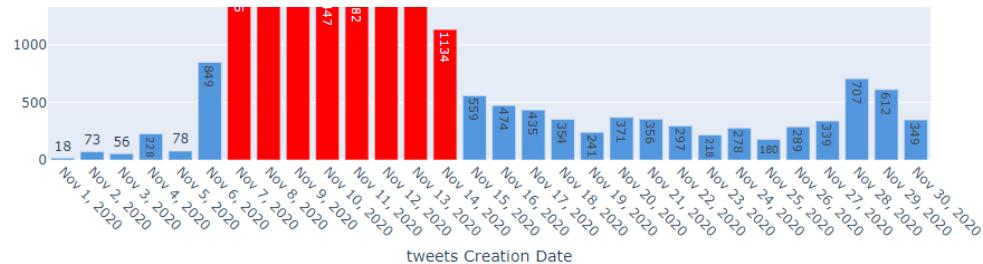


In [162]

```
helpers.bar_peaks(df_nov_20, "'Aquaman Petition' Tweets Created in Each Day of Nov 2020", 1000)
```

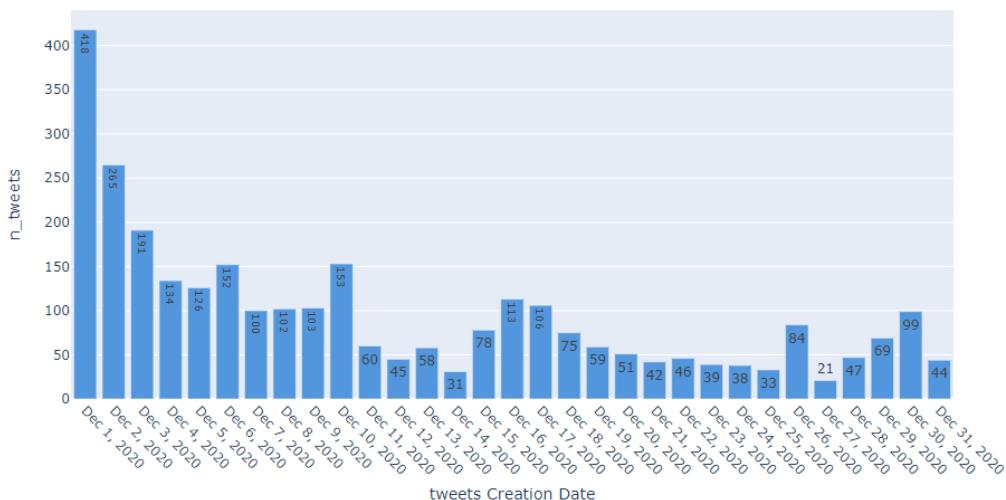
'Aquaman Petition' Tweets Created in Each Day of Nov 2020





```
In [163]: helpers.bar_peaks(df_dec_20, "'Aquaman Petition' Tweets Created in Each Day of Dec 2020", 1000)
```

'Aquaman Petition' Tweets Created in Each Day of Dec 2020

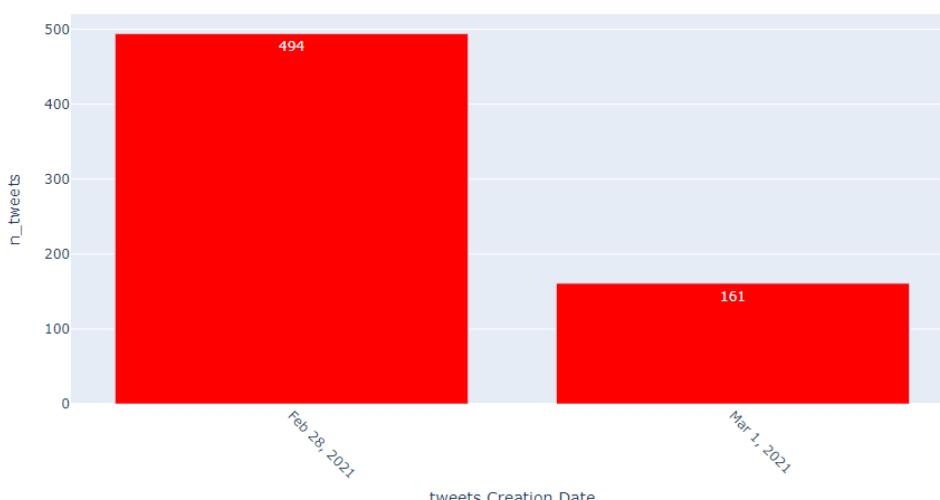


## 2021 Peaks

- All Years
- 2018
- 2019
- 2020
- **2021**
- 2022

```
In [164]: helpers.bar_peaks(df_peaks_21.head(2), "Dates with the Highest Number of 'Aquaman Petition' Tweets in 2021")
```

Dates with the Highest Number of 'Aquaman Petition' Tweets in 2021

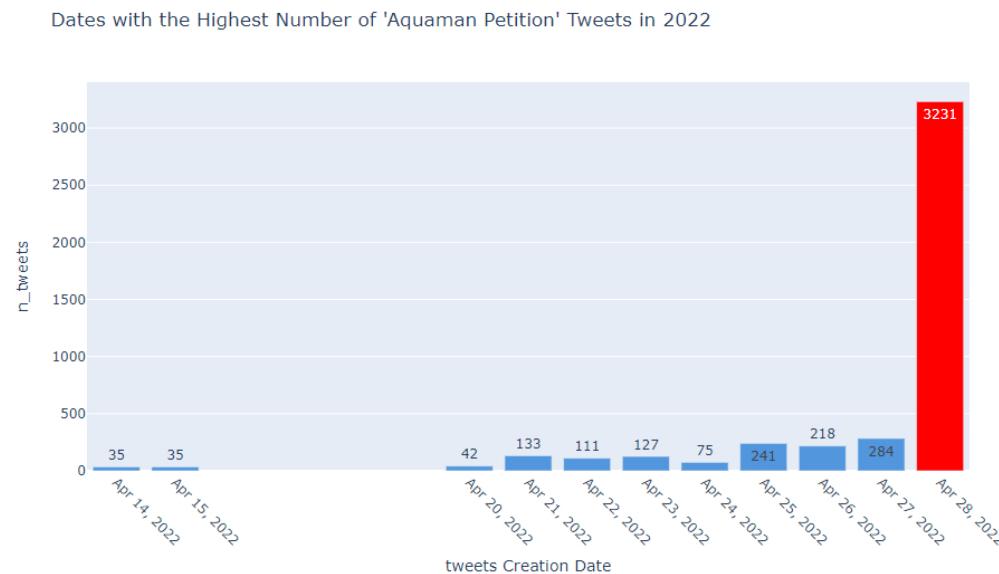


## 2022 Peaks

- All Years
- 2018
- 2019

- 2020
- 2021
- 2022

```
In [165]: helpers.bar_peaks(df_peaks_22.head(11), "Dates with the Highest Number of 'Aquaman Petition' Tweets in 2022", threshold=3000)
```



## "Aquaman Petition" Tweets on Peaks

- Tweets Metrics
- Users Tweets Metrics
- -----
- Duration After Account Creation
- Tweets Created OVER TIME
- Peak Dates
- -----
- **Tweets on Peaks**
- Most Repeated Tweets
- Same Text Same Date
- -----
- Unverified Accounts
- Deleted or Banned
- Default Profile Image
- Users Metrics

## "Aquaman Petition" Tweets on Peak Dates

- **Tweets on Peak Dates**
- Tweets on Peak Hours
- Tweets on Peak Times

### Peak Dates

```
In [166]: df_peaks.head(10)
```

```
Out[166]:
```

	date	n_tweets
1100	2022-04-28	3231
586	2020-11-12	3197
587	2020-11-13	2493
582	2020-11-08	2094
583	2020-11-09	1752
302	2020-02-02	1654
581	2020-11-07	1565
585	2020-11-11	1482
584	2020-11-10	1447
588	2020-11-14	1134

2022-04-28 --> (3626 Tweets)

```
In [167]: mask = (aquaman_petition.date.astype(str)=="2022-04-28")
```

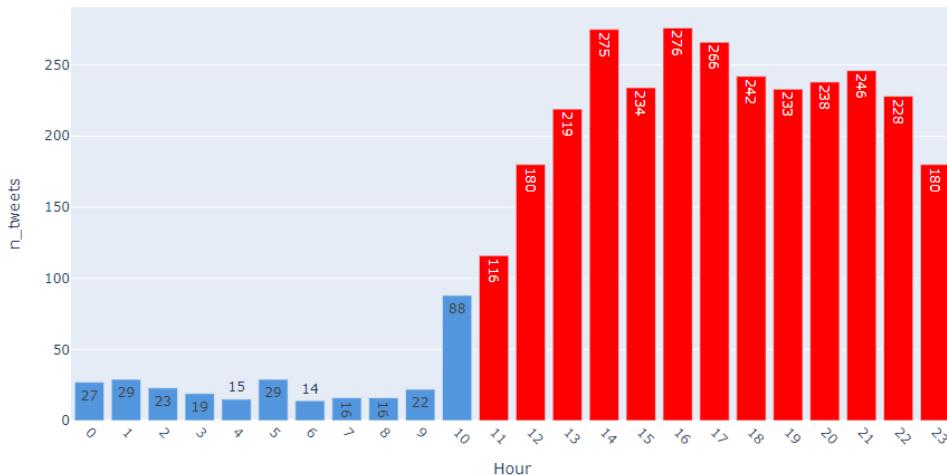
```

df = aquaman_petition[mask]
tmp = df.groupby('hour').size().reset_index(name='n_tweets')

title = '"Aquaman Petition" Contributions on (2022-04-28)'
helpers.bar_peaks(tmp, title, threshold=90, xlabel='Hour')

```

"Aquaman Petition" Contributions on (2022-04-28)



```
In [168]: aquaman_petition[aquaman_petition.date.astype(str) == "2022-04-28"]["text"].value_counts().head()
```

```
Out[168]:
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/8829dkv21h via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/f06emailvb @change használatával
,dc entertainment: remove amber heard from aquaman 2" - jetzt unterschreiben! https://t.co/dqnsrv3v2k via @changegeger
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/usypylijybg via @changeorg_india
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/uwio4vjnc via @change
Name: text, dtype: int64
```

```
In [169]: aquaman_petition[aquaman_petition.date.astype(str) == "2022-04-28"]["username"].value_counts().head()
```

```
Out[169]:
leah bennett      7
Crystal Moore     6
Jaybee34         6
Michelle          5
Stacey Innocent   4
Name: username, dtype: int64
```

2020-11-12 --> (3595 Tweets)

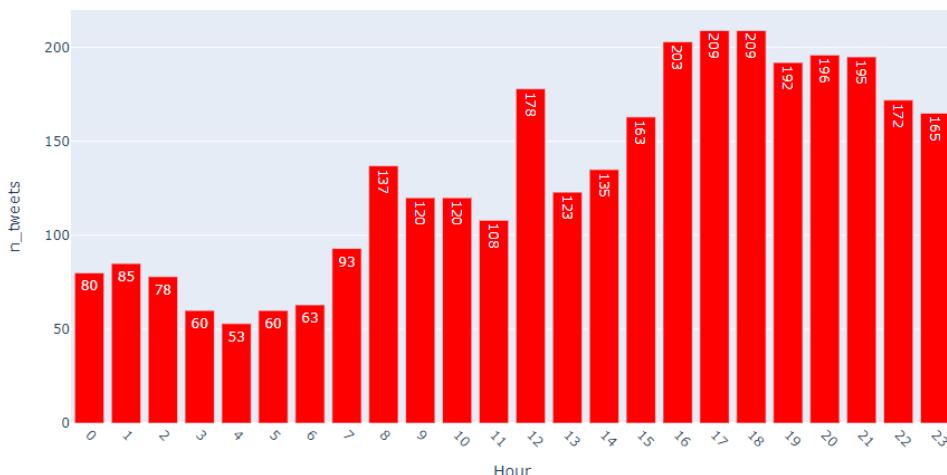
```

mask = (aquaman_petition.date.astype(str)=="2020-11-12")
df = aquaman_petition[mask]
tmp = df.groupby('hour').size().reset_index(name='n_tweets')

title = '"Aquaman Petition" Contributions on (2020-11-12)'
helpers.bar_peaks(tmp, title, threshold=0, xlabel='Hour')

```

"Aquaman Petition" Contributions on (2020-11-12)



```
In [171]: aquaman_petition[aquaman_petition.date.astype(str) == "2020-11-12"]["text"].value_counts().head()
```

```
Out[171]:
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/pckoilujs via @ukchange
warner brothers: emilia clarke to replace amber heard as mera on aquaman 2 - sign the petition! https://t.co/tqygilzheo via @change
Name: text, dtype: int64
```

```
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/hnyykb21hv via @change  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/cqezpn34zw via @ukchange  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/wgbdjj6iai via @change  
Name: text, dtype: int64
```

```
In [172... aquaman_petition[aquaman_petition.date.astype(str) == "2020-11-12"]["username"].value_counts().head()
```

```
Support Johnny Depp 🌟 Stream City of Lies      27  
metallicarebear                                10  
Tanya GB 🇺🇸 Wald-Mignon #JusticeForJohnnyDepp    9  
Idea@JusticeForJohnnyDepp                      8  
Stephanie Brown                                 8  
Name: username, dtype: int64
```

## "Aquaman Petition" Tweets on Peak Hours

- [Tweets on Peak Dates](#)
- [Tweets on Peak Hours](#)
- [Tweets on Peak Times](#)

```
In [173... aquaman_petition.head(1)
```

	n_statuses	created_at	user_description	user_created_at	user_id	username	is_verified	user_location	n_followers	user_url	lang	profile_banner_u
4434	2860	2018-03-16 21:52:09	I pretend to be sophisticated, but really I'm ...	2016-06-29 18:06:35	748216104565235712	Morgan	False	NaN	177	https://t.co/7NIXfsBF9J	en	https://pbs.twimg.com/profile_banners/748216104565235712/1583530800/1583530800

```
In [174... df_peak_hrs = aquaman_petition.groupby(['date', 'hour']).agg({'text':'count'}).reset_index()  
.rename(columns={'text':'n_tweets'}).sort_values('n_tweets', ascending=False)
```

```
df_peak_hrs.head(15)
```

	date	hour	n_tweets
10236	2022-04-28	16	276
10234	2022-04-28	14	275
10237	2022-04-28	17	266
10241	2022-04-28	21	246
10238	2022-04-28	18	242
10240	2022-04-28	20	238
10235	2022-04-28	15	234
10239	2022-04-28	19	233
10242	2022-04-28	22	228
10233	2022-04-28	13	219
5321	2020-11-13	0	215
5314	2020-11-12	17	209
5315	2020-11-12	18	209
5313	2020-11-12	16	203
5317	2020-11-12	20	196

## Users with The Most Tweets on the same hour

```
In [175... df = aquaman_petition.groupby(['date', 'hour', 'username']).agg({'text':'count'}).reset_index()  
.rename(columns={'text':'n_tweets'}).sort_values('n_tweets', ascending=False)
```

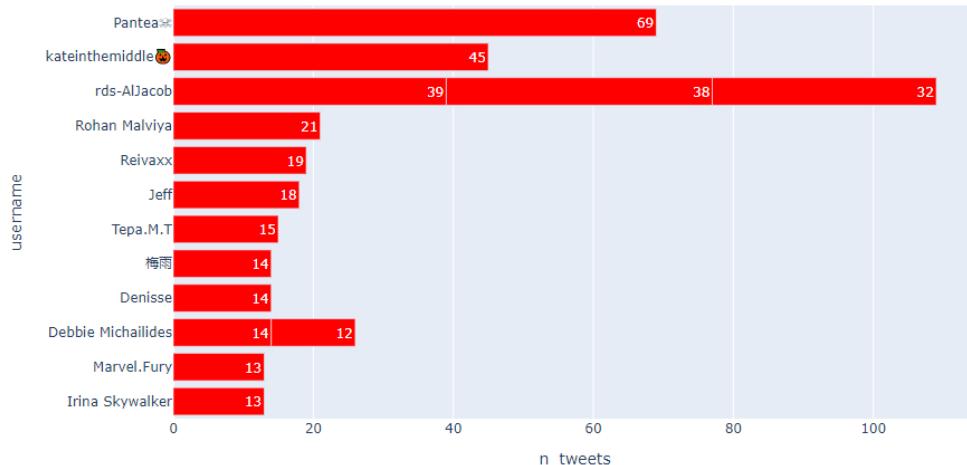
```
print(df.shape)
df.head(15)
```

```
(51849, 4)
```

	date	hour	username	n_tweets
29068	2020-11-13	0	Pantea 🌸	69
22874	2020-11-09	17	kateinthemiddle 🌸	45
23913	2020-11-10	13	rds-AlJacob	39
23860	2020-11-10	12	rds-AlJacob	38
23958	2020-11-10	14	rds-AlJacob	32
20038	2020-11-08	2	Rohan Malviya	21
36029	2020-11-26	19	Reivaxx	19
33879	2020-11-18	5	Jeff	18
35567	2020-11-24	15	Tepa.M.T	15
19111	2020-11-07	13	梅雨	14
37349	2020-11-29	10	Denisse	14
43724	2021-03-23	16	Debbie Michailides	14
44932	2021-06-11	13	Marvel.Fury	13
41013	2021-01-07	12	Irina Skywalkerer	13
43726	2021-03-23	17	Debbie Michailides	12

```
In [176... title = 'Users with The Most "Aquaman Petition" Contributions on Each Hour'
helpers.bahr(df[['username', 'n_tweets']].head(15), title, c='red') # , c=colors
```

Users with The Most "Aquaman Petition" Contributions on Each Hour



Pantea (69) "Aquaman Petition" Tweets (2020-11-13) on the same hour (12:00 am)

```
In [177... mask = (aquaman_petition.date.astype(str)=="2020-11-13") & (aquaman_petition.username=="Pantea")
tmp = aquaman_petition[mask]
tmp.text.value_counts().head(30)
```

```
@alexedorado dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change
@asharblz dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change
@mattlovescinema dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq
@lewisjohny2 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq
@gwcpika dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change
@bredgaming dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change
@slimeseason35 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change
@emarged dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change
@gay_moana dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change
@infinitejay dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change
@holyska1991 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change
@gingerstale dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change
@astronixii dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change
@gibjock dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change
@emily_jayne1233 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change
@poedjarin dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change
@andrew_muench dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq
@unlucky_em dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq
@nullahh dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupumiy
@broncosjrr dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq
@selrareheartbeb dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq
@skcomics2 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq
@pantherhollyann dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq
@nazaeukunife dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq
@redapplesquares dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq
@alidoinferno dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq
@moonfiyahh dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq
@immortallydum dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq
@jamiekinnear2 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq
@happygamerlife dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq
Name: text, dtype: int64
```

misscastle13 (56) "Aquaman Petition" Tweets (2020-11-06) on the same hour (08:00 pm)

```
In [178... mask = (aquaman_petition.date.astype(str)=="2020-11-06") & (aquaman_petition.username=="misscastle13")
tmp = aquaman_petition[mask]
tmp.text.value_counts().head(30)
```

```
Out[178... Series([], Name: text, dtype: int64)
```

kateinthemiddle (45) "Aquaman Petition" Tweets (2020-11-09) on the same hour (05:00 pm)

```
In [179... mask = (aquaman_petition.date.astype(str)=="2020-11-09") & (aquaman_petition.username=="kateinthemiddle")
tmp = aquaman_petition[mask]
tmp.text.value_counts().head(30)
```

```
@mygrindelwald lets save johnny! sign & share these petitions! together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@deppxblake lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@dariapankov lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@follllllll_ lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@kountryserenity lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@himespet lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@juliee_nc lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@ricanahicar
```

```

@hectorray0623 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #ambe
rheardisanabuser 1
@bey_bts lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amberheard
isanabuser 1
@irem_yagmur_ lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amber
heardisanabuser 1
@colt_arold lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amberh
eardisanabuser 1
@bacacov lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amberheard
isanabuser 1
@adityam3199 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amberh
eardisanabuser 1
@kishiteirudarin lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #am
berheardisanabuser 1
@jessconnell1 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amber
heardisanabuser 1
@suspectbuddy @coramelodie @realamberheard @kamalaharris lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amberheardisanabuser 1
@swami_ananya lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amber
heardisanabuser 1
@philmitchell83 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amb
erheardisanabuser 1
@sineonfirinne lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amb
rheardisanabuser 1
@maggconbound lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amber
heardisanabuser 1
@vintage_tabitha lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #am
berheardisanabuser 1
@genevieidepp lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amberh
eardisanabuser 1
@mey9015115 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amberh
eardisanabuser 1
@bnerd187 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amberhear
disanabuser 1
@black_lady83 @change_mex lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnn
ydepp #amberheardisanabuser 1
@nicsimx lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amberheard
isanabuser 1
@thenamesq lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amberhea
rdisanabuser 1
@clarcanuwu lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehc0ms & https://t.co/94flec4l3j #justiceforjohnnydepp #amberh
eardisanabuser 1
@peanut1_1 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amberhea
rdisanabuser 1
@teamdepp_ lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmrrt #justiceforjohnnydepp #amberhea
rdisanabuser 1
Name: text, dtype: int64

```

## "Aquaman Petition" Tweets on Peak Times

- Tweets on Peak Dates
- Tweets on Peak Hours
- [Tweets on Peak Times](#)

```
In [180... df_peak_times = aquaman_petition.groupby('created_at').count()['text'].reset_index(name='n_tweets')\n.sort_values('n_tweets', ascending=False)\n\ndf_peak_times.head()
```

```
Out[180...   created_at  n_tweets\n42031  2020-12-10 17:23:29      3\n29974  2020-11-12 19:37:54      3\n30731  2020-11-13 00:00:03      3\n22366  2020-11-08 17:53:12      2\n3192   2020-02-02 00:54:11      2
```

## 29 Users Tweeted more than one Tweet on the same Second

```
In [181... df = aquaman_petition.groupby(['created_at', 'username']).agg({'text':'count'}).reset_index(\n).rename(columns={'text':'n_tweets'}).sort_values('n_tweets', ascending=False)\n\ndf = df[df.n_tweets > 1]\n\nprint(f'Unique number of users: {df.username.nunique()}')\nprint(f'Total number of Tweets: {df.n_tweets.sum()}\n\ndf.head(15)
```

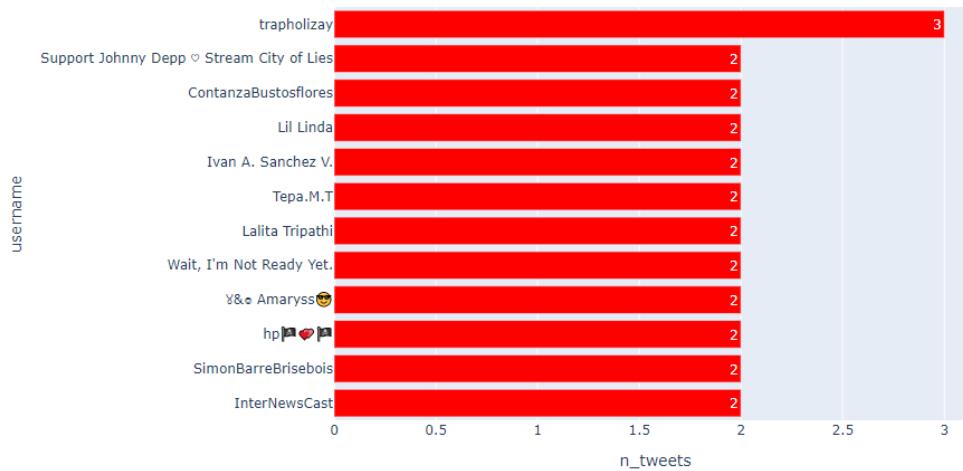
Unique number of users: 12  
Total number of Tweets: 25

created_at	username	n_tweets
42357	trapholizay	3
22583	SupportJohnny Depp ☺ Stream City of Lies	2
25349	ContanzaBustosflores	2
54620	Lil Linda	2
52996	Ivan A. Sanchez V.	2
49750	Tepa.M.T	2
50278	Lalita Tripathi	2
39318	Wait, I'm Not Ready Yet.	2
23604	Y&@ Amaryss😊	2
46597	hp 🌟 ❤️ 🎉	2

```
18795 2020-11-06 18:23:11           SimonBarreBrisebois  2
46268 2021-03-01 14:02:08          InterNewsCast      2
```

```
In [182... title = 'Users with The Most "Aquaman Petition" Contributions on The same Time'
helpers.bahr(df[['username', 'n_tweets']].head(15), title, c='red') # , c=colors
```

### Users with The Most "Aquaman Petition" Contributions on The same Time



```
In [183... aquaman_petition.duplicated().sum()
```

```
Out[183... 0
```

```
In [184... aquaman_petition[aquaman_petition.created_at.astype(str) == "2020-12-10 17:23:29"]
```

	n_statuses	created_at	user_description	user_created_at	user_id	username	is_verified	user_location	n_followers	user_url	lang	profile_banner_url
693851	42545	2020-12-10 17:23:29	News aggregator for hip-hop	2020-01-27 01:17:47	1221603113477591042	trapholizay	False	The Internet	16	https://t.co/RtCeEzOF18	en	NaN http://pbs.twimg.com
693850	42545	2020-12-10 17:23:29	News aggregator for hip-hop	2020-01-27 01:17:47	1221603113477591042	trapholizay	False	The Internet	16	https://t.co/RtCeEzOF18	en	NaN http://pbs.twimg.com
693849	42545	2020-12-10 17:23:29	News aggregator for hip-hop	2020-01-27 01:17:47	1221603113477591042	trapholizay	False	The Internet	16	https://t.co/RtCeEzOF18	en	NaN http://pbs.twimg.com

```
In [185... print("\nIdentical Tweets data except for the created petition link\n")
aquaman_petition[aquaman_petition.created_at.astype(str) == "2020-12-10 17:23:29"].text.value_counts()
```

```
Identical Tweets data except for the created petition link
johnny depp reportedly tries to have amber heard fired from "aquaman 2"\n\n#amberheard #aquaman2 #beef #johnnydepp #johnnydeppabuseallegations #m...\\nhttps://t.co/rehhrj8x7q
johnny depp reportedly tries to have amber heard fired from "aquaman 2"\n\n#amberheard #aquaman2 #beef #johnnydepp #johnnydeppabuseallegations #m...\\nhttps://t.co/ofenkvtjtce
johnny depp reportedly tries to have amber heard fired from "aquaman 2"\n\n#amberheard #aquaman2 #beef #johnnydepp #johnnydeppabuseallegations #m...\\nhttps://t.co/0xt4vor5zh
Name: text, dtype: int64
```

## Most Repeated Tweets

- Tweets Metrics
- Users Tweets Metrics
- -----
- Duration After Account Creation
- Tweets Created OVER TIME
- Peak Dates
- -----
- Tweets on Peaks
- **Most Repeated Tweets**
- Same Text Same Date

- 
- Unverified Accounts
- Deleted or Banned
- Default Profile Image
- Users Metrics

```
In [186]: aquaman_petition.text.value_counts().head(30)

Out[186]: remove the turd from aquaman 2 petition: https://t.co/osnxmehphw\n\n#justiceforjohnnydepp #johnnydeppisinnocent\n#johnnydepp #fireamberheard #amberturd #boycottwarnerbros #boycottdisney #boycottthesun
@gn_geeknation please help sign, share & retweet. thanks, you're fantastic.\n\n'l'oréal: remove amber heard as l'oreal spokesperson - sign the petition! https://t.co/p7sbttmnb via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/ayervx1tkr via @change
12
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/2hqx8updxs via @change
11
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/vq7lnk6xq8 via @change
11
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/s2ngnta5md via @cdnchange \n\n#justiceforjohnnydepp
10
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/453uc1kgck via @change
10
warnermedia: fire amber heard from aquaman 2 - sign the petition! https://t.co/b8ttqwgfy via @change #johnnydeppisinnocent \n#amberheardisalier #amberheardisanabuser #justiceforjohnnydepp #johnnydeppisavictim #fireamberheard #boycottloreal #recastmra #nojohnnynopirates 9
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/wimizy1klz via @change
8
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/fpzqgp3wjw via @change
8
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/2v6mnnewq1 via @change
8
l'oréal: remove amber heard as l'oreal spokesperson - sign the petition! https://t.co/tkpbutm7rf via @change #johnnydeppisinnocent \n#amberheardisalier #amberheardisanabuser #justiceforjohnnydepp #johnnydeppisavictim #fireamberheard #boycottloreal #recastmra #nojohnnynopirates 7
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/kgdu4qjv8r via @change
7
please sign the petition! https://t.co/n4oyifjxz0\n#johnnydepp #justiceforjohnnydepp #boycottwarnerbros #fantasticbeasts
7
please sign the petition! https://t.co/n4oyifjxz0\n#johnnydepp #justiceforjohnnydepp #boycottwarnerbros #boycottfantasticbeasts3 #fantasticbeasts
7
l'oréal: remove amber heard as l'oréal spokesperson - sign the petition! https://t.co/x2iddwtrt via @change #johnnydeppisinnocent \n#amberheardisalier #amberheardisanabuser #justiceforjohnnydepp #johnnydeppisavictim #fireamberheard #boycottloreal #recastmra #nojohnnynopirates 7
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/c8ho35f9oz via @change #johnnydeppisinnocent \n#amberheardisalier #amberheardisanabuser #justiceforjohnnydepp #johnnydeppisavictim #fireamberheard #boycottloreal #recastmra #nojohnnynopirates 6
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/j6ecforj53 via @cdnchange \n\n#justiceforjohnnydepp
6
please sign the petition! https://t.co/n4oyifjxz0\n#johnnydepp #justiceforjohnnydepp #boycottwarnerbros #fantasticbeasts #fantasticbeasts
6
@realmberheard dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/njgw3t9cwh via @change_es #justiceforjohnnydepp
5
petition · have amber heard removed as aclu ambassador for women's rights · https://t.co/lg8e0ayje6 https://t.co/dduyhjfqs
5
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/nmifycbgxv via @change
5
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/utcrtn7s5w via @change
5
fbi: investigate and charge amber heard - sign the petition! https://t.co/ydh96sy80k via @change #johnnydeppisinnocent \n#amberheardisalier #amberheardisanabuser #justiceforjohnnydepp #johnnydeppisavictim #fireamberheard #boycottloreal #recastmra #nojohnnynopirates 5
dc entertainment: remove amber heard from aquaman 2 - ;firma la petición! https://t.co/osy7dooubx via @change_es
5
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/inpncl0ml via @change
5
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/w3ysifztwe via @cdnchange \n\n#justiceforjohnnydepp
5
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/tfnrdlf4eh via @change
5
bring captain jack sparrow petition: sign nowwww at https://t.co/edpsnq0s4 #justiceforjohnnydepp #johnnydeppisurvivor #johnnydeppismygrindelwald #jacksparrow #amberturd #amberheardisanabuser #amberheardisalier #amberheardisanabuser 5
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/ib9xsouvk via @ukchange
5
Name: text, dtype: int64
```

## Same Text Same Date

- Tweets Metrics
- Users Tweets Metrics
- 
- Duration After Account Creation
- Tweets Created OVER TIME
- Peak Dates
- 
- Tweets on Peaks
- Most Repeated Tweets
- Same Text Same Date**
- 
- Unverified Accounts
- Deleted or Banned
- Default Profile Image
- Users Metrics

```
In [187]: # print('\nThe Amplifications in the counts and number of likes on #justiceforjohnnydepp is quite obvious!!')
df_same = aquaman_petition.groupby(['text', 'date', 'username']).agg({'tweet_id': 'count', 'user_id': 'nunique'}).reset_index()
df_same.rename(columns={'tweet_id': 'n_tweets', 'user_id': 'by_accounts'}, inplace=True)
df_same.sort_values(['n_tweets', 'date'], ascending=[False, True], inplace=True)

with pd.option_context('display.max_colwidth', None):
    display(df_same.head(15))
```

		text	date	username	n_tweets	by_accounts
3401	@gn_geeknation please help sign, share & retweet. thanks, you're fantastic.\n\n'l'oréal: remove amber heard as l'oreal spokesperson - sign the		2021-01-07	Irina Skywalker	13	1

		petition: <a href="https://t.co/prsbumnri via @change">https://t.co/prsbumnri via @change</a>	view	edit
48702	remove the turd from aquaman 2 petition: <a href="https://t.co/osnxmebphw\n\n#justiceforjohnnydepp #johnnydeppisinnocent\n#johnnydepp #fireamberheard #amberturd #boycottwarnerbros #boycottdisney #boycottthesun">https://t.co/osnxmebphw\n\n#justiceforjohnnydepp #johnnydeppisinnocent\n#johnnydepp #fireamberheard #amberturd #boycottwarnerbros #boycottdisney #boycottthesun</a>	2020-11-07	izjclnolivaaa♥	11 1
7704	bring captain jack sparrow petition: sign nowwww at <a href="https://t.co/edpdnsq04 #justiceforjohnnydepp #johnnydeppisavasuror #johnnydeppismygrindelwald #jacksparrow #amberturd #amberheardisanabuser #amberheardisalilar #amberheardisanabuser">https://t.co/edpdnsq04 #justiceforjohnnydepp #johnnydeppisavasuror #johnnydeppismygrindelwald #jacksparrow #amberturd #amberheardisanabuser #amberheardisalilar #amberheardisanabuser</a>	2020-11-09	izjclnolivaaa♥	5 1
3988	@realmamberheard dc entertainment: remove amber heard from aquaman 2 - sign the petition! <a href="https://t.co/njgw3t9cwh via @change_es #justiceforjohnnydepp">https://t.co/njgw3t9cwh via @change_es #justiceforjohnnydepp</a>	2020-11-29	Denisse	5 1
48703	remove the turd from aquaman 2 petition: <a href="https://t.co/osnxmebphw\n\n#justiceforjohnnydepp #johnnydeppisinnocent\n#johnnydepp #fireamberheard #amberturd #boycottwarnerbros #boycottdisney #boycottthesun">https://t.co/osnxmebphw\n\n#justiceforjohnnydepp #johnnydeppisinnocent\n#johnnydepp #fireamberheard #amberturd #boycottwarnerbros #boycottdisney #boycottthesun</a>	2020-11-08	izjclnolivaaa♥	4 1
4324	@thr sign this petition to remove amber heard the abuser from aquaman2 🙏🙏\n#justiceforjohnnydepp \n <a href="https://t.co/t7mgd9fa14">https://t.co/t7mgd9fa14</a>	2020-12-09	I am Ghazaal	4 1
27911	dc entertainment: remove amber heard from aquaman 2 - sign the petition! <a href="https://t.co/s2ngnta5md via @cdnchange\n\n#justiceforjohnnydepp">https://t.co/s2ngnta5md via @cdnchange\n\n#justiceforjohnnydepp</a>	2020-11-08	metallicarebear	3 1
49885	the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! <a href="https://t.co/j6ecorfj3 via @cdnchange\n\n#justiceforjohnnydepp">https://t.co/j6ecorfj3 via @cdnchange\n\n#justiceforjohnnydepp</a>	2020-11-08	metallicarebear	3 1
3996	@realmamberheard <a href="https://t.co/avrp22j00nplease sign!! we reached 1million now lets get more :) \nsign and share to get amber off aquaman 2! thank you♥ #justiceforjohnnydepp #amberheard #amberheardisanabuser #johnnydepp #help #johnnydeppisinnocent">https://t.co/avrp22j00nplease sign!! we reached 1million now lets get more :) \nsign and share to get amber off aquaman 2! thank you♥ #justiceforjohnnydepp #amberheard #amberheardisanabuser #johnnydepp #help #johnnydeppisinnocent</a>	2020-11-14	Luna Loves	3 1
37167	dc entertainment: remove amber heard from aquaman 2 - ¡firma la petición! <a href="https://t.co/sycijhow1 via @changeorglatino">https://t.co/sycijhow1 via @changeorglatino</a>	2021-04-07	Katrina ♡	3 1
48065	please, let your voice be heard against injustice brought by amber heard <a href="https://t.co/r7te1hzisg \n\nsign a petition to show \n@warnerbros\n\n\n@aquamanmovie\nn nobody supports domestic abusers as they do.\n\n#justiceforjohnnydepp #aquaman #amberheardisalilar #amberheardisanabuser">https://t.co/r7te1hzisg \n\nsign a petition to show \n@warnerbros\n\n\n@aquamanmovie\nn nobody supports domestic abusers as they do.\n\n#justiceforjohnnydepp #aquaman #amberheardisalilar #amberheardisanabuser</a>	2021-09-07	Papaya	3 1
11783	dc entertainment: remove amber heard from aquaman 2 - sign the petition! <a href="https://t.co/5q5dfdfg8c via @ukchange">https://t.co/5q5dfdfg8c via @ukchange</a>	2019-03-21	Amanda Rose	2 1
19401	dc entertainment: remove amber heard from aquaman 2 - sign the petition! <a href="https://t.co/hlvuy1yay6 via @change @aquamanmovie @dccomics @wbhomeent @wbpictures">https://t.co/hlvuy1yay6 via @change @aquamanmovie @dccomics @wbhomeent @wbpictures</a>	2019-03-22	Martina Vaira	2 1
24299	dc entertainment: remove amber heard from aquaman 2 - sign the petition! <a href="https://t.co/nmifycbgx via @change">https://t.co/nmifycbgx via @change</a>	2019-03-23	Mary Fakhoury	2 1
47370	petition to remove amber heard from aquaman 2! keep sharing it! <a href="https://t.co/iqxy2zwoj ... @aquamanmovie @dccomics @shazammovie @warnerbrosuk @wbpictures #jasonmomoa">https://t.co/iqxy2zwoj ... @aquamanmovie @dccomics @shazammovie @warnerbrosuk @wbpictures #jasonmomoa</a>	2019-03-24	Support Johnny Depp ♡ Stream City of Lies 🎤	2 1

## Exploring Unverified Accounts

- Tweets Metrics
  - Users Tweets Metrics
  - -----
  - Duration After Account Creation
  - Tweets Created OVER TIME
  - Peak Dates
  - -----
  - Tweets on Peaks
  - Most Repeated Tweets
  - Same Text Same Date
  - -----
  - **Unverified Accounts**
  - Deleted or Banned
  - Default Profile Image
  - Users Metrics

```
In [188]: users.is_verified.value_counts()
```

```
Out[188...]: False    447394  
           True     4694  
           Name: is_verified, dtype: int64
```

```
In [189]: aquaman_petition_u.is_verified.value_counts()
```

```
Out[189]: False    38253  
          True     143  
          Name: is_verified, dtype: int64
```

## **NOTE:**

- Most of the accounts are not verified!!

```
In [190]: df_unverified = aquaman_petition.query(" is_verified == False ")
print(df_unverified.shape)
df_unverified.head()
```

Out[190...]	n_statuses	created_at	user_description	user_created_at	user_id	username	is_verified	user_location	n_followers	user_url	lang
	4434	2860 2018-03-16 21:52:09	I pretend to be sophisticated, but really I'm ...	2016-06-29 18:06:35	748216104565235712	Morgan	False	NaN	177	<a href="https://t.co/7NiXf9J">https://t.co/7NiXf9J</a>	en <a href="https://pbs.twimg.com">https://pbs.twimg.com</a>
4577	4654	2018-03-18 22:06:17	Daily film news, intellectually stimulating ed...	2018-02-17 08:29:20	964778778143555585	Le Cinéphiles	False	Le Cinéma	17786	<a href="https://t.co/TexAcEQbue">https://t.co/TexAcEQbue</a>	en <a href="https://pbs.twimg.com">https://pbs.twimg.com</a>
10145	28391	2018-06-14 18:17:20	NaN	2011-08-09 00:55:59	351267259	josé	False	NaN	356	<a href="https://t.co/82UfLNoANG">https://t.co/82UfLNoANG</a>	en <a href="https://pbs.twimg.com">https://pbs.twimg.com</a>
10426	267324	2018-06-18 02:54:23	Science,news,sports,fashion,nerd,comic book,Ge...	2014-11-19 03:48:32	2904153955	Nathaniel DeVon Sanford	False	Dayton, OH	2004	<a href="https://t.co/z9m36Rni5a">https://t.co/z9m36Rni5a</a>	en <a href="https://pbs.twimg.com">https://pbs.twimg.com</a>
11111	11111	2018-06-19 00:00:00	Eternal T.V./film viewer of sci-fi.	2014-06-15 00:00:00	11111111111111111111	Christopher	False	LaSalle	11111	<a href="https://t.co/11111111111111111111">https://t.co/11111111111111111111</a>	en <a href="https://pbs.twimg.com">https://pbs.twimg.com</a>

```
In [191]: df_unverified.username.value_counts().head(15)
```

```
Out[191]:
```

Mrs Charmaine Grindelwald	291
Captain Bool-Bool	260
Harleycosplay	204
rds-Aljacob	184
Andriana Pavlidou	159
Darlene Piechoski	128
Stephanie Brown	122
metallicarebear	122
Support Johnny Depp ⚡ Stream City of Lies	119
Tanya GB 🇬🇧 Wald-Mignon #JusticeForJohnnyDepp	99
👉 Om 🌟 🎉 🎉 SE 🎉	94
DorkAngel-GBW	93
Sara Roberts	93
Helen Marie (Helly Skelly)	93
SimonBarreBrisebois	89

Name: username, dtype: int64

```
In [192]: df_unverified.text.value_counts().head(60)
```

```
Out[192]:
```

remove the turd from aquaman 2 petition: <https://t.co/osnxmehphw> #justiceforjohnnydepp #johnnydeppisinnocent \n#johnnydepp #fireamberheard #amberturd #boycottwarnerbros #boycottdisney #boycottthesun  
@gn\_geeknation please help sign, share & retweet. thanks, you're fantastic.\n\nl'oréal: remove amber heard as l'oreal spokesperson - sign the petition! <https://t.co/p7sbttmhi> via @change  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/ayerxv1tkr> via @change  
12  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/vq7lnk6xq8> via @change  
11  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/2hqx8updxs> via @change  
11  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/s2ngnta5md> via @cdnchange \n\n#justiceforjohnnydepp  
10  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/453uc1kgck> via @change  
10  
warnermedia: fire amber heard from aquaman 2 - sign the petition! <https://t.co/b8ttqwgfyy> via @change #johnnydeppisinnocent \n#amberheardisalier #amberheardisanabuser #justiceforjohnnydepp #johnnydeppisavictim #fireamberheard #boycottoreal #recastmera #nojohnnynopirates  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/2v6mnnewq1> via @change  
8  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/wim1zy1klz> via @change  
8  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/fpzgqp3wjw> via @change  
8  
l'oréal: remove amber heard as l'oreal spokesperson - sign the petition! <https://t.co/tkpbutm7rf> via @change #johnnydeppisinnocent \n#amberheardisalier #amberheardisanabuser #justiceforjohnnydepp #johnnydeppisavictim #fireamberheard #boycottoreal #recastmera #nojohnnynopirates  
l'oréal: remove amber heard as l'oreal spokesperson - sign the petition! <https://t.co/xziddwtut> via @change #johnnydeppisinnocent \n#amberheardisalier #amberheardisanabuser #justiceforjohnnydepp #johnnydeppisavictim #fireamberheard #boycottoreal #recastmera #nojohnnynopirates  
please sign the petition! <https://t.co/n4oyifjxz0> #johnnydepp #justiceforjohnnydepp #boycottwarnerbros #fantasticbeasts  
7  
please sign the petition! <https://t.co/n4oyifjxz0> #johnnydepp #justiceforjohnnydepp #boycottwarnerbros #boycottfantasticbeasts3 #fantasticbeasts  
7  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/kgdu4qvjv8r> via @change  
7  
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! <https://t.co/j6ecforj53> via @cdnchange \n\n#justiceforjohnnydepp  
6  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/c8ho35f9oz> via @change #johnnydeppisinnocent \n#amberheardisalier #amberheardisanabuser #justiceforjohnnydepp #johnnydeppisavictim #fireamberheard #boycottoreal #recastmera #nojohnnynopirates  
please sign the petition! <https://t.co/n4oyifjxz0> #johnnydepp #justiceforjohnnydepp #boycottwarnerbros #fantasticbeasts #fantasticbeasts  
6  
dc entertainment: remove amber heard from aquaman 2 - firma la petición! <https://t.co/osy7doouxb> via @change\_es  
5  
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! <https://t.co/w3ysifztwe> via @cdnchange \n\n#justiceforjohnnydepp  
5  
@realmamberheard dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/ngjw3t9cwh> via @change\_es #justiceforjohnnydepp  
5  
fbi: investigate and charge amber heard - sign the petition! <https://t.co/ydh96sy80k> via @change #johnnydeppisinnocent \n#amberheardisalier #amberheardisanabuser #justiceforjohnnydepp #johnnydeppisavictim #fireamberheard #boycottoreal #recastmera #nojohnnynopirates  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/ib9xsouki> via @ukchange  
5  
bring captain jack sparrow petition: sign nowww at <https://t.co/edpdnsnq0s4> #justiceforjohnnydepp #johnnydeppisasurvivor #johnnydeppismygrindelwald #jacksparrow #amberturd #amberheardisanabuser #amberheardisalier #amberheardisanabuser  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/utcrtn7s5w> via @change  
5  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/inpnczi0ml> via @change  
5  
petition • have amber heard removed as aclu ambassador for women's rights • <https://t.co/lg8e0ayje6> <https://t.co/dduyhjfqs>  
5  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/tfnrdlf4eh> via @change  
5  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/nmifycbgv> via @change  
5  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/vqnpxq2uw> via @ukchange  
4  
american civil liberties union: aclu: revoke your title of ambassador for women's rights from amber heard! - sign the petition! <https://t.co/mjrjnpo74> via @ukchange  
4  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/s2ngnta5md> via @cdnchange \n\n#justiceforjohnnydepp \n#justiceforjohnnydepp  
4  
@dccomics @warnerbrothers @wpictures @aquamanmovie @aquaman2 @aclu @oneyoungworld @unhumanrights @un\_women @ungeneva @marieclaireuk #metoo #amberheardisanabuser \ndc entertainment: remove amber heard from aquaman 2 - firma la petizione! <https://t.co/qyctngwuk6> via @changeitalia  
#justiceforjohnnydepp #piratesofthecaribbean #jacksparrow #johnnydepp #disney #captainjacksparrow \n<https://t.co/rnnbphshbr> \ndisney: we want johnny depp back as captain jack sparrow - sign the petition!\n183 k.  
amber heard aquaman birthday massively backfires <https://t.co/083bvuyolv> via @youtube  
4  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/ykwer4qdg> via @ukchange  
4  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/8wr19jx4py> via @change  
4  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/fvvkz1igrq> via @change  
4  
win an 'aquaman' poster signed by jason momoa, amber heard, patrick wilson and james wan <https://t.co/vnjww5uoks>  
4  
there is a petition for johnny. if you haven't signed it, let's support him!\n<https://t.co/cucql190sc> \n\n#justiceforjohnnydepp  
4  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! <https://t.co/zpbsoaqueb> via @changeaus

```

4
l'oréal: remove amber heard as l'oreal spokesperson - sign the petition! https://t.co/episal4knz via @ukchange
4
please sign the petition! https://t.co/n4oyifjxz\#johnnydepp #justiceforjohnnydepp #boycottwarnerbros #fantasticbeasts #warnerbros #fantasticbeasts\#
4
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/od7tcrs1j6 via @change
4
@thr sign this petition to remove amber heard the abuser from aquaman2 📲\#justiceforjohnnydepp \nhttps://t.co/t7mgd9fa14
4
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/xn4obmkmtf via @change
4
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/pwcat5wb5p via @change
4
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/q1k7ymqhte via @change
4
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/yyyajryxz via @cdnchange \n\n#justiceforjohnnydepp
4
l'oréal: remove amber heard as l'oreal spokesperson - sign the petition! https://t.co/esg2z5o5ek via @change
4
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/quxvfzxak via @change
3
#amberheard supporters: we support amber heard in #aquaman2 - sign the petition! https://t.co/xsnitoatqr via \n@change\n amber heard wrote in the washington post about how
she had to #change her phone number weekly due to death threats from depp fans and how she supports #rights: 3
3
petition · dc entertainment: remove amber heard from aquaman 2 · https://t.co/ffgpbigowb https://t.co/eyjlql33r
3
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/w3ysifztwe via @cdnchange \n#justiceforjohnnydepp
3
#amberheard supporters: we support amber heard in #aquaman2 - sign the petition! https://t.co/hyvdoti5ii via \n@change\n amber heard wrote in the washington post about how
she had to #change her phone number weekly due to death threats from depp fans and how she supports #rights: 3
#justiceforjohnnydepp #piratesofthecaribbean #jacksparrow #johnnydepp #disney #captainjacksparrow \nhttps://t.co/rnnbphshbr\ndisney: we want johnny depp back as captain ja
ck sparrow - sign the petition!\n188 k.
3
dc entertainment: remove amber heard from aquaman 2 - ;firma la petición! https://t.co/yopvgohmu2 vía @change_mex
3
dc entertainment: remove amber heard from aquaman 2 - ;firma la petición! https://t.co/xog7nn6xrg via @change
3
dc entertainment: remove amber heard from aquaman 2 - ;firma la petición! https://t.co/uik1iqokql vía @changeorglatino
3
Name: text, dtype: int64

```

## Deleted or Banned

- Tweets Metrics
- Users Tweets Metrics
- -----
- Duration After Account Creation
- Tweets Created OVER TIME
- Peak Dates
- -----
- Tweets on Peaks
- Most Repeated Tweets
- Same Text Same Date
- -----
- Unverified Accounts
- **Deleted or Banned**
- Default Profile Image
- Users Metrics

## Check the NaNs in Usernames --> 108

The NaNs in username --> either means deleted or banned accounts

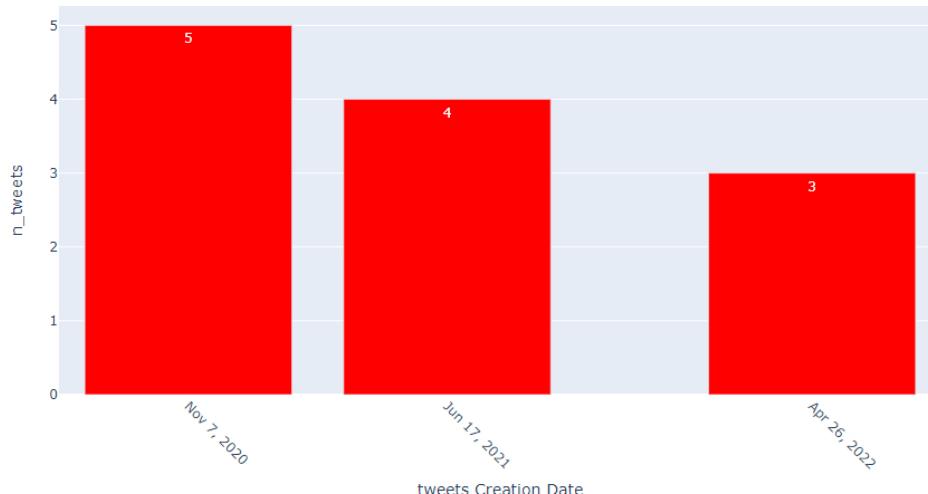
account is temporarily unavailable because it violates the twitter media policy.

In [193...]	helpers.isnull(tweets[['username', 'user_url', 'profile_image_url']])																																																																																										
	The number of NaNs in username: 108 The number of NaNs in user_url: 1244722 The number of NaNs in profile_image_url: 74																																																																																										
In [194...]	df_banned = tweets[pd.isnull(tweets.username)] print(df_banned.shape) df_banned.head()																																																																																										
	(108, 30)																																																																																										
Out[194...]	<table border="1"> <thead> <tr> <th></th><th>n_statuses</th><th>created_at</th><th>user_description</th><th>user_created_at</th><th>user_id</th><th>username</th><th>is_verified</th><th>user_location</th><th>n_followers</th><th>user_url</th><th>lang</th><th>profile_banner_url</th><th>profile_image_url</th><th>tex</th></tr> </thead> <tbody> <tr> <td>1593</td><td>239</td><td>2018-01-24 02:03:36</td><td>@Hail_Monroe's account is temporarily unavail...</td><td>2017-12-17 23:23:02</td><td>942535638078971907</td><td>NaN</td><td>False</td><td>NaN</td><td>177</td><td>NaN en</td><td>NaN</td><td>NaN</td><td>NaN</td><td>@hail_monroe' account i temporari unavail.</td></tr> <tr> <td>2008</td><td>29548</td><td>2018-01-30 21:28:23</td><td>@WouldYouHitGirl's account is temporarily unav...</td><td>2015-12-19 06:06:04</td><td>4600424982</td><td>NaN</td><td>False</td><td>NaN</td><td>412</td><td>NaN en</td><td>NaN</td><td>NaN</td><td>NaN</td><td>@wouldyouhitgirl' account i temporari unavail.</td></tr> <tr> <td>2010</td><td>12166</td><td>2018-01-30 21:40:09</td><td>@ViralSexyPic's account is temporarily unavail...</td><td>2016-06-28 18:19:39</td><td>747857005973483520</td><td>NaN</td><td>False</td><td>NaN</td><td>449</td><td>NaN en</td><td>NaN</td><td>NaN</td><td>NaN</td><td>@viralsexypic' account i temporari unavail.</td></tr> <tr> <td>5936</td><td>6741</td><td>2018-04-12 04:01:19</td><td>@cristianpg23's account is temporarily unavail...</td><td>2010-11-28 09:47:43</td><td>220617414</td><td>NaN</td><td>False</td><td>NaN</td><td>22</td><td>NaN et</td><td>NaN</td><td>NaN</td><td>NaN</td><td>@cristianpg23' account i temporari unavail.</td></tr> <tr> <td>6043</td><td>25447</td><td>2018-04-16 09:01:49</td><td>@awilliams_84's account is temporarily unavail...</td><td>2011-08-02 23:36:39</td><td>347542318</td><td>NaN</td><td>False</td><td>NaN</td><td>113</td><td>NaN en</td><td>NaN</td><td>NaN</td><td>NaN</td><td>@awilliams_84' account i temporari unavail.</td></tr> </tbody> </table>		n_statuses	created_at	user_description	user_created_at	user_id	username	is_verified	user_location	n_followers	user_url	lang	profile_banner_url	profile_image_url	tex	1593	239	2018-01-24 02:03:36	@Hail_Monroe's account is temporarily unavail...	2017-12-17 23:23:02	942535638078971907	NaN	False	NaN	177	NaN en	NaN	NaN	NaN	@hail_monroe' account i temporari unavail.	2008	29548	2018-01-30 21:28:23	@WouldYouHitGirl's account is temporarily unav...	2015-12-19 06:06:04	4600424982	NaN	False	NaN	412	NaN en	NaN	NaN	NaN	@wouldyouhitgirl' account i temporari unavail.	2010	12166	2018-01-30 21:40:09	@ViralSexyPic's account is temporarily unavail...	2016-06-28 18:19:39	747857005973483520	NaN	False	NaN	449	NaN en	NaN	NaN	NaN	@viralsexypic' account i temporari unavail.	5936	6741	2018-04-12 04:01:19	@cristianpg23's account is temporarily unavail...	2010-11-28 09:47:43	220617414	NaN	False	NaN	22	NaN et	NaN	NaN	NaN	@cristianpg23' account i temporari unavail.	6043	25447	2018-04-16 09:01:49	@awilliams_84's account is temporarily unavail...	2011-08-02 23:36:39	347542318	NaN	False	NaN	113	NaN en	NaN	NaN	NaN	@awilliams_84' account i temporari unavail.
	n_statuses	created_at	user_description	user_created_at	user_id	username	is_verified	user_location	n_followers	user_url	lang	profile_banner_url	profile_image_url	tex																																																																													
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```
In [195]
```

```
title = 'Peak contributions of the Banned Accounts'
df = df_banned.groupby('date').size().reset_index(name='n_tweets')
df.sort_values('n_tweets', ascending=False, inplace=True)
helpers.bar_peaks(df.head(3), title, threshold=0, xlabel='tweets Creation Date')
```

Peak contributions of the Banned Accounts



```
In [196]
```

```
df_banned.user_screen_name.value_counts().head()
```

```
Out[196]
```

```
JasonIsGone_    4
IvanOrozcojr2  4
awilliams_84   3
baattleaxeee   2
Rpdlol         2
Name: user_screen_name, dtype: int64
```

```
In [197]
```

```
df_banned.text.value_counts().head(60)
```

```
Out[197]
```

```
@jasonisgone_ 's account is temporarily unavailable because it violates the twitter media policy. learn more.
4
@awilliams_84's account is temporarily unavailable because it violates the twitter media policy. learn more.
3
@wouldyouhitgirl's account is temporarily unavailable because it violates the twitter media policy. learn more.
2
#justiceforjohnnydepp
2
@gatitaper's account is temporarily unavailable because it violates the twitter media policy. learn more.
2
@www_4flirt_org's account is temporarily unavailable because it violates the twitter media policy. learn more.
2
@sniperw31911655's account is temporarily unavailable because it violates the twitter media policy. learn more.
2
@dollarsloppies's account is temporarily unavailable because it violates the twitter media policy. learn more.
2
@mikegravitybro's account is temporarily unavailable because it violates the twitter media policy. learn more.
2
@pyromike4's account is temporarily unavailable because it violates the twitter media policy. learn more.
2
@freeblackpussyi's account is temporarily unavailable because it violates the twitter media policy. learn more.
2
@sofawarriorlady's account is temporarily unavailable because it violates the twitter media policy. learn more.
2
@viralsexypic's account is temporarily unavailable because it violates the twitter media policy. learn more.
2
@niniseel's account is temporarily unavailable because it violates the twitter media policy. learn more.
2
damn amber heard has the most perfect most iconic most biggest most juciest and most yummiest tits i have ever seen the perfect tits the most iconic tits the most biggest tits the most juciest tits the sexiest tits https://t.co/dz3n3yk705
1
@elfundadoreturns's account is temporarily unavailable because it violates the twitter media policy. learn more.
1
@aadik36769152's account is temporarily unavailable because it violates the twitter media policy. learn more.
1
@lecoleurp's account is temporarily unavailable because it violates the twitter media policy. learn more.
1
@rosechickduck's account is temporarily unavailable because it violates the twitter media policy. learn more.
1
@groovesagna's account is temporarily unavailable because it violates the twitter media policy. learn more.
1
@ulabaron5 @biobio te ganaste un combo de amber heard https://t.co/zubhgkv6xc
1
if your personalities like amber heard then i don't want you,period!
1
@tribecadreams's account is temporarily unavailable because it violates the twitter media policy. learn more.
1
@mrworld36369038's account is temporarily unavailable because it violates the twitter media policy. learn more.
1
@jasonismissing's account is temporarily unavailable because it violates the twitter media policy. learn more.
1
yoooo amber heard is trending again, and i feel to remind the tl that this woman shat on her bed 😂😂
1
@giojo_cato's account is temporarily unavailable because it violates the twitter media policy. learn more.
1
```

```

1 @tomvanc06956916's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @hail_monroe's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 girls will go gay with amber heard's perfect iconic huge juicy yummy sexy tits https://t.co/9slsjus2zn
1 - #justiceforjohnnydepp
1 @ghostyray i saw a thing "amber heard was diagnosed with histrionic pd, an extreme form of narcissism" and like yeah that's literally not what that is good job tho, first he
adline i saw 1
@tankieravensfan's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @malenascordias's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 ireland baldwin blasts amber heard calling her a disaster of a human being - marca english https://t.co/ykizqlldfx
1 @ramiusxi's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @paulaeal @trawian_lol oh god, the "abused" wild card. it is time for you now to photoshot a police statement and so on. you give me such strong amber heard vibes.
1 amber heard cuma planga plongo hah hoh hah hoh
1 emang bener-bener tega si amber ya, dr dulu ni kasus ga kelar2 heran. #justiceforjohnnydepp
1 @popo14004776's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 damn amber heard has the world's most perfect most iconic most biggest most iconic most yummiest and most sexiest boobies i have ever seen girls will go gay with amber hear
d's perfect iconic huge juicy yummy boobies and i so want to have sex with her 1
@lennieismine's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @depotmister's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @goggles29947680's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @cbmgodesses's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @switchy_witch's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @grittymcgritty's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @lewdestgenius's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 and i so want to motorboat amber heard perfect iconic huge juicy yummy sexy boobies
1 اهلاً وسهلاً amber heard ! 😊
1 @husseimfatal's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @thisiselmababe's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @ducklysouls34's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @jwigss's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 pues si, al final parece que teníamos razón los que dudábamos de amber heard.\n\nla "maltratada" resulta ser la maltratadora.\n\npero ahora todos a callar, que es más fácil
hacer como que no lo ves que reconocer que la presunción de inocencia es solo para quien os cae bien. 1
@stopbrexit1309's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @natali04423258's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @frederi32978034's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @ad_nsfw's account is temporarily unavailable because it violates the twitter media policy. learn more.
1 @homempelado6's account is temporarily unavailable because it violates the twitter media policy. learn more.
1
Name: text, dtype: int64

```

## Default Profile Image

- [Tweets Metrics](#)
- [Users Tweets Metrics](#)
- -----
- [Duration After Account Creation](#)
- [Tweets Created OVER TIME](#)
- [Peak Dates](#)
- -----
- [Tweets on Peaks](#)
- [Most Repeated Tweets](#)
- [Same Text Same Date](#)
- -----
- [Unverified Accounts](#)
- [Deleted or Banned](#)
- [\*\*Default Profile Image\*\*](#)
- [Users Metrics](#)

## Users with the same profile image (the default image)

In [198...]	users.head(1)										
Out[198...]	user_id	user_created_at	username	user_screen_name	n_followers	n_friends	n_statuses	user_url	user_description	user_location	profile_banner_url
0	1968	2006-07-17 16:06:28	Jonn Nubian 🇺🇸	JonnNubian	4838	2247	31013	https://t.co/pMzd272GFv	Professional Adventurer, Editor-in-Chief	Manhattan NYC	https://pbs.twimg.com/profile_banners/1968/164... http://pbs.twimg...

```
In [199... users['profile_image_url'].value_counts().head(3)
```

```
Out[199... http://abs.twimg.com/sticky/default_profile_images/default_profile_normal.png    8750
http://pbs.twimg.com/profile_images/118384953/jnuavatara_normal.jpg      1
http://pbs.twimg.com/profile_images/1340308525839474698/w4nPXBQ_normal.jpg      1
Name: profile_image_url, dtype: int64
```

```
In [200... # Users Tweeted with "Aquaman Petition Links" having the default profile image
aquaman_petition_df['profile_image_url'].value_counts().head(3)
```

```
Out[200... http://abs.twimg.com/sticky/default_profile_images/default_profile_normal.png    1846
http://pbs.twimg.com/profile_images/519511394467577857/A-28MauA_normal.jpeg      1
http://pbs.twimg.com/profile_images/1114498542603784192/J0JJKhJX_normal.jpg      1
Name: profile_image_url, dtype: int64
```

```
In [201... image = "http://abs.twimg.com/sticky/default_profile_images/default_profile_normal.png"
default_image = aquaman_petition[aquaman_petition['profile_image_url'] == image]
print(default_image.shape)
default_image.head()
```

(2817, 30)													
	n_statuses	created_at	user_description	user_created_at	user_id	username	is_verified	user_location	n_followers	user_url	lang	profile_banner_url	
11046	4	2018-06-23 13:10:28	Avid book reader. Makeup artist. Face painter....	2018-06-13:07:34	1004349077243514881	Treenthemakeupmaven	False	Dallas	0	NaN	en	NaN http://abs.twimg.com/stick	
17042	3	2018-08-16 09:53:57	NaN	2017-09-26 10:04:44	912618935748517888	Krystal Ashlin-Watts	False	NaN	1	NaN	en	NaN http://abs.twimg.com/stick	
17398	1570	2018-08-16 18:34:50	NaN	2017-03-08 02:48:40	839306844795518976	Brenda Clemons	False	NaN	43	NaN	en	NaN http://abs.twimg.com/stick	
17487	21080	2018-08-16 20:51:29	NaN	2017-08-24 23:52:42	900868501828771840	Helene Efraimsen	False	Aarhus, Danmark	90	NaN	en	NaN http://abs.twimg.com/stick	
35883	21080	2018-12-26 22:45:00	NaN	2017-08-24 23:52:42	900868501828771840	Helene Efraimsen	False	Aarhus, Danmark	90	NaN	en	NaN http://abs.twimg.com/stick	

```
In [202... tweets.is_verified.value_counts()
```

```
Out[202... False    1688126
True     32191
Name: is_verified, dtype: int64
```

```
In [203... default_image.is_verified.value_counts()
```

```
Out[203... False    2817
Name: is_verified, dtype: int64
```

```
In [204... default_image.text.value_counts().head(30)
```

```
Out[204... dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/ayervx1tkv via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/vq7lnk6xq8 via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/wimizy1kl5 via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/2v6mnnewq1 via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/fpzgapp3wj via @change
petition · have amber heard removed as aclu ambassador for women's rights · https://t.co/lg8e0ayje6 https://t.co/dduyhjfqsh
dc entertainment: remove amber heard from aquaman 2 - ¡firma la petición! https://t.co/osy7douxb via @change_es
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/utcrtn7s5w via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/qlk7ymqhete via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/xog7nn6xrg via @change
american civil liberties union: aclu: revoke your title of ambassador for women's rights from amber heard! - sign the petition! https://t.co/irehky8wu5 via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/b0qb2k48f via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4hn385l09y via @changeaus
dc entertainment: remove amber heard from aquaman 2 - ¡firma la petición! https://t.co/dwlacvekpi via @change_es
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/spwtco8xtg via @cdnchange
l'oréal: remove amber heard as l'oreal spokesperson - sign the petition! https://t.co/s770akhokf via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/blqpn3qj8r via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/98rvjczm46 via @changeaus
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/cbnrl1ls6l via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/qg81ojatbb via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/xs38r71k7x via @cdnchange
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/ft9zjt9mic via @ukchange
@gre3f #justiceforjohnnydepp #amberheardisanabuser #amberturd \boycottfantasticbeasts\nremove amber from aquaman 2 petition:\nhttps://t.co/tob1s9d2ad
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/xpxgzmptaf via @change
dc entertainment: remove amber heard from aquaman 2 - ¡firma la petición! https://t.co/4epkgdmvo2 via @change_es
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/oggmdmqhfd via @change
l'oréal: remove amber heard as l'oreal spokesperson - sign the petition! https://t.co/iamld7obu via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/svty1bwlp9 via @change
dc entertainment: remove amber heard from aquaman 2 - ¡firma la petición! https://t.co/xbeqq5u51x via @change_es
@laurabockov #justiceforjohnnydepp #amberheardisanabuser #amberturd \boycottfantasticbeasts\nremove amber from aquaman 2 petition:\nhttps://t.co/tob1s9d2ad
Name: text, dtype: int64
```

```
In [205... title = 'Peak contributions of the accounts tweeted "aquaman petition links" having the default profile image!'
df = default_image.groupby('date').size().reset_index(name='n_tweets')
df.sort_values('n_tweets', ascending=False, inplace=True)
helpers.bar_peaks(df.head(2), title, threshold=0, xlabel='tweets Creation Date')
```

Peak contributions of the accounts tweeted "aquaman petition links" having the default profile image!



```
In [206...]: default_image.username.value_counts().head(10)
```

```
Out[206...]:
```

username	n_tweets
mary fakhoury	57
Marcus Scott	57
████████Justice JD 2022████	54
Tulin	48
Zeta	45
jessicalockhart	41
Jeff	35
Susan Hornill	32
Lou	22
YVONNE SHOEBRIDGE	21

Name: username, dtype: int64

```
In [207...]: default_image.user_location.value_counts().head(10)
```

```
Out[207...]:
```

user_location	n_tweets
A real person in the USA	84
Essex	32
Denmark	14
Aarhus, Denmark	7
Texas, USA	6
Durban, South Africa	5
United States	5
Florida, USA	5
Manchester, England	4
Dundee, Scotland	4

Name: user\_location, dtype: int64

```
In [208...]: tweets[tweets['username'] == 'mary fakhoury'].user_location.value_counts()
```

```
Out[208...]: Series([], Name: user_location, dtype: int64)
```

```
In [209...]: tweets[tweets['username'] == '████████Justice JD 2022████'].user_location.value_counts()
```

```
Out[209...]:
```

user_location	n_tweets
A real person in the USA	431

Name: user\_location, dtype: int64

```
In [210...]: tweets[tweets['username'] == 'Marcus Scott'].user_location.value_counts()
```

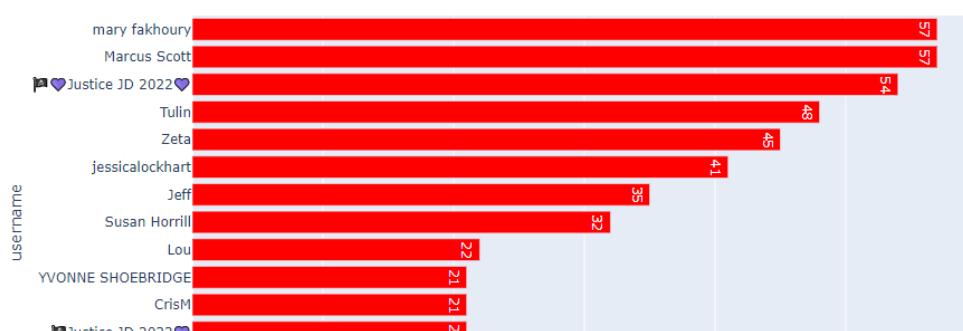
```
Out[210...]: Series([], Name: user_location, dtype: int64)
```

## Top accounts tweeted with "aquaman petition links" having the default profile image!

```
In [211...]:
```

```
tmp = default_image.username.value_counts().reset_index().rename(columns={'index': 'username', 'username': 'n_tweets'})
title = 'Top accounts tweeted with "aquaman petition links" having the default profile image!'
helpers.bahr(tmp.head(15), title, c='red')
```

Top accounts tweeted with "aquaman petition links" having the default profile image!





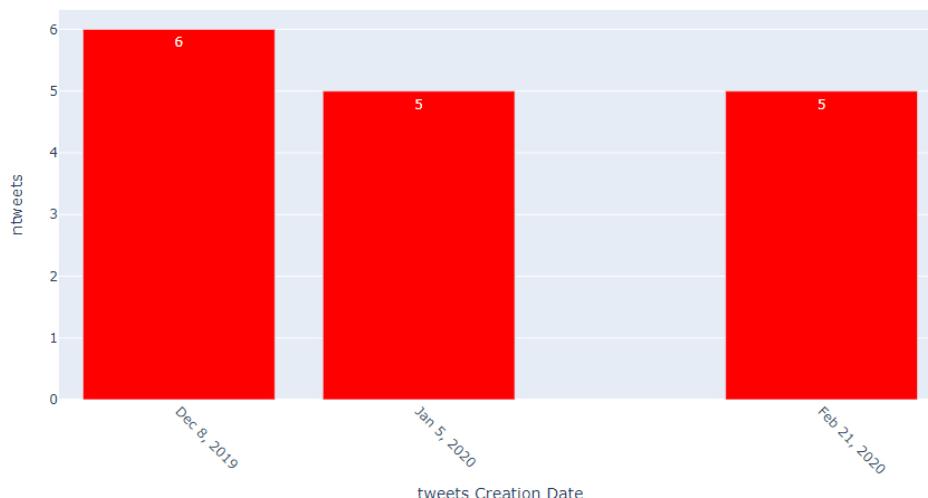
## mary fakhoury

In [212]

```
helpers.contr_peaks(tweets, "mary fakhoury", n=3, threshold=0)
```

total number of tweets by "mary fakhoury": 73

"mary fakhoury" Top Contributions



In [213]

```
tweets[tweets.username == 'mary fakhoury'].text.value_counts().head()
```

Out[213]

Text	Count
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/vq7lnk6xq8 via @change	11
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/2v6mnnewq1 via @change	8
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/fpzgqp3wjw via @change	8
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/wimizy1kls via @change	8
amber heard's father threatens to shoot johnny depp, reports https://t.co/gft2zzb1mf via @change	2

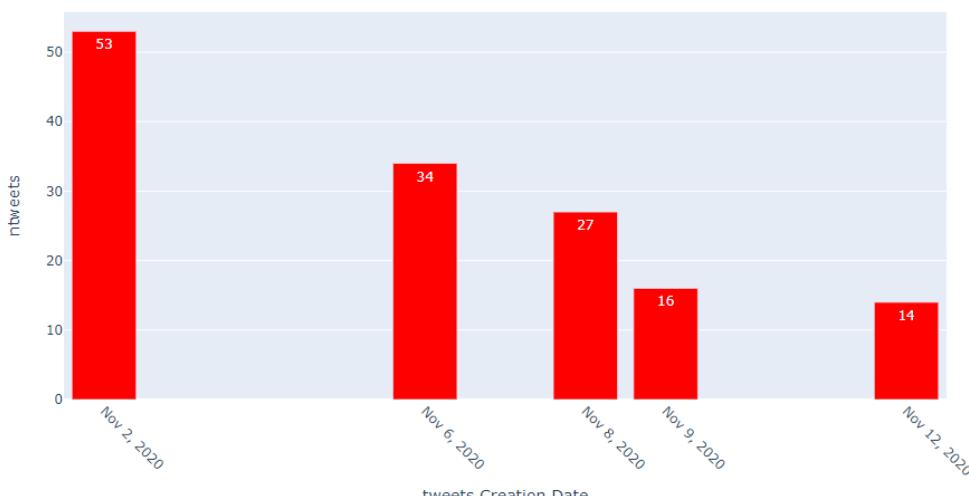
## █████████████████████Justice JD 2022█████████████████████

In [214]

```
helpers.contr_peaks(tweets, "█████████████████████Justice JD 2022█████████████████████", n=5, threshold=0)
```

total number of tweets by "█████████████████████Justice JD 2022█████████████████████": 431

"█████████████████████Justice JD 2022█████████████████████" Top Contributions



In [215]

```
tweets[tweets.username == '█████████████████████Justice JD 2022█████████████████████'].text.value_counts().head()
```

Out[215]

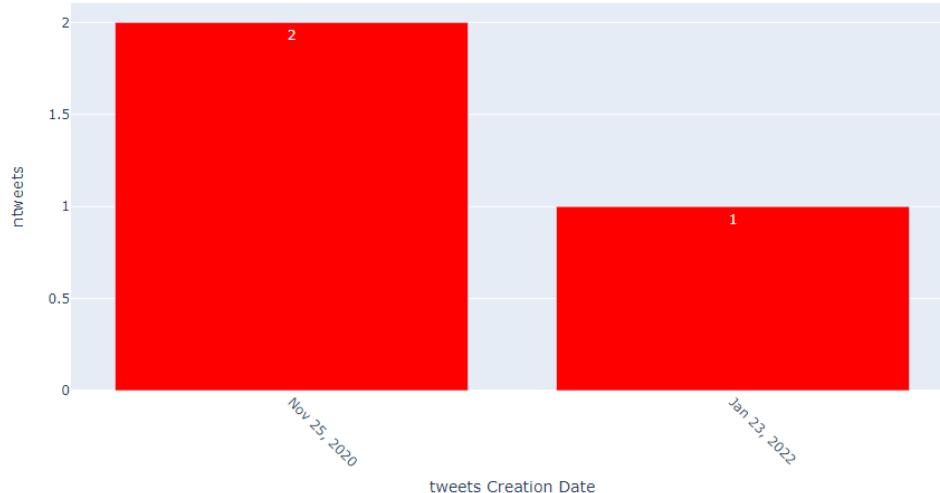
Text
#justiceforjohnnydepp
#justiceforricharddepp #johnnudepp

```
"petition · have amber heard removed as aclu ambassador for women's rights · https://t.co/lgb0e0ayje6 https://t.co/dduyhjfsh  
american civil liberties union: aclu: revoke your title of ambassador for women's rights from amber heard! - sign the petition! https://t.co/irehky8wu5 via @change  
#amberheardisaliar  
Name: text, dtype: int64
```

## Marcus Scott

```
In [216]: helpers.contr_peaks(tweets, "Marcus Scott", n=2, threshold=0)  
total number of tweets by "Marcus Scott": 57
```

"Marcus Scott" Top Contributions

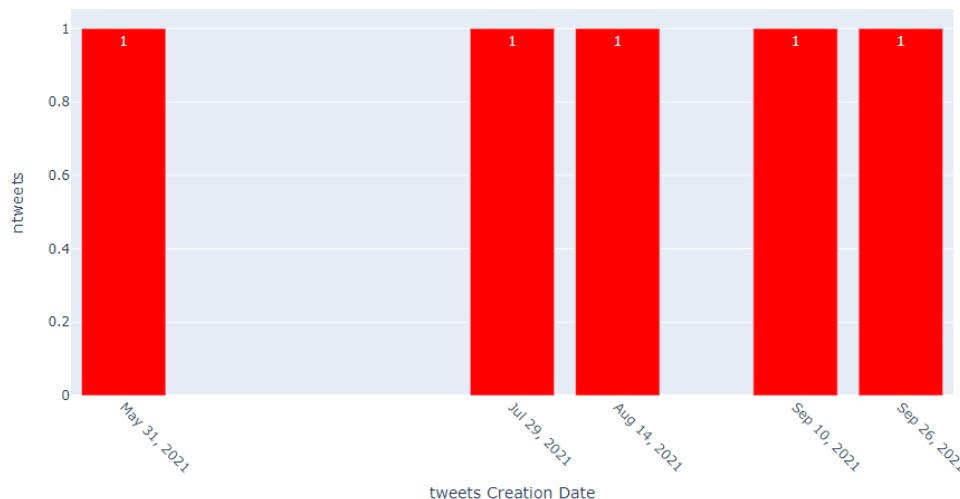


```
In [217]: tweets[tweets.username == 'Marcus Scott'].text.value_counts().head()  
Out[217]: dc entertainment: remove amber heard from aquaman 2 https://t.co/6shiy6sqw via @change 1  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/yjfa0ti9vf via @change 1  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/b97cbrrehuo via @change 1  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/htko6llqw4 via @change 1  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/mzdldygsi8 via @change 1  
Name: text, dtype: int64
```

## Tulin

```
In [218]: helpers.contr_peaks(tweets, "Tulin", n=5, threshold=0)  
total number of tweets by "Tulin": 48
```

"Tulin" Top Contributions



```
In [219]: tweets[tweets.username == 'Tulin'].text.value_counts().head()  
Out[219]: dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/ma0zwt2xxl via @ukchange 1  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/d35dtoa7ri via @ukchange 1  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/fajdefjjds via @ukchange 1  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/pod83ik0z2d via @ukchange 1  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/xeqo8hlifm via @ukchange 1  
Name: text, dtype: int64
```

## Zeta

In [220]

```
helpers.contr_peaks(tweets, "Zeta", n=4, threshold=0)
```

total number of tweets by "Zeta": 58

"Zeta" Top Contributions



In [221]

```
tweets[tweets.username == 'Zeta'].text.value_counts().head()
```

Out[221]

```
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/ayervx1tkr via @change 12
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/q1k7ymqhte via @change 4
l'oréal: remove amber heard as l'oreal spokesperson - sign the petition! https://t.co/rim7i68spq via @change 2
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/b0qbz2k48f via @change 2
l'oréal: remove amber heard as l'oreal spokesperson - sign the petition! https://t.co/fqjwkwX5g5v via @change 2
Name: text, dtype: int64
```

## jessicalockhart

In [222]

```
helpers.contr_peaks(tweets, "jessicalockhart", n=4, threshold=0)
```

total number of tweets by "jessicalockhart": 123

"jessicalockhart" Top Contributions



In [223]

```
tweets[tweets.username == 'jessicalockhart'].text.value_counts().head()
```

Out[223]

```
#justiceforjohnnydepp
49
#justiceforjohnnydepp #amberheardisaliar
3
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/g17fkfgfkt via @change
1
american civil liberties union: aclu: revoke your title of ambassador for women's rights from amber heard! - sign the petition! https://t.co/refx3yw5pv via @change #justiceforjohnnydepp #amberheardisanabuser #amberheardisaliar 1
amber heard failed to donate $7m divorce settlement to pledged charities https://t.co/evqfsm348t #amberheardisagolddigger #amberheardisaliar #justiceforjohnnydepp
1
```

Name: text, dtype: int64

## Users Metrics

- Tweets Metrics
  - Users Tweets Metrics
  - -----
  - Duration After Account Creation
  - Tweets Created OVER TIME
  - Peak Dates
  - -----
  - Tweets on Peaks
  - Most Repeated Tweets
  - Same Text Same Date
  - -----
  - Unverified Accounts
  - Deleted or Banned
  - Default Profile Image
  - **Users Metrics**

## Users Metrics

- **Top Tweeted Users**
  - Users with the Most Followers
  - Users with the Most Friends
  - Users with the Most Statuses

## Top Tweeted Users with "Aquaman Petition Links"

- Top Totals
  - Top Daily
  - Top Daily (on average)

```
In [224]: # df_top_users = (
#     aquaman_petition["username"]
#     .value_counts()
#     .to_frame()
#     .reset_index()
#     .rename(columns={"index": "username", "username": "n_Tweets"})
# )
```

```
In [225]: df_top_users = (
    aquaman_petition.groupby(['username', aquaman_petition.user_created_at.dt.date])
    .agg({'text': 'count', 'n_friends': 'max', 'n_followers': 'max', 'n_statuses': 'max'})
    .reset_index().rename(columns={'text': 'n_tweets'}).sort_values('n_tweets', ascending=False)
)

df_top_users.head(60)
```

Out[225...]		username	user_created_at	n_tweets	n_friends	n_followers	n_statuses
19426		Mrs Charmaine Grindelwald	2019-08-09	291	290	331	6627
4859		Captain Bool-Bool	2017-01-28	260	189	705	17985
10656		Harley/cosplay	2020-10-07	204	195	216	4580
33397		rds-AlJacob	2019-02-23	184	1675	1017	15632
2192		Andriana Pavlidou	2020-11-09	159	37	47	2142
6973		Darlene Piechoski	2015-01-22	128	142	17	2375
32586		metallicarebear	2020-11-06	122	27	24	440
25118		Stephanie Brown	2018-08-10	121	5008	2045	40157
25396		Support Johnny Depp 🌟 Stream City of Lies	2015-12-23	119	273	15617	203908
25797	Tanya GB	Wald-Mignon #JusticeforJohnnyDepp	2015-02-24	99	2458	1561	15155
36216	🦋🦋 Om 🌸🌸	st 🎃	2020-10-23	94	232	215	33773
10848		Helen Marie (Helly Skelly)	2019-08-12	93	2568	2568	49332
23646		Sara Roberts	2020-07-29	93	203	76	1130
7817		DorkAngel-GBW	2009-05-18	93	62	420	23414
24546		SimonBarreBrisebois	2012-02-22	89	1920	2073	242477
12228	Janina	#IBelieveHim #justiceforjohnnydepp	2012-04-30	88	558	2270	199234
7392		DeppFanPageus	2011-04-11	87	1000	1027	20830
11490		Irina Skywalker	2020-05-30	84	10	0	8609
30600	francky.fb	#justiceforjohnnydepp	2018-10-08	81	50	43	2497
11042		Horae of Peace	2020-11-23	79	573	607	9422
21050		Pantea	2020-05-31	78	180	180	1314
3522		BeCurious	2020-07-17	77	700	751	7793
368		84Blackbird	2012-03-24	71	133	73	2167
6641		Dale Cleary GB	2014-03-26	70	3626	1974	42094

26330	TheRealLauraB 🇬🇧🇪🇺	2015-06-05	65	740	20921	42756
9130	Fairy Naa 🎉🎊🎈	2011-08-06	65	496	946	9502
25398	Support Johnny Depp 💕 Stream City of Lies 🎉	2015-12-23	62	282	15975	206679
25397	Support Johnny Depp 💕 Stream City of Lies NOW us	2015-12-23	61	273	15611	203752
17861	Mary Ficarra	2009-03-23	61	955	917	16561
31653	kateinthemiddle 🇬🇧	2015-04-07	59	78	19	275
2507	Annabel Depthead 🌟🌟	2020-08-11	59	995	1618	31258
36635	梅雨	2019-06-29	59	524	27	308
25970	Tepa.M.T	2020-11-02	58	205	119	2880
32462	mary fakhoury	2019-12-04	57	4	2	313
17483	Marcus Scott	2013-07-13	57	314	48	13143
17859	Mary Fakhoury	2009-07-13	55	14440	15285	4702
9381	FlamenRed	2009-04-19	55	639	99	18322
29411	blahbydodaday 🇬🇧	2017-06-22	54	502	605	7112
38022	🇵🇹Justice JD 2022🇵🇹	2020-07-20	54	1057	530	15425
22353	ReemDepp	2018-09-17	52	12	7842	8982
3809	Be 🇵🇹sk	2020-04-21	52	449	333	24739
34119	sweet_emmee/Emily 🇬🇧🌳	2009-03-20	50	4988	1344	203729
5257	Cesar Ramirez	2015-04-07	50	249	174	7901
38043	🇬🇧Kerryanne E Wald-Mignon GB 🇬🇧	2010-06-28	49	150	206	12896
26933	Tulin	2015-07-23	48	31	14	13830
16027	Libby 🇵🇹🇵🇹🇵🇹 #JusticeForJohnnyDepp	2017-11-19	48	1631	1669	52965
11206	IFOD	2009-08-25	46	227	12540	56836
28564	Zeta	2019-07-18	45	78	9	496
14320	Kathy Hedden	2012-01-29	45	2979	777	20655
11150	I am Ghazaal	2017-08-10	44	216	208	4810
22444	ReslipsaLoquitur	2020-08-10	44	629	500	10738
10152	Giovanna	2020-11-07	44	0	3	231
11856	JT Larson Depp-Mignon	2009-04-06	44	899	2811	10323
22390	Reivaxx	2020-10-19	44	56	25	1938
31367	joann hess	2020-08-20	43	3392	4030	29154
28828	airamanna	2019-07-10	43	68	8	338
4689	CRC	2019-10-10	42	109	274	44682
11647	Ivelina	2010-12-26	42	1182	1202	31495
31333	jessicalockhart	2008-03-13	41	192	28	3786
12747	JessaLou	2020-07-16	40	247	296	8919

In [226]

# df\_top\_users[60: ].head(60)

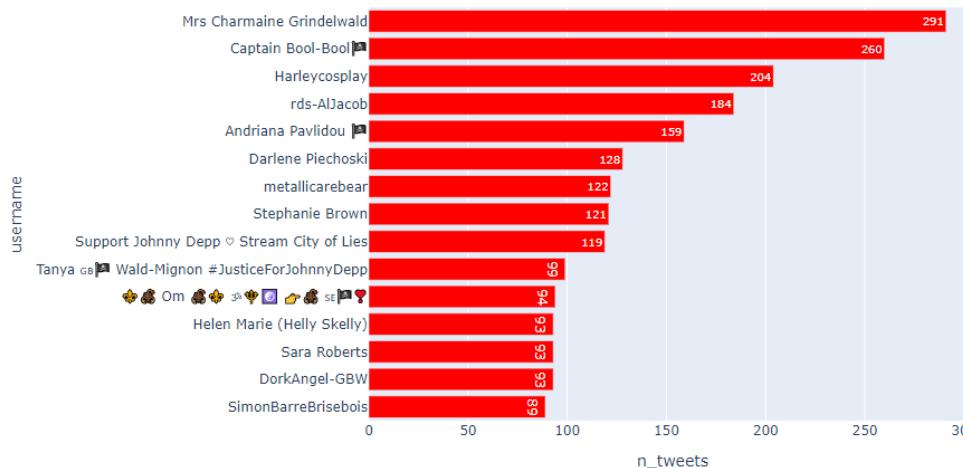
In [227]

# top\_list = set(df\_top\_users.username.head(60))  
# users[users.username.isin(top\_list)][['user\_Location']].value\_counts()

In [228]

helpers.bahr(df\_top\_users[['username', 'n\_tweets']].head(15), "Top Tweeted Users with 'Aquaman Petition Links'", c='red')

Top Tweeted Users with 'Aquaman Petition Links'



**NOTE:**

- The repeated pirate flag in usernames

## Mrs Charmaine Grindelwald

In [229]

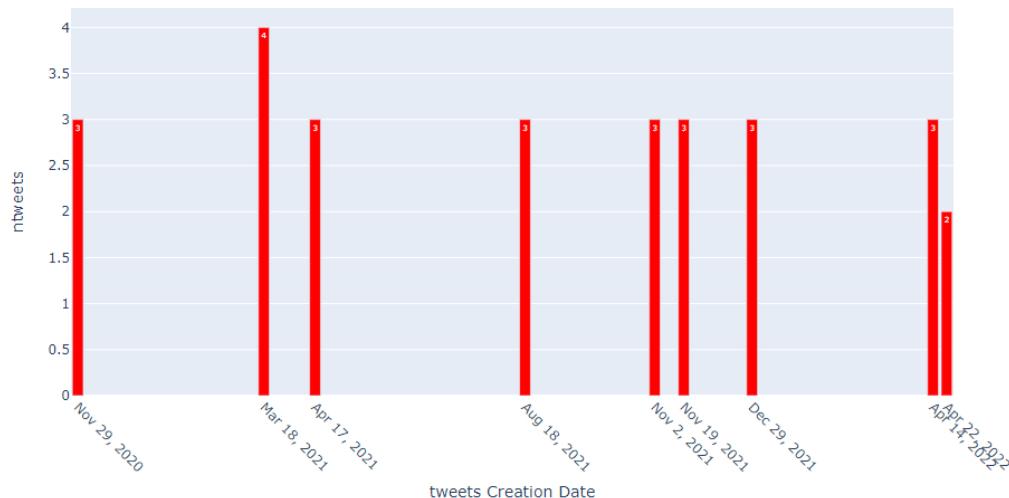
```
# importlib.reload(helpers)
```

In [230]

```
helpers.contr_peaks(tweets, "Mrs Charmaine Grindelwald", n=9, threshold=0)
```

total number of tweets by "Mrs Charmaine Grindelwald": 430

"Mrs Charmaine Grindelwald" Top Contributions



In [231]

```
aquaman_petition[aquaman_petition.username == 'Mrs Charmaine Grindelwald'].text.value_counts().head()
```

Out[231]

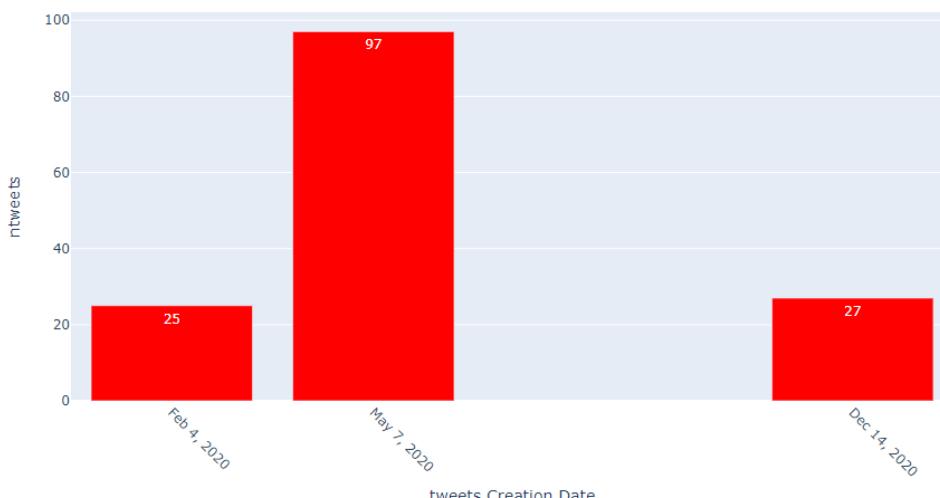
```
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/ykwerv4qdg via @ukchange
l'oréal: remove amber heard as l'oréal spokesperson - sign the petition! https://t.co/zrlks4blmt via @ukchange
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/hhx2cen01 via @ukchange
united states supreme court: put amber heard behind bars! - sign the petition! https://t.co/gtorxpmkbf via @ukchange
united states supreme court: put amber heard behind bars! - sign the petition! https://t.co/6xxzokvvip via @ukchange
Name: text, dtype: int64
```

## Captain Boo-Boo

```
helpers.contr_peaks(tweets, "Captain Boo-Boo", n=3, threshold=0)
```

total number of tweets by "Captain Boo-Boo": 1341

"Captain Boo-Boo" Top Contributions



In [233]

```
aquaman_petition[aquaman_petition.username == 'Captain Boo-Boo'].text.value_counts().head()
```

Out[233]

```
#justiceforjohnnydepp #piratesofthecaribbean #jacksparrow #johnnydepp #disney #captainjacksparrow\nhttps://t.co/rnnbphshbr\ndisney: we want johnny depp back as captain jack sparrow - sign the petition!\n183 k.
#justiceforjohnnydepp #piratesofthecaribbean #jacksparrow #johnnydepp #disney #captainjacksparrow\nhttps://t.co/rnnbphshbr\ndisney: we want johnny depp back as captain jack sparrow - sign the petition!\n180 k.
```

```
#nojohnnynopirates #johnnydeppforpotc6 #johnnydepp #bringbackcaptainjack #justiceforjohnnydepp #disney #captainjacksparrow\nhttps://t.co/rnnbphshbr\ndisney: we want johnny depp back as captain jack sparrow - sign the petition!\n195 k. 3  
#justiceforjohnnydepp #piratesofthecaribbean #jacksparrow #johnnydepp #disney #captainjacksparrow\nhttps://t.co/rnnbphshbr\ndisney: we want johnny depp back as captain jack sparrow - sign the petition!\n184 k. 3  
#justiceforjohnnydepp #piratesofthecaribbean #jacksparrow #johnnydepp #disney #captainjacksparrow\nhttps://t.co/rnnbphshbr\ndisney: we want johnny depp back as captain jack sparrow - sign the petition!\n182 k. 3  
Name: text, dtype: int64
```

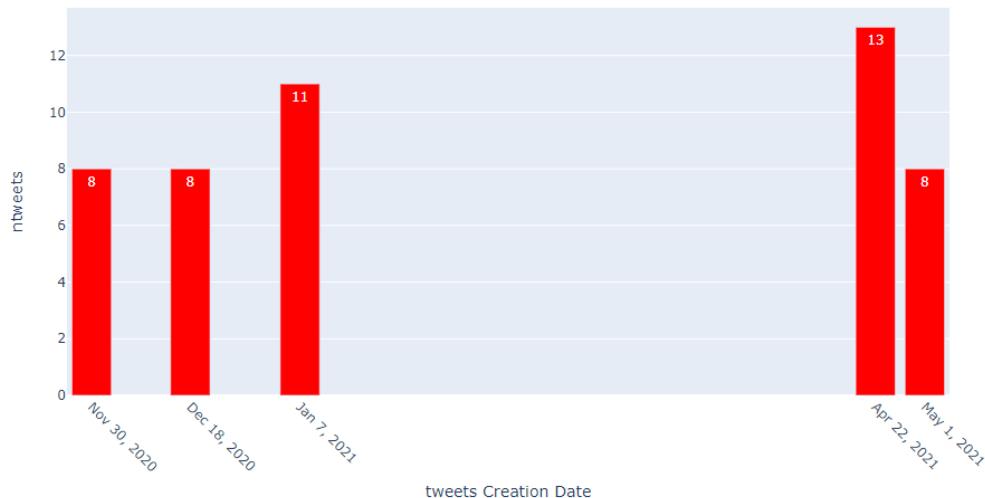
## Harleycosplay

In [234...]

```
helpers.contr_peaks(tweets, "Harleycosplay", n=5, threshold=0)
```

total number of tweets by "Harleycosplay": 441

"Harleycosplay" Top Contributions



In [235...]

```
aquaman_petition[aquaman_petition.username == 'Harleycosplay'].text.value_counts().head()
```

Out[235...]

```
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/pqkppmmap via @change \n\n1,596,072 still going strong. we can do this #justiceforjohnnydepp #firetherelief #amberheardisanabuser 1  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/pqkppmmap via @change 1,839,445 lets keep it going. i will not be seeing this movie sorry jason but she is pos human and i just can't 1  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/crpauzohbp via @change 1,834,515 real people don't want to see little miss nobody in the movie. please share #10mstandwithjohnnydepp and then some. happy easter 1  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/crpauzohbp via @change don't forget to share 1,834,605 real people have signed lets keep showing that nobody we don't like her #10mstandwithjohnnydepp and then some 1  
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/7ctfn0w6v via @change 1,834,908 and still growing slowly but every signature counts keep sharing #10mstandwithjohnnydepp and more 1  
Name: text, dtype: int64
```

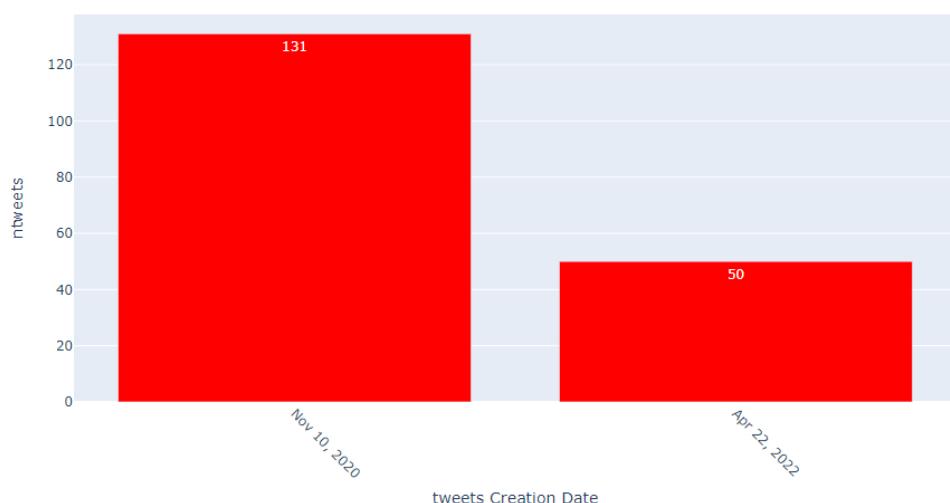
## rds-AlJacob

In [236...]

```
helpers.contr_peaks(tweets, "rds-AlJacob", n=2, threshold=0)
```

total number of tweets by "rds-AlJacob": 1437

"rds-AlJacob" Top Contributions



In [237...]

```

aquaman_petition[aquaman_petition.username == 'ros-AIJACOD'].text.value_counts().head()

Out[237... warner brothers: bring johnny depp back to fantastic beasts - sign the petition! https://t.co/iyyst4adue via @ukchange #justiceforjohnnydepp
2 warner brothers: keep johnny depp as grindelwald! - sign the petition! https://t.co/k2syrnbue via @ukchange #justiceforjohnnydepp
2 california state courts: amber heard brought to justice - sign the petition! https://t.co/ytscgbeer8 via @ukchange #justiceforjohnnydepp #amberheardisanabuser
1 united nation human rights : united nations drop amber heard - sign the petition! https://t.co/20elcdsqld via @ukchange #justiceforjohnnydepp #amberheardisanabuser
1 the walt disney company: for disney to apologize and give johnny depp his capt jack sparrow job back. - sign the petition! https://t.co/ijuzkeh1ab via @ukchange #justiceforjohnnydepp
Name: text, dtype: int64

```

## Andriana Pavlidou 🏴

```

In [238... helpers.contr_peaks(tweets, "Andriana Pavlidou 🏴", n=5, threshold=0)

total number of tweets by "Andriana Pavlidou 🏴": 478

```

"Andriana Pavlidou 🏴" Top Contributions



```

In [239... aquaman_petition[aquaman_petition.username == 'Andriana Pavlidou 🏴'].text.value_counts().head()

```

```

Out[239... please sign the petition! https://t.co/n4oyifjxoz\n#johnnydepp #justiceforjohnnydepp #boycottwarnerbros #fantasticbeasts 7
please sign the petition! https://t.co/n4oyifjxoz\n#johnnydepp #justiceforjohnnydepp #boycottwarnerbros #boycottfantasticbeasts3 #fantasticbeasts 7
please sign the petition! https://t.co/n4oyifjxoz\n#johnnydepp #justiceforjohnnydepp #boycottwarnerbros #fantasticbeasts #fantasticbeasts3 6
please sign the petition! https://t.co/n4oyifjxoz\n#johnnydepp #justiceforjohnnydepp #boycottwarnerbros #fantasticbeasts #warnerbros #fantasticbeasts3 4
please sign the petition! https://t.co/n4oyifjxoz\n#johnnydepp #justiceforjohnnydepp #boycottwarnerbros #fantasticbeasts #fantasticbeasts3 #warnerbros 3
Name: text, dtype: int64

```

## Darlene Piechoski

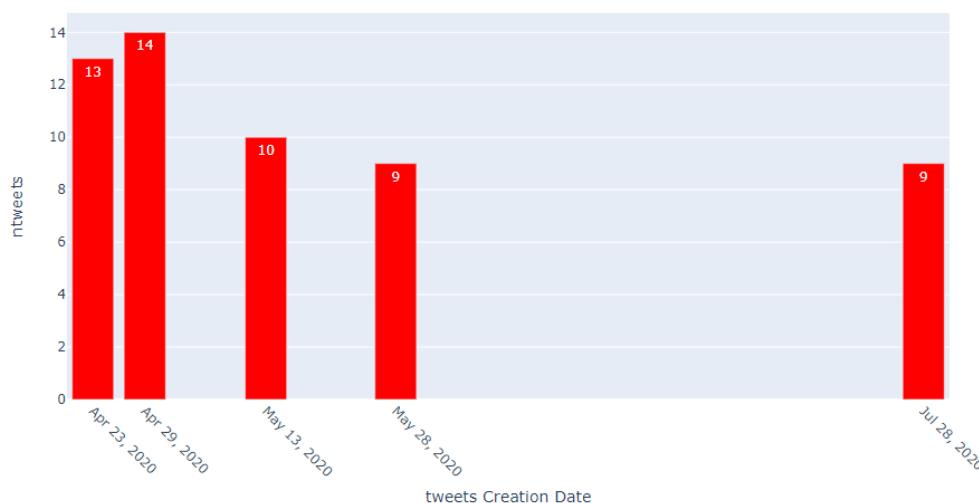
```

In [240... helpers.contr_peaks(tweets, "Darlene Piechoski", n=5, threshold=0)

total number of tweets by "Darlene Piechoski": 241

```

"Darlene Piechoski" Top Contributions



```
In [241... aquaman_petition[aquaman_petition.username == 'Darlene Piechoski'].text.value_counts().head()

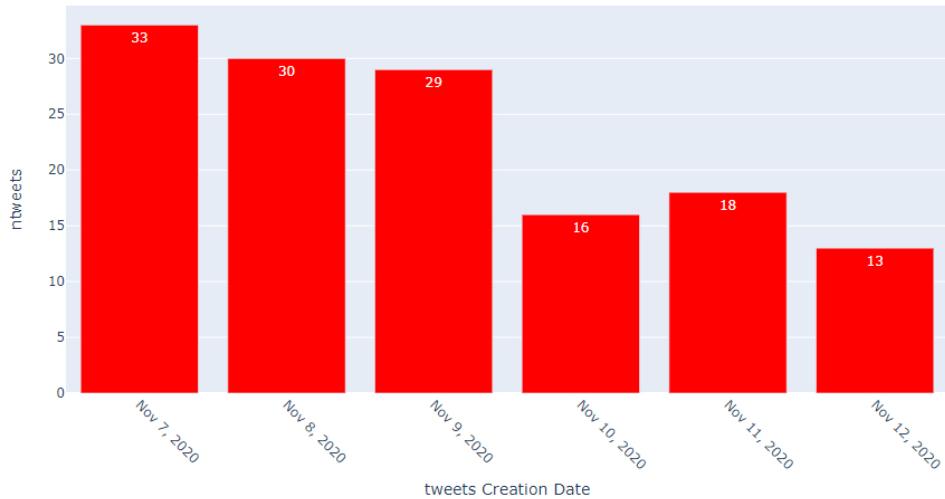
Out[241... warnermedia: fire amber heard from aquaman 2 - sign the petition! https://t.co/b8ttqwgfy via @change #johnnydeppisinnocent \n#amberheardisalier #amberheardisanabuser #justiceforjohnnydepp #johnnydeppisavictim #fireamberheard #boycottloreal #recastmera #nojohnnynopirates 9
l'oréal: remove amber heard as l'oreal spokesperson - sign the petition! https://t.co/x2iddwtr via @change #johnnydeppisinnocent \n#amberheardisalier #amberheardisanabuser #justiceforjohnnydepp #johnnydeppisavictim #fireamberheard #boycottloreal #recastmera #nojohnnynopirates 7
l'oréal: remove amber heard as l'oreal spokesperson - sign the petition! https://t.co/tkpbutm7rf via @change #johnnydeppisinnocent \n#amberheardisalier #amberheardisanabuser #justiceforjohnnydepp #johnnydeppisavictim #fireamberheard #boycottloreal #recastmera #nojohnnynopirates 6
fbi: investigate and charge amber heard - sign the petition! https://t.co/ydh96sy80k via @change #johnnydeppisinnocent \n#amberheardisalier #amberheardisanabuser #justiceforjohnnydepp #johnnydeppisavictim #fireamberheard #boycottloreal #recastmera #nojohnnynopirates 5
Name: text, dtype: int64
```

## metallicarebear

```
In [242... helpers.contr_peaks(tweets, "metallicarebear", n=6, threshold=0)

total number of tweets by "metallicarebear": 328
```

"metallicarebear" Top Contributions



```
In [243... aquaman_petition[aquaman_petition.username == 'metallicarebear'].text.value_counts().head()

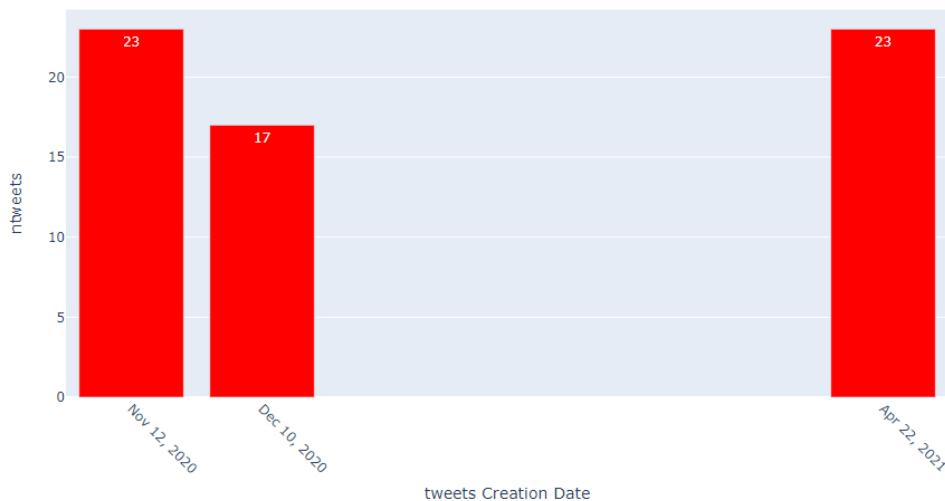
Out[243... dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/s2ngnta5md via @cdnchange \n\n#justiceforjohnnydepp
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/j6ecforj53 via @cdnchange \n\n#justiceforjohnnydepp
the people: warner bros, bring johnny depp back as gellert grindelwald!!! - sign the petition! https://t.co/w3yafzwe via @cdnchange \n\n#justiceforjohnnydepp
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/s2ngnta5md via @cdnchange \n\n#justiceforjohnnydepp \n#justiceforjohnnydepp
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/yyyajryxz via @cdnchange \n\n#justiceforjohnnydepp
Name: text, dtype: int64
```

## Stephanie Brown

```
In [244... helpers.contr_peaks(tweets, "Stephanie Brown", n=3, threshold=0)

total number of tweets by "Stephanie Brown": 867
```

"Stephanie Brown" Top Contributions



```
In [245... aquaman_petition[aquaman_petition.username == 'Stephanie Brown'].text.value_counts().head()

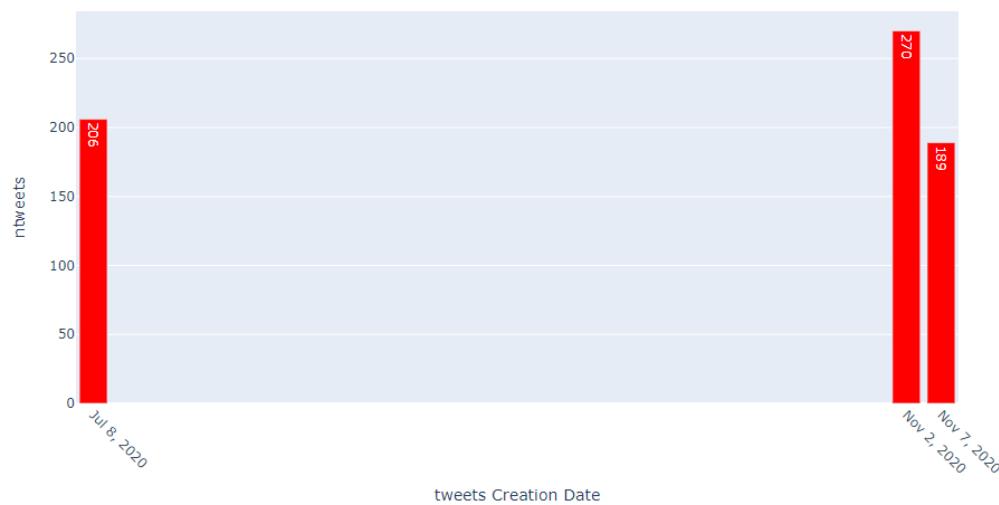
Out[245... dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/ikr5wevcgt via @change
1
#johnnydeppiscaptainjacksparrow #boycottdisney until they #rehirejohnnydepp! \nthis is #justiceforjohnnydepp!\ndisney: get disney to sign j
ohnny depp again - sign the petition! https://t.co/i36dluhqzq via @change 1
#removeamberheard \nunited nations: remove amber heard as a spokesperson for harry walker agency for domestic violence - sign the petition! https://t.co/9q16sjhawp via @chan
ge 1
#amberheardisanabuser \nnumber heard.: have amber heard plead guilty for domestic violence. - sign the petition! https://t.co/bvmedfmba5 via @change
1
#justiceforjohnnydepp \nunited states supreme court: put amber heard behind bars! - sign the petition! https://t.co/sb42arilqs via @change
1
Name: text, dtype: int64
```

## Support Johnny Depp ❤ Stream City of Lies

```
In [246... helpers.contr_peaks(tweets, "Support Johnny Depp ❤ Stream City of Lies", n=3, threshold=0)

total number of tweets by "Support Johnny Depp ❤ Stream City of Lies": 4297
```

"Support Johnny Depp ❤ Stream City of Lies" Top Contributions



```
In [247... aquaman_petition[aquaman_petition.username == 'Support Johnny Depp ❤ Stream City of Lies'].text.value_counts().head()

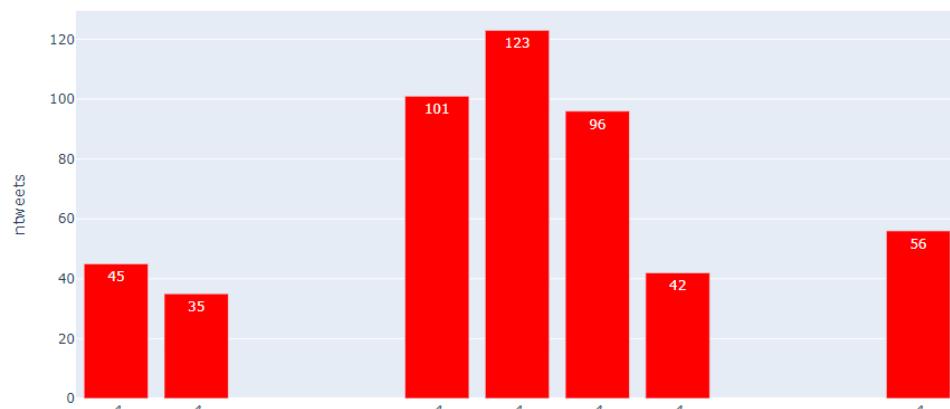
Out[247... @aquamanmovie why don't you stop celebrating abusers? #recastmera #amberheardisanabuser #fireamberheard #justiceforjohnnydepp\nhttps://t.co/lpy0jbgy7o https://t.co/wluvkdtwd
k
petition to remove amber heard from 'aquaman 2' reaches 1.1 million signatures #fireamberheard https://t.co/jjxrzuel15
1
dc entertainment: remove amber heard from aquaman 2 - sign the petition!\n1,445,278 have signed. let's get to 1,500,000! https://t.co/3bxok9jfsu
1
sign the petitions please:\n\nwarner bros, bring johnny depp back as gellert grindelwald!!!\nhttps://t.co/elazu19brk\n\nwe want johnny depp back as captain jack sparrow\nhtt
ps://t.co/539txobaym\n\nremove amber heard from aquaman 2\nhttps://t.co/isbnz7d3z\n\n#justiceforjohnnydepp https://t.co/a7ne7hscat 1
petition to bring johnny depp back as captain jack sparrow reaches nearly 300,000 signatures #justiceforjohnnydepp https://t.co/wjwrjjev7h
1
Name: text, dtype: int64
```

## Tanya GB🏴‍☠️ Wald-Mignon #JusticeForJohnnyDepp

```
In [248... helpers.contr_peaks(tweets, "Tanya GB🏴‍☠️ Wald-Mignon #JusticeForJohnnyDepp", n=7, threshold=0)

total number of tweets by "Tanya GB🏴‍☠️ Wald-Mignon #JusticeForJohnnyDepp": 1458
```

"Tanya GB🏴‍☠️ Wald-Mignon #JusticeForJohnnyDepp" Top Contributions





```
In [249... aquaman_petition[aquaman_petition.username == 'Tanya GB 🇬🇧 Wald-Mignon #JusticeForJohnnyDepp'].text.value_counts().head()

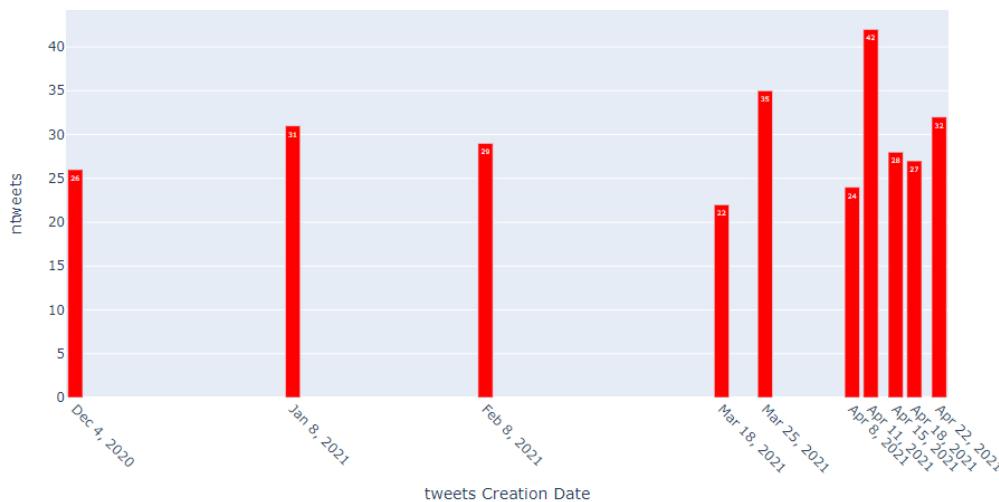
Out[249... dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/ib9xsouvki via @ukchange
l'oréal: remove amber heard as l'oreal spokesperson - sign the petition! https://t.co/episal4knz via @ukchange
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/sg0dzvnocp via @ukchange
american civil liberties union: aclu: revoke your title of ambassador for women's rights from amber heard! - sign the petition! https://t.co/b1bjaj5zoxr via @ukchange
american civil liberties union: aclu: revoke your title of ambassador for women's rights from amber heard! - sign the petition! https://t.co/41s5vzc2rg via @ukchange
Name: text, dtype: int64
```



```
In [250... helpers.contr_peaks(tweets, "✿ ❁ Om ❁ ❁ ❁ ❁ ❁ ❁ SE ❁ ❁", n=10, threshold=0)

total number of tweets by "✿ ❁ Om ❁ ❁ ❁ ❁ ❁ ❁ SE ❁ ❁": 905
```

"✿ ❁ Om ❁ ❁ ❁ ❁ ❁ ❁ SE ❁ ❁" Top Contributions



```
In [251... aquaman_petition[aquaman_petition.username == '✿ ❁ Om ❁ ❁ ❁ ❁ ❁ ❁ SE ❁ ❁'].text.value_counts().head()
```

```
Out[251... dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/67ojmnnong via @change
320 have signed. let's get to 500!\nnumber heard: a public letter to amber heard - sign the petition! https://t.co/wd0jqyps7j via @change
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/aggankixxd via @change
14,787 have signed. let's get to 15,000!\n'l'oréal: remove amber heard as l'oréal spokesperson - sign the petition! https://t.co/vxwo1imqse via @change
american civil liberties union: have amber heard removed as aclu ambassador for women's rights - sign the petition! https://t.co/gb7ugawtey via @change
Name: text, dtype: int64
```

## Top Daily Tweeted Users with "Aquaman Petition Links"

- Top Totals
- Top Daily
- Top Daily (on average)

## Users with The Most Contributions on Each Date

```
In [252... df = aquaman_petition.groupby(['date', 'username']).agg({'text':'count'}).reset_index()
    .rename(columns={'text':'n_tweets'}).sort_values('n_tweets', ascending=False)

df.head(15)
```

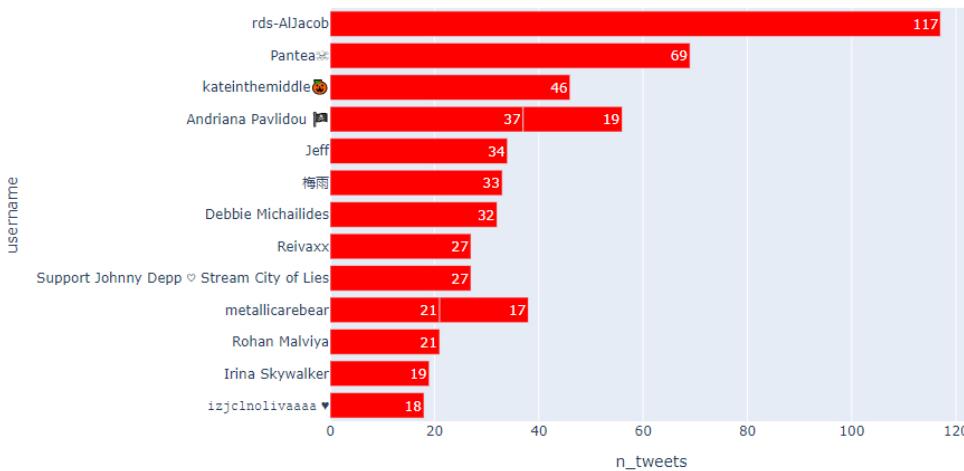
	date	username	n_tweets
23543	2020-11-10	rds-Allacob	117
29146	2020-11-13	Pantea潮湿	69
22245	2020-11-09	kateinthemiddle潮湿	46
34392	2020-11-26	Andriana Pavlidou 🇬🇷	37
32650	2020-11-18	Jeff	34
19097	2020-11-07	梅雨	33
41917	2021-03-23	Debbie Michailides	32
34485	2020-11-26	Reivaxx	27
26900	2020-11-12	Support Johnny Depp ❤ Stream City of Lies	27
22281	2020-11-09	metallicarebear	21
20315	2020-11-08	Rohan Malviya	21
33621	2020-11-22	Andriana Pavlidou 🇬🇷	19

39319	2021-01-07	Irina Skywalker	19
19132	2020-11-07	izjclnolivaaaa	18
20795	2020-11-08	metallicarebear	17

In [253]:

```
title = 'Users with The Most "Aquaman Petition" Contributions on Each Date'
helpers.barch(df[['username', 'n_tweets']].head(15), title, c='red') # , c=colors
```

Users with The Most "Aquaman Petition" Contributions on Each Date



### rds-AlJacob (2020-11-10)

In [254]:

```
mask = (aquaman_petition.date.astype(str)=="2020-11-10") & (aquaman_petition.username=="rds-AlJacob")
df_jacob = aquaman_petition[mask]
df_jacob.text.value_counts().head(60)
```

Out[254]:

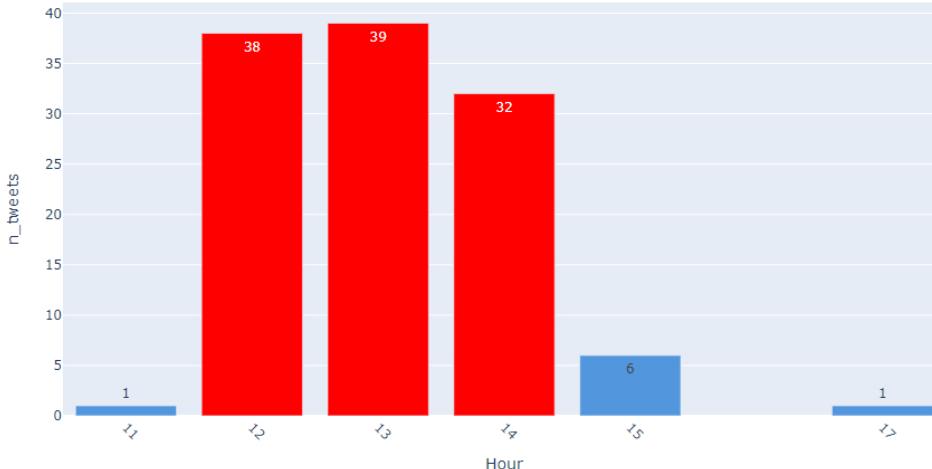
```
dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/tky8fqmwj4 via @ukchange nearly 810k signatures and rising! public opinion is not with her @wpictures #boycottwarnerbros #justiceforjohnnydepp 1
warner bros: i want warner bros to reinstate johnny depp as grindlewald and has his name cleared - sign the petition! https://t.co/tvro3bjqbc via @ukchange #justiceforjohnnydepp https://t.co/y3nfxelgu 1
l'oréal: remove amber heard from being l'oréal's new global spokesperson!! - sign the petition! https://t.co/ur6mp4cty5 via @ukchange #justiceforjohnnydepp
1
people with common sense: amber heard must be fired too! - sign the petition! https://t.co/g9ixhn6zyg via @ukchange #justiceforjohnnydepp
1
state of california : file criminal charges against people that falsify evidence in domestic violence cases - sign the petition! https://t.co/mqvu9fnvka via @ukchange #justiceforjohnnydepp
1
warner brothers: justice for johnny depp, in the case against amber heard - sign the petition! https://t.co/yabclqq8va via @ukchange #justiceforjohnnydepp
1
warner bros: petition to bring johnny depp back in fantastic beasts! - sign the petition! https://t.co/xgbiyi4sfy via @ukchange #justiceforjohnnydepp
1
the walt disney company: cancel pirates of the caribbean reboot - sign the petition! https://t.co/r33go2rydh via @ukchange #justiceforjohnnydepp
1
walt disney: let johnny depp be in potc - sign the petition! https://t.co/lvv9pwsrk7j via @ukchange #justiceforjohnnydepp
1
everyone : justice for johnny depp as captain jack sparrow - sign the petition! https://t.co/05se5uansh via @ukchange #justiceforjohnnydepp
1
warner brothers: recast johnny depp for fantastic beasts 6 now - sign the petition! https://t.co/oehzkk7vca via @ukchange #justiceforjohnnydepp
1
disney: let johnny depp back into the "pirates" movie series. - sign the petition! https://t.co/ycjpuneeg via @ukchange #justiceforjohnnydepp
1
walt disney: get jonny deep his job back!! - sign the petition! https://t.co/iwfndnw8zes via @ukchange #justiceforjohnnydepp
1
warner brothers: fire amber heard, rehire johnny depp - sign the petition! https://t.co/qzys16frll via @ukchange #justiceforjohnnydepp
1
warner brothers: get johnny depp back on fantastic beasts - sign the petition! https://t.co/rsrxwtlugk via @ukchange #justiceforjohnnydepp
1
walt disney: bring johnny depp back to pirates of the caribbean - sign the petition! https://t.co/02zeab83q5 via @ukchange #justiceforjohnnydepp
1
marvel: johnny depp as ghost rider in mcu - sign the petition! https://t.co/fiqfknn6w4 via @ukchange #justiceforjohnnydepp
1
warner brothers: warner brothers, apologise to johnny depp and give him his job back! - sign the petition! https://t.co/tkihqby9a via @ukchange #justiceforjohnnydepp
1
the walt disney company: do not remove johnny depp from pirates of the caribbean - sign the petition! https://t.co/hpteu6fn via @ukchange #justiceforjohnnydepp
1
the walt disney company: give johnny depp his job back! - sign the petition! https://t.co/vyi89txhlq via @ukchange #justiceforjohnnydepp
1
warner brothers studios: warner bros must publicly apologise to johnny depp - sign the petition! https://t.co/msoxe cpdil via @ukchange #justiceforjohnnydepp
1
hollywood: boycott aquaman 2 amber heard - sign the petition! https://t.co/rujo4y6cmo via @ukchange #justiceforjohnnydepp
1
the walt disney company: restore johnny depp after amber heard evidence proves innocence - sign the petition! https://t.co/euvt6zuluq via @ukchange #justiceforjohnnydepp
1
warner brothers: get johnny depp his role in fantastic beasts back. arrest&fire amber heard from aquaman 2. - sign the petition! https://t.co/biu0uovxlv via @ukchange #justiceforjohnnydepp
1
warner bros studios (wb): johnny depp should remain gellert grindelwald - sign the petition! https://t.co/ee7tiqcpcu via @ukchange #justiceforjohnnydepp even all the way over in india 🌎 1
walt disney: revoke the decision not to cast johnny depp in disney's pirates of the caribbean - #jfj - sign the petition! https://t.co/liewed8geb via @ukchange #justiceforjohnnydepp
1
directors of pirates of the caribbean : bring back johnny depp as captain jack sparrow in potc - sign the petition! https://t.co/mn3rizuq5a via @ukchange #justiceforjohnnydepp
1
warner brothers: get johnny depp back on fantastic beasts! - sign the petition! https://t.co/ajvjfj6fqo via @ukchange #justiceforjohnnydepp
1
warner bros: warner bros, keep johnny depp as grindelwald!!! please!! - sign the petition! https://t.co/8sm5dfuyq4 via @ukchange #justiceforjohnnydepp wow this is coming from all over the world 1
```

... over the world  
 disney: keep johnny depp in pirates and don't make a reboot - sign the petition! <https://t.co/eyavnrluh> via @ukchange #justiceforjohnnydepp  
 1  
 the walt disney company: put johnny depp in pirates of the caribbean 6 - sign the petition! <https://t.co/6ro3dpgzse> via @ukchange #justiceforjohnnydepp  
 1  
 warner brothers: boycott fantastic warner bros - sign the petition! <https://t.co/waqgex3onk> via @ukchange #justiceforjohnnydepp  
 1  
 warner brothers: keep johnny deep as grindelwald - sign the petition! <https://t.co/lyuxsqr7jg> via @ukchange #justiceforjohnnydepp  
 1  
 warner brothers: fire amber heard from aquaman 2 - sign the petition! <https://t.co/x6u0wjazc5> via @ukchange #amberheardisanabuser #justiceforjohnnydepp  
 1  
 warner brothers: remove amber heard from dceu movies - sign the petition! <https://t.co/dq0qtwkqa7> via @ukchange #amberheardisanabuser #justiceforjohnnydepp south africa  
 1  
 the walt disney company: emilia to take the place of amber in the next aquaman - sign the petition! <https://t.co/pjo65brxws> via @ukchange #justiceforjohnnydepp #amberheardisanabuser kenya KE  
 1  
 l'oreal boycott: boycott l'oreal amber heard woman of worth - sign the petition! <https://t.co/20kjxit3h> via @ukchange #justiceforjohnnydepp #amberheardisanabuser  
 1  
 no one: black list amber heard!!! - sign the petition! <https://t.co/49jr20cj1o> via @ukchange #justiceforjohnnydepp #amberheardisanabuser  
 1  
 dc comics: replace amber heard with emilia clarke as mera in aquaman 2 - sign the petition! <https://t.co/uw6ugg1plw> via @ukchange #justiceforjohnnydepp #amberheardisanabuser  
 1  
 california state courts: amber heard brought to justice - sign the petition! <https://t.co/ytscgbeer8> via @ukchange #justiceforjohnnydepp #amberheardisanabuser  
 1  
 the walt disney company: bring back captain jack sparrow - sign the petition! <https://t.co/q2ouopvzaq> via @ukchange #justiceforjohnnydepp  
 1  
 warner brothers: fire/cancel/blacklist amber heard, clear depp's name #johnnydeppisinnocent - sign the petition! <https://t.co/6qkpyvujm1> via @ukchange #justiceforjohnnydepp  
 1  
 disney studios: 500,000 - sign the petition! <https://t.co/gaetnfbmw> via @ukchange #justiceforjohnnydepp  
 1  
 the walt disney company: make disney wait for jonny depp's case to become clear before replacement - sign the petition! <https://t.co/0xuhmfy5vh> via @ukchange #justiceforjohnnydepp  
 1  
 warner brothers: johnny is our grindelwald - sign the petition! <https://t.co/uiwsbvr1l2> via @ukchange #justiceforjohnnydepp  
 1  
 the walt disney company: we want captain jack sparrow back on pirated of the caribbean 6 - sign the petition! <https://t.co/lhmwjx9axm> via @ukchange #justiceforjohnnydepp  
 1  
 warner brothers: johnnydeppisgrindelwald - sign the petition! <https://t.co/shshdzvse5> via @ukchange #justiceforjohnnydepp  
 1  
 the walt disney company: for disney to apologize and give johnny depp his capt jack sparrow job back. - sign the petition! <https://t.co/ijuzkeh1ab> via @ukchange #justiceforjohnnydepp  
 1  
 united nation human rights : united nations drop amber heard - sign the petition! <https://t.co/20elcdsqld> via @ukchange #justiceforjohnnydepp #amberheardisanabuser  
 1  
 warner bros.: petition against the redeployment of gellert grindelwald in the film fantastic beasts 3. - sign the petition! <https://t.co/jsqlqd48hd2> via @ukchange #justiceforjohnnydepp  
 1  
 have warner brothers reinstate johnny depp into the fantastic beasts movies.: have warner brothers reinstate johnny depp into the fantastic beasts movies - sign the petition! <https://t.co/lwzuyhsxk0> via @ukchange #justiceforjohnnydepp  
 1  
 warner brothers: have warner bros. keep johnny depp in the fantastic beast franchise. - sign the petition! <https://t.co/hdv1o2gndi> via @ukchange #justiceforjohnnydepp  
 1  
 the walt disney company: keep jack sparrow in potc! #nojacknolirates #nopiratesreboot #johnnyasjackispotc #bringbackoriginalwritersforpotc #bringbackforeverbinsk @disney - sign the petition! <https://t.co/63aecaghsg> via @ukchange #justiceforjohnnydepp  
 1  
 warner brothers: boycott aquaman 2 and l'oreal - sign the petition! <https://t.co/cffnihwhal> via @ukchange #justiceforjohnnydepp  
 1  
 bbc: johnny depp should be the next "doctor who" doctor! - sign the petition! <https://t.co/qrb0pihey9r> via @ukchange #justiceforjohnnydepp #forthebands  
 1  
 bann amber heard acting career: bann amber heard from acting due to being a abuser & her publicly humiliating johnny depp - sign the petition! <https://t.co/laqxqlfb74> via @ukchange #justiceforjohnnydepp  
 1  
 nickelodeon movies: get nickelodeon and paramount to start making rango 2 - sign the petition! <https://t.co/4ntquswgml> via @ukchange #justiceforjohnnydepp  
 1  
 warner brothers: save johnny depp as gellert grindelwald in the movie "fantastic beasts"! - sign the petition! <https://t.co/tut3tgaka0> via @ukchange #justiceforjohnnydepp  
 1  
 dc comics: make johnny depp the joker in dc batman - sign the petition! <https://t.co/nkixf7y0ka> via @ukchange #justiceforjohnnydepp  
 1  
 justice for johnny depp - sign the petition! <https://t.co/rgpn52pelt> via @ukchange #justiceforjohnnydepp #boycottwarnerbro  
 1  
 Name: text, dtype: int64

```
In [255]: counts_per_hr = df_jacob.groupby('hour').size().reset_index(name='n_tweets')
# or
# counts_per_hr = df_jacob.hour.value_counts().to_frame()
# counts_per_hr.head()
```

```
In [256]: title = 'rds-AlJacob "Aquaman Petition" Contributions on (2020-11-10)'
helpers.bar_peaks(counts_per_hr, title, threshold=10, xlabel='Hour')
```

rds-AlJacob "Aquaman Petition" Contributions on (2020-11-10)



## Pantea 🦇 (2020-11-13)

In [257]

```
mask = (aquaman_petition.date.astype(str) == "2020-11-13") & (aquaman_petition.username == "Pantea 🦇")
df_Pantea = aquaman_petition[mask]
df_Pantea.text.value_counts().head(60)
```

Out[257]

```
@alexordarado dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@asharblz dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@mattlovescinema dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@lewisjohny2 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@gwcpika dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@bredgaming dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@slimeseason35 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@mmerged dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@gay_moana dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@infinitejaydc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@holyska1991 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@gingertale dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@astronixii dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@gibjock dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@emily_jayne1233 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@poedjarin dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@andrew_muench dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@unlucky_em dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@dulllahh dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupumiy 1
@broncosjrr dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@selrareheartbet dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@skcomics2 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@pantherhollyann dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@nazaekwunife dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@redapplesquares dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@llidocinferno dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@moonfiyah dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@immortallydum dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@jamiekinnear2 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@happygamerlife dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@chubsohan dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@kellsdasportguy dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@orgnlyangster @warnerbros dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq 1
@aerithsseat dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@ollosaurrell dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@allen_eagles27 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@exoticchickenn dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@veronicareen @heavenlycontrol dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@franciscoallen @heavenlycontrol dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@geek_man_dc dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@haydn_e99 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@moeizer dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@thelegomoses dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@soyb1 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@thedevil0fh dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@echoorcool dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupumiy via @change 1
@adesimidivine_dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@arkham2019 @bpictures dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@datingsims_dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@staruplatinum dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@kevin179_nuk3 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@tomyo_dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@snapedior dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@okkareenn dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@dc64306187 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@vanillaabignoni1 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@markus9 dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@marvelousxoxo dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@spiders_might dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
@skylershuler @bpictures dc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/4rrcupclrq via @change 1
Name: text, dtype: int64
```

In [258]

```
counts_per_hr = df_Pantea.groupby('hour').size().reset_index(name='n_tweets')
# or
# counts_per_hr = df_jacob.hour.value_counts().to_frame()
# counts_per_hr.head()
```

In [259]

```
title = 'Pantea 🦇 "Aquaman Petition" Contributions on (2020-11-13)'
helpers.bar_peaks(counts_per_hr, title, threshold=10, xlabel='Hour')
```

Pantea 🦇 "Aquaman Petition" Contributions on (2020-11-13)



## kateinthemiddle 🎃 (2020-11-09)

```
In [260]: mask = (aquaman_petition.date.astype(str)=="2020-11-09") & (aquaman_petition.username=="kateinthemiddle 🎃")
df_kate = aquaman_petition[mask]
df_kate.text.value_counts().head(60)

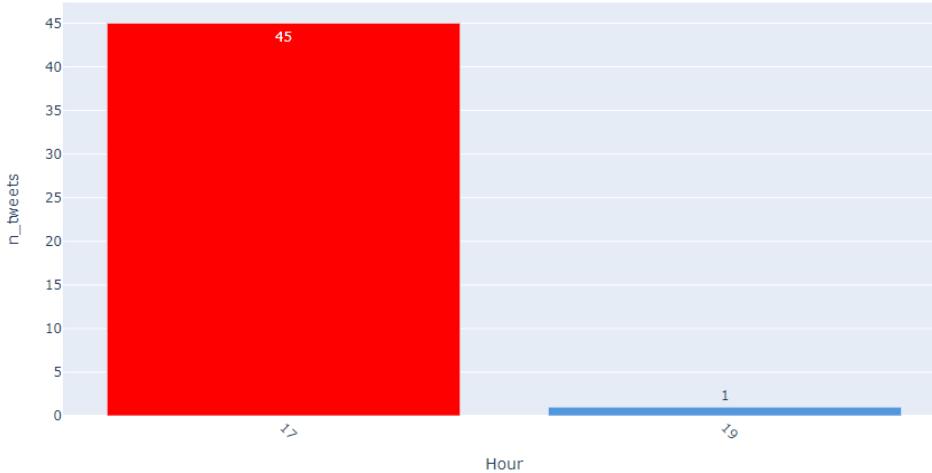
Out[260]: @mygrindelwald lets save johnny! sign & share these petitions! together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@deppxblake lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@dariapankov lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@falllllll_ lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@kountrysidey lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@himespit lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberhearisanabuser
@juliee_nc lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@hettoray0623 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@bey_bts lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@irem_yagmur_ lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@colt_arnold lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@bacacov lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@adityam3199 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@ishiteirudarin lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@jessconnell1 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@suspectbuddy @_coramelodie @realamberheard @kamalaharris lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@swami_ananya lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@philmitchell183 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@sineoffirinne lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@magconbound lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@vintage_tabitha lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@geneviedepp lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@mey9015115 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@bnerd187 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberhearisanabuser
@black_lady83 @_change_mex lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@nicsim lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@thenamesq lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@clarchanuwu lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehc0ms & https://t.co/94flec4l3j #justiceforjohnnydepp #amberheardisanabuser
@peanut1_1 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@teamdepp_ lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@ierealdradian lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@i_bee_that lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@resurarex @_jk_rowling @_stephenfry lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@stillnoiuck lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@jesusbeard_815 @_jk_rowling @_stephenfry @fantasticbeasts lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@ishayoi @_realamberheard @_kamalaharris lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@roraimacs lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@imagine_peace7 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@moirawetherell lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@jonny_xis lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@oh_tay_ @_realamberheard lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@rachintha_kasun lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@samshawmedia lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@kris_wilson38 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
@lyngee3 lets save johnny! sign & share these petitions, together we can make it! https://t.co/qpjmehtcb2 & https://t.co/94flecmmt #justiceforjohnnydepp #amberheardisanabuser
i know that many of you don't want him to go back because of how he was treated by @wpictures, but this petition it's to show our support in general to johnny depp and send a message to the world! sign now!https://t.co/94flecmmt #justiceforjohnnydepp #johnnydeppdeservesjustice 1
Name: text, dtype: int64
```

```
In [261]: counts_per_hr = df_kate.groupby('hour').size().reset_index(name='n_tweets')
```

```
# # or
# counts_per_hr = df_jacob.hour.value_counts().to_frame()
# counts_per_hr.head()
```

```
In [262... title = 'kateinthemiddle "Aquaman Petition" Contributions on (2020-11-09)'
helpers.bar_peaks(counts_per_hr, title, threshold=10, xlabel='Hour')
```

kateinthemiddle "Aquaman Petition" Contributions on (2020-11-09)



## Top Daily Tweeted Users with "Aquaman Petition Links"

(On Average)

- Top Totals
- Top Daily
- Top Daily (on average)

```
In [263... df = aquaman_petition.groupby(['date', 'username']).agg({'text':'count'}).reset_index()
).rename(columns={'text':'n_tweets'}).sort_values('n_tweets', ascending=False)
df.head(1)
```

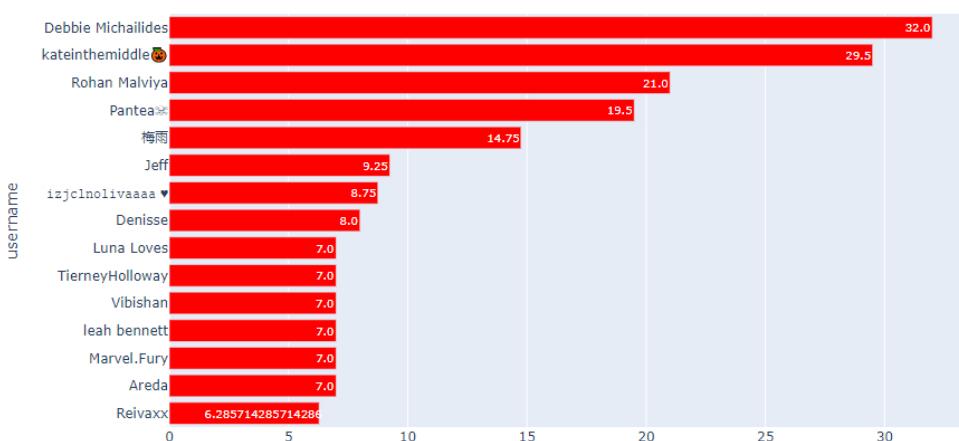
```
Out[263...      date   username  n_tweets
23543  2020-11-10  rds-AlJacob      117
```

```
In [264... tmp = df.groupby('username', as_index=False)[['n_tweets']].mean().sort_values('n_tweets', ascending=False)
tmp.head(1)
```

```
Out[264...      username  n_tweets
6629  Debbie Michailides      32.0
```

```
In [265... title = 'Users with The Most Daily "Aquaman Petition" Contributions (On Average)'
helpers.bahr(tmp[['username', 'n_tweets']].head(15), title, c='red')
```

Users with The Most Daily "Aquaman Petition" Contributions (On Average)



n\_tweets

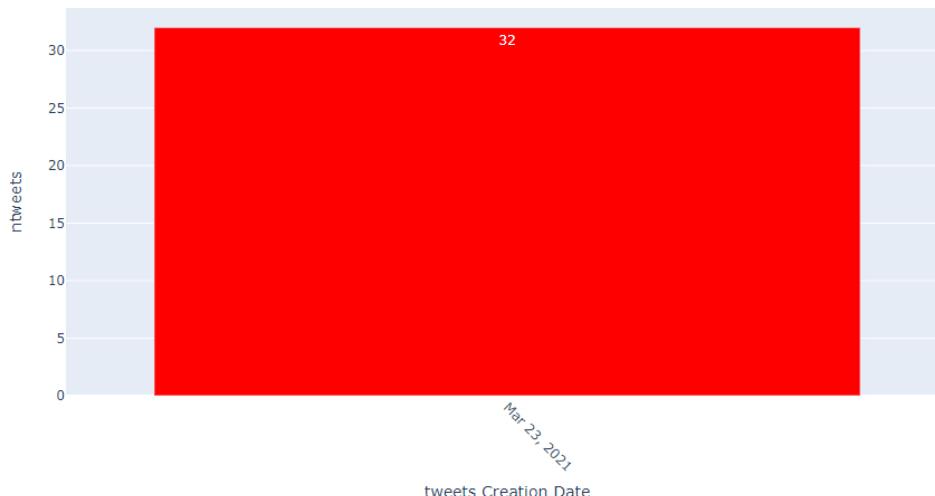
## Debbie Michailides

In [266]

```
helpers.contr_peaks(tweets, "Debbie Michailides", n=7, threshold=0)
```

total number of tweets by "Debbie Michailides": 32

"Debbie Michailides" Top Contributions



In [267]

```
aquaman_petition[aquaman_petition.username == 'Debbie Michailides'].text.value_counts().head()
```

Out[267]

```
people with common sense: amber heard must be fired too! - sign the petition! https://t.co/qgn96t1du3 via @change 1
dc: replace amber heard with danny devito in aquaman - sign the petition! https://t.co/xlelezatz5 via @change 1
warner brothers: i would like for amber heard to be removed from warner bros for assaulting johnny depp - sign the petition! https://t.co/kxy6wg1mhP via @change 1
johnny depp: reopening the amber heard vs johnny depp abuse case for actual justice to be carried out. - sign the petition! https://t.co/jtnmwwdicg via @change 1
royal court of justice london: johnny depp be dropped of all charges and allegations from amber heard - sign the petition! https://t.co/lvksfnbp0x via @change 1
Name: text, dtype: int64 1
```

## Least Tweeted Accounts

In [268]

```
# df_top_users.tail(15)
```

### NOTE:

- No need to investigate more on the Least Tweeted Accounts with "Aquaman Petition Links"

'n\_statuses', 'n\_followers', 'n\_friends'

## Users with the Most Followers

- Top Tweeted Users
- Users with the Most Followers**
- Users with the Most Friends
- Users with the Most Statuses

In [269]

```
aquaman_petition.head(1)
```

Out[269]

	n_statuses	created_at	user_description	user_created_at	user_id	username	is_verified	user_location	n_followers	user_url	lang	profile_banner_u
4434	2860	2018-03-16 21:52:09	I pretend to be sophisticated, but really I'm ...	2016-06-29 18:06:35	748216104565235712	Morgan	False	NaN	177	https://t.co/7NiXfsBF9J	en	https://pbs.twimg.com/profile_banners/748216104565235712/1561905120

In [270]

```
df_nfollower = (
    aquaman_petition.groupby(['username', aquaman_petition.user_created_at.dt.date])
    .agg({'n_followers': 'max', 'text': 'count', 'n_statuses': 'max', 'n_friends': 'max'})
    .reset_index().rename(columns={'text': 'n_tweets'}).sort_values('n_followers', ascending=False)
)
```

```
df_nfollower.head(15)
```

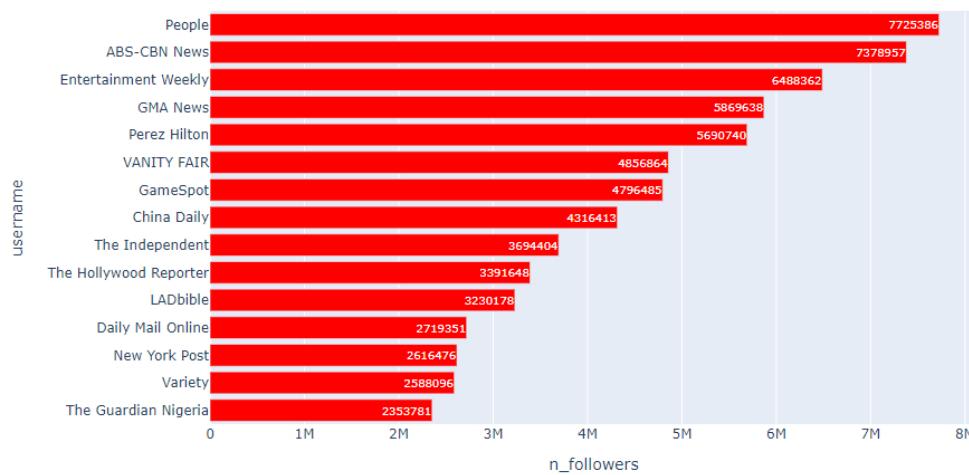
Out[270...]

	username	user_created_at	n_followers	n_tweets	n_statuses	n_friends
21332	People	2009-03-20	7725386	1	384146	1704
534	ABS-CBN News	2008-08-16	7378957	1	881305	1069
8712	Entertainment Weekly	2008-09-16	6488362	1	285741	4310
9693	GMA News	2009-05-12	5869638	2	725118	697
21348	Perez Hilton	2009-01-22	5690740	2	355634	560
27168	VANITY FAIR	2008-06-30	4856864	1	134309	1203
9844	GameSpot	2007-06-29	4796485	2	157557	715
5539	China Daily	2009-11-05	4316413	1	148791	536
26161	The Independent	2008-10-26	3694404	8	1258624	671
26156	The Hollywood Reporter	2008-11-17	3391648	3	463838	2729
15316	LADbible	2011-07-08	3230178	1	54493	0
6614	Daily Mail Online	2008-07-15	2719351	1	446843	2226
20032	New York Post	2008-11-18	2616476	3	467803	10995
27337	Variety	2008-11-20	2588096	1	327112	245614
26153	The Guardian Nigeria	2009-07-16	2353781	2	265977	523

In [271...]

```
helpers.barch(df_nfollow[['username', 'n_followers']].head(15), "Users with the Most Followers", c='red')
```

Users with the Most Followers



## detikcom

In [272...]

```
# tweets[tweets.username == 'detikcom'].text.value_counts().head()
```

In [273...]

```
# helpers.contr_peaks(tweets, "detikcom", n=5, threshold=0)
```

## Vogue Magazine

In [274...]

```
# tweets[tweets.username == 'Vogue Magazine'].text.value_counts().head()
```

In [275...]

```
# helpers.contr_peaks(tweets, "Vogue Magazine", n=5, threshold=0)
```

## Users with the Least Followers

In [276...]

```
df_nfollow.tail(15)
```

Out[276...]

	username	user_created_at	n_followers	n_tweets	n_statuses	n_friends
28684	__xistua	2020-01-03	0	1	1	63
28686	_eugenius_	2019-10-07	0	1	4	30
28696	_kolyvaaa_	2020-08-19	0	1	8	14
28705	a	2018-04-18	0	1	10	8
4830	Candace Presleigh	2022-04-27	0	1	44	30
28721	a.dilene	2019-05-13	0	2	16	120
4825	Can Erdemir	2016-07-24	0	1	8	7
28732	aaron	2020-10-23	0	1	22	53

28736	aazzeeli	2019-05-11	0	1	3	110
28741	abby)	2019-12-26	0	1	25	30
28742	abbyramsay	2020-05-13	0	1	18	62
28750	abigail mercado	2019-02-22	0	1	11	9
28751	ablindworld	2020-09-05	0	1	31	1
28753	abomouad daghistani	2021-08-08	0	1	13	1
25095	Steph-Sis	2020-08-21	0	1	11	27

#### NOTE:

- we can investigate more on Accounts with the Least Followers too!!

```
In [277... tweets[tweets.username == 'Natsume'].text.value_counts()

out[277... if you want jonny go, you have to replace her too!!! \n\ndc entertainment: remove amber heard from aquaman 2 - sign the petition! https://t.co/z72s8ume3u 來自 @change 1
Name: text, dtype: int64
```

'n\_statuses', 'n\_followers', 'n\_friends'

## Users with the Most Friends

- Top Tweeted Users
- Users with the Most Followers
- **Users with the Most Friends**
- Users with the Most Statuses

```
In [278... df_nfrnds = (
    aquaman_petition.groupby(['username', aquaman_petition.user_created_at.dt.date])
    .agg({'n_friends': 'max', 'text':'count', 'n_statuses': 'max', 'n_followers': 'max'})
    .reset_index().rename(columns={'text':'n_tweets'}).sort_values('n_friends', ascending=False)
)

df_nfrnds.head(15)
```

	username	user_created_at	n_friends	n_tweets	n_statuses	n_followers
27337	Variety	2008-11-20	245614	1	327112	2588096
21382	Peter Dickerson	2009-03-31	198138	1	134759	188431
4176	Braden Port	2010-04-10	157477	1	199286	144018
12690	Jermaine	2009-06-26	131864	1	239574	144959
7162	Deadline Hollywood	2012-05-20	125127	3	171040	960957
36042	⭐ Teo Kanistras®	2011-01-11	115371	3	764140	145002
27370	Velvet Skye™	2009-03-07	102437	1	296806	120755
38324	✉️The_News_DIVA✉️	2008-07-20	93910	2	2017361	71232
16630	Lucas Wyrtsch	2008-02-11	88893	1	725057	97068
25198	Steven J Gross	2009-03-26	72196	1	38898	79606
28471	Zackery Walls	2009-03-04	65141	1	170901	68707
12837	Jessie Jones	2015-05-15	62309	1	252800	74995
26763	Toxic Agenda	2013-01-11	60628	1	394604	62382
18141	Mayowa olagunju ⚡	2016-06-13	57794	1	144327	139377
9925	GeekFeed	2014-02-18	50656	1	16360	75510

```
In [279... helpers.barch(df_nfrnds[['username', 'n_friends']].head(15), "Users with the Most Friends", c='red')
```

## Users with the Most Friends



0 50K 100K 150K 200K 250K  
n\_friends

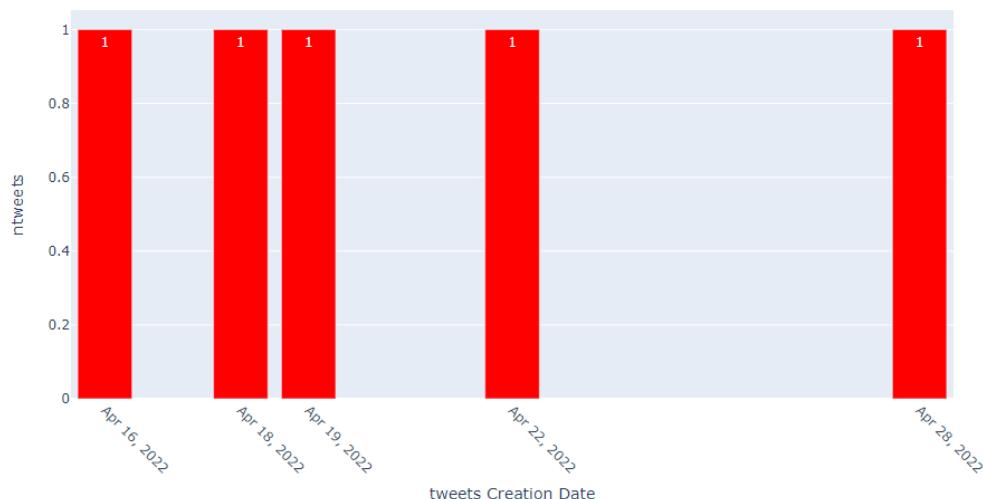
```
In [280]: tweets[tweets.username == 'Cooperativa'].text.value_counts().head()
```

```
Out[280]: 
relación tóxica: amber heard admitió violencia física contra johnny depp https://t.co/zvqakcewc6 https://t.co/gffjna6gl9 1
johnny depp pintó con su propia sangre mensajes para amber heard #cooperativaencasa https://t.co/vl6rnykxpu https://t.co/y1imlsj4ls 1
pese a campaña en contra, amber heard confirma que estará en "aquaman 2" #cooperativaencasa https://t.co/pqx0xj61ph https://t.co/cswnlm8qep 1
aseguran que johnny depp intentó sacar a amber heard de "aquaman" https://t.co/s1eb4p3dk1 https://t.co/wdhimadzif 1
[video] amber heard muestra su extenuante trabajo físico para "aquaman 2" https://t.co/85q1digod7 https://t.co/ouytgqmmkb 1
Name: text, dtype: int64
```

```
In [281]: helpers.contr_peaks(tweets, "Cooperativa", n=5, threshold=0)
```

total number of tweets by "Cooperativa": 13

"Cooperativa" Top Contributions



## Users with the Least Friends

```
In [282]: df_nfrnds.tail(15)
```

	username	user_created_at	n_friends	n_tweets	n_statuses	n_followers
6134	Conor's Bot	2020-03-26	0	1	8449	10
6694	Dan Sullivan	2018-07-17	0	1	26	0
20705	Olivia	2020-11-08	0	1	1	0
15316	LADbible	2011-07-08	0	1	54493	3230178
6100	Compte d'un ""Facho"" fatigué	2020-04-22	0	1	11	0
7844	Doxa	2018-08-30	0	1	68	0
3017	Asten	2017-01-11	0	2	35	0
1845	America First News	2016-09-24	0	1	158324	137
30784	gulch94	2020-12-30	0	1	2	0
15328	LBR LBR	2020-10-06	0	1	9	0
286	14403615900	2016-09-19	0	1	2	0
12768	Jessi_deOliveira	2020-03-25	0	1	3	0
34664	x	2019-07-14	0	1	277	2
21315	Peggy Fowler	2020-06-26	0	1	1	0
8813	Erin Wood	2018-03-19	0	1	336	0

### NOTE:

- we can investigate more on Accounts with the Least Friends too!!

```
In [283]: tweets[tweets.username == 'Onhike'].text.value_counts()
```

```
Out[283]: 
following the johnny depp row, petition to remove amber heard from aquaman 2 crosses 1 million signatures! https://t.co/pb5seszyno 1
Name: text, dtype: int64
```

```
In [284]: tweets[tweets.username == 'Breaking News Tv'].text.value_counts()
```

```
Out[284]: 
johnny depp testifies in libel trial, claims amber heard assaulted him https://t.co/hir9gmstpl 1
amber heard: i loved depp, but he could be a monster https://t.co/kvs33jyhva 1
johnny depp and amber heard: elon musk offered actress '24/7' security https://t.co/hnk560nwfd 1
amber heard denies fabricating injuries in johnny depp's u.k. libel trial https://t.co/h7qgomomp5 1
amber heard says johnny depp pressed so hard on her neck she could not breathe during 'three-day hostage situation' https://t.co/urjil2ords 1
amber heard: johnny depp threw bottles 'like grenades' at me https://t.co/vxkrfkbsz6 1
```

```

amber heard testifies johnny depp threw liquor bottles at her 'like grenades' https://t.co/gpjvxfso8d
johnny depp 'tried to suffocate' amber heard with pillow during fight, court hears https://t.co/sob3uovrgq
1
amber heard tells jury of mashed potato on door and 'blood everywhere' after alleged drink-drug rampage by johnny depp https://t.co/56qpvi7vhp
1
in uk court, johnny depp accuses amber heard of 'hoax' abuse claims https://t.co/r5m85or7v1
1
amber heard says she 'did not want to expose' johnny depp https://t.co/gdrm#0isvw
1
johnny depp's lawyers say they have a video showing amber heard 'attacked' sister https://t.co/q25zbugpv1
1
johnny depp and amber heard's courtroom face-off: an explainer https://t.co/qngahs7x6y
1
johnny depp, amber heard libel case: decide guidelines towards depp https://t.co/mqf6l19pf5
1
emilia clarke replaces amber heard in bosslogic's aquaman 2 artwork https://t.co/qyiamivxlz
1
aquaman 2 petition to take away amber heard soars previous 1 million signatures https://t.co/4ik87zobxf
1
johnny depp accused me of having affair with 'pumpkin-head' leonardo dicaprio, claims amber heard https://t.co/peosjswyie
1
amber heard begins testimony against ex-husband johnny depp in u.k. libel trial https://t.co/oxmgy8kvrs
1
amber heard to begin giving evidence at johnny depp libel trial https://t.co/ii4pd7e9ja
1
amber heard: johnny depp hit me during row over pre-nuptial agreement https://t.co/1paxcaltec
1
amber heard made domestic violence claims to blackmail johnny depp, actor's friend says https://t.co/pb6ovkyi8o
1
amber heard 'was verbally and physically abusive,' johnny depp's bodyguard says at trial https://t.co/j3pkwpgxtr
1
amber heard's former personal assistant accuses actress of 'stealing' rape story in johnny depp trial https://t.co/cevckw6zko
1
johnny depp and amber heard: couple rowed 'like schoolchildren', says ex-employee https://t.co/kat52opjp3
1
johnny depp 'insulted by amber heard during bahamas trip', says his employee https://t.co/m8wbs17j7q
1
johnny depp security guard tells jury he made up story about actor's severed finger to 'protect' amber heard https://t.co/bfngkgs4a
1
johnny depp claims amber heard's domestic violence allegations 'mirrored' her abuse towards him https://t.co/kwqsq0lg32
1
johnny depp and amber heard: she was 'the abuser', says depp's ex-pa https://t.co/ampf6tvv3n
1
johnny depp tells libel trial amber heard hit him with wild 'haymaker' punch https://t.co/g6mmceywo
1
johnny depp libel trial: actor says amber heard's domestic abuse claims part of 'conspiracy' https://t.co/wlpmlc9fe
1
johnny depp says feces in bed was last straw in marriage to amber heard https://t.co/vgddptpf44
1
johnny depp and amber heard: court hears details of birthday row https://t.co/ugcm3fvjzb
1
johnny depp accuses amber heard of misleading psychiatrist https://t.co/66ocjr1ocu
1
amber heard confirms aquaman 2 return, claims petitions have no foundation in actuality https://t.co/5kq9pvinq
1
Name: text, dtype: int64

```

```
In [285]: tweets[tweets.username == 'Sarkari Job Wale'].text.value_counts()
```

```
Out[285]: amber heard's lawyer accuse johnny depp of sexual assault using liquor bottles during defamation case https://t.co/2pxcqthqtb
1
johnny depp's severed finger was found on kitchen floor, his doctor says at amber heard trial https://t.co/kmamctpnw
1
johnny depp claims amber heard defecated on his side of the bed: 'it was so bizarre, so grotesque' https://t.co/81wbuvbaws
1
petition to remove amber heard from 'aquaman 2' receives 2 million signatures https://t.co/8kjif0doer
1
Name: text, dtype: int64
```

```
In [286]: tweets[tweets.username == 'Topstoriestoday'].text.value_counts()
```

```
Out[286]: johnny depp denies slapping amber heard for mocking his tattoo https://t.co/mhkggzylca
1
amber heard says johnny depp dangled her canine out of a automotive window https://t.co/tm4itzjg8r
1
wb reportedly is not taking the petitions to fireplace amber heard severely https://t.co/0m9vz115e3
1
a forgotten amber heard film hits netflix this week https://t.co/ivjz7nmhor
1
amber heard reportedly has a lot larger function in justice league snyder reduce https://t.co/5qczzbl183
1
warner bros. reportedly sees amber heard as the sufferer in her authorized battle https://t.co/5pnbmkgqrn
1
amber heard breaks the silence on aquaman 2, slams on-line petitions https://t.co/ausq05klys
1
wb reportedly has no plans to hearth amber heard from aquaman 2 https://t.co/dftbnbfkjz
1
johnny depp reportedly instructed wb that amber heard ought to be fired as nicely https://t.co/vghkrx4vdm
1
amber heard reportedly possible to have a decreased function in aquaman 2 https://t.co/r48yrirut3
1
johnny depp followers rally behind him after he loses authorized battle to amber heard https://t.co/29oankdy0s
1
amber heard reportedly returning for aquaman 2 no matter the decide guidelines https://t.co/cfv0jzqivr
1
amber heard fires again after johnny depp tries to swap court docket date https://t.co/8khbk8jfa
1
johnny depp reportedly planning to take down amber heard in second lawsuit https://t.co/minbtjqq8w
1
ezra miller and amber heard reportedly will not be fired from the dcu https://t.co/vjle1jeuwf
1
elon musk challenges johnny depp to a cage combat amid rumors of amber heard affair https://t.co/8pddd13d2a
1
amber heard admits to punching johnny depp in courtroom trial https://t.co/vzgakhywg
1
amber heard says johnny depp as soon as held her hostage for three days https://t.co/kphc3akdbv
1
amber heard's ex-assistant says the actress felt that she's above the legislation https://t.co/cic3cwkms9
1
amber heard's diary entry about combat with johnny depp made public https://t.co/m10vx03lyr
1
johnny depp says amber heard defecating in his mattress was the ultimate straw https://t.co/bsp6xog1fj
1
wb reportedly thinks amber heard petitions are artificially inflated https://t.co/3zavnru87
1
Name: text, dtype: int64
```

## Users with the Most Statuses (Tweets + Retweets)

- Top Tweeted Users
- Users with the Most Followers
- Users with the Most Friends
- **Users with the Most Statuses**

The number of Tweets (including retweets) issued by the user.

<https://developer.twitter.com/en/docs/twitter-api/v1/data-dictionary/object-model/user>

```
In [287]: df_nstatus = (
    aquaman_petition.groupby(['username', aquaman_petition.user_created_at.dt.date])
    .agg({'n_statuses': 'max', 'text': 'count', 'n_followers': 'max', 'n_friends': 'max'})
    .reset_index().rename(columns={'text': 'n_tweets'}).sort_values('n_statuses', ascending=False)
)

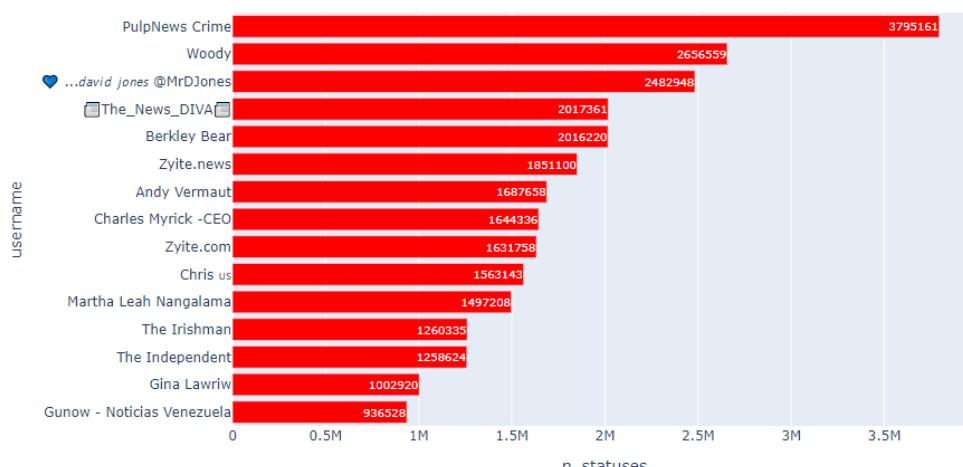
df_nstatus.head(15)
```

	username	user_created_at	n_statuses	n_tweets	n_followers	n_friends
21755	PulpNews Crime	2010-01-01	3795161	2	4960	924
28061	Woody	2013-05-11	2656559	3	1631	88
38219	♥ ...david jones @MrDJones	2011-04-28	2482948	1	5060	2279
38324	✉ The_News_DIVA✉	2008-07-20	2017361	2	71232	93910
3727	Berkley Bear	2012-08-28	2016220	1	1576	180
28649	Zyite.news	2013-07-15	1851100	1	3392	4860
2220	Andy Vermaut	2011-04-17	1687658	16	30881	33788
5346	Charles Myrick -CEO	2009-06-21	1644336	1	1383	1860
28648	Zyite.com	2014-06-03	1631758	4	1745	3666
5650	Chris us	2011-06-06	1563143	3	61426	23776
17700	Mother Earth Management	2012-05-12	1407700	1	4472	7120

ID	Username	Full Name	Created At	Followers	Friends	Lists
26165	The Irishman	2010-02-04	1260335	1	12054	12038
26161	The Independent	2008-10-26	1258624	8	3694404	671
10116	Gina Lawriw	2014-06-04	1002920	4	9440	7060
10422	Gunow - Noticias Venezuela	2015-08-30	936528	1	6759	135

```
In [288]: helpers.barch(df_nstatus[['username', 'n_statuses']].head(15), "Users with the Most Statuses", c='red')
```

Users with the Most Statuses



```
In [289]: aquaman_petition[aquaman_petition.username == 'Andy Vermaut'].text.value_counts().head(20)
```

```
Out[289]: johnny depp allegedly asked warner bros. boss to fire amber heard from aquaman https://t.co/ek1l20xptf https://t.co/yogtksutwl
johnny depp fans are pushing hard to get amber heard fired from aquaman 2 https://t.co/finevjdlgf https://t.co/espwmqezek
petition to drop amber heard from aquaman 2 over domestic violence allegations boasts nearly 500,000 signatures https://t.co/haocj9c863 https://t.co/fzufu04eaa
the internet's calling for amber heard to be fired from aquaman 2 https://t.co/qfixvpqmz0 https://t.co/hhq1wu02bi
after johnny depp was fired from fantastic beasts, fans petition for amber heard's removal from aquaman 2 https://t.co/tveerij6qk https://t.co/wsrpsnhcth
1 million fans petition warner bros. to fire amber heard from aquaman 2! wow! https://t.co/nhh13ta9ab https://t.co/h5yasgspn8
amber heard on "paid campaigns" to remove her from 'aquaman 2': "they have no basis in reality" https://t.co/551dyys8ym https://t.co/3vh7d1tev7
amber heard slams petition to remove her from aquaman 2 as 'not based in reality' https://t.co/xz34yjujnr https://t.co/oesawmn1nq
'greatest news!' netizens celebrate after reports say amber heard fired from aquaman 2 https://t.co/caet8xnw2w https://t.co/cejj2retu6
has amber heard actually been fired from aquaman 2? here's the latest https://t.co/jycny18tg5 https://t.co/a4psjbqhbc
aquaman 2 producer responds to petition for amber heard's removal as mera https://t.co/rc8aagty71 https://t.co/a16jhykx01
campaign to remove amber heard from 'aquaman 2' had "no impact", according to producer https://t.co/1naqqfebqh https://t.co/clh5bcm3g0
aquaman 2 cast announcements: amber heard still not fired https://t.co/csueyg5n1c https://t.co/td51ebs1w
andy vermaut shares:that rumor was true?! amber heard was almost fired from aquaman over alleged johnny depp abuse!: the dirty laundry we've seen so far in johnny depp's... https://t.co/pnbb8valvt thank you. #lifeisknowing #andyvermautlovesperezhilton talks #newlycuriousbeingisnice https://t.co/0zrozkmvbh
andy vermaut shares:2 million sign petition seeking amber heard's removal from 'aquaman 2'; johnny depp filed a defamation case against heard for a column in which she indicated she was abused by the actor. https://t.co/qdvuek4nlj thank you. https://t.co/gnquis6eob
andy vermaut shares:petition to fire amber heard from 'aquaman 2' reaches two million signatures: it comes as johnny depp and heard's trial in the us continues \n\nthe post petition to fire amber heard from 'aquaman 2' reaches two million... https://t.co/8pf2e8szji thank you. https://t.co/iklzi011vg
Name: text, dtype: int64
```

```
In [290]: helpers.contr_peaks(tweets, "Andy Vermaut", n=2, threshold=0)
```

total number of tweets by "Andy Vermaut": 403

"Andy Vermaut" Top Contributions





## Users with the Least Statuses

In [291...]

```
# df_nstatus.tail(15)
```

### NOTE:

- No need to investigate more on Accounts with the Least Statuses.

In [292...]

```
# df_years_status0 = users.groupby(users.user_created_at.dt.year)[['n_statuses']].sum().reset_index()
# helpers.pie(df_years_status0, "Number of Statuses for accounts created over Years")
```

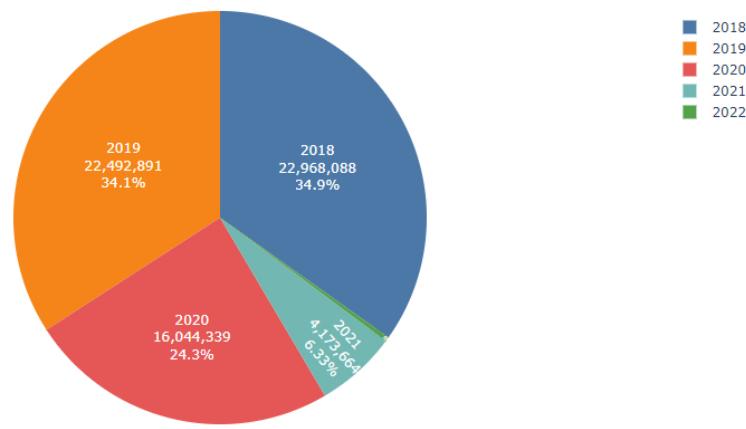
In [293...]

```
# new_users = users[users['user_created_at'].dt.year.isin([2018, 2019, 2020, 2021, 2022])]
# df_years_status = new_users.groupby(new_users.user_created_at.dt.year)[['n_statuses']].sum().reset_index()
# helpers.pie(df_years_status, "Total Number of Statuses for accounts created over Years")
```

In [294...]

```
new_aqua_users = aquaman_petition_u[aquaman_petition_u['user_created_at'].dt.year.isin([2018, 2019, 2020, 2021, 2022])]
df_years_status2 = new_aqua_users.groupby(new_aqua_users.user_created_at.dt.year)[['n_statuses']].sum().reset_index()
helpers.pie(df_years_status2, "Total Number of Statuses for accounts created over Years, and tweeted with 'Aquaman Petition Links'")
```

Total Number of Statuses for accounts created over Years, and tweeted with 'Aquaman Petition Links'



### NOTE:

- It's expected that old accounts have more statuses than newly created accounts,
- But, we can see how accounts created on 2019 and 2020 have created almost the number of statuses that 2018-accounts created

## Conclusions

- Introduction
- Exploratory Data Analysis
- **Conclusions**

**END OF NOTEBOOK**