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1 contributor

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```
In [ ]: !unzip /content/drive/MyDrive/_Twitter - Data-20211011T052737Z-002.zip -d Twitter

In [ ]: !pip install pandasql

Collecting pandasql
  Downloading pandasql-0.7.3.tar.gz (26 kB)
Requirement already satisfied: numpy in /usr/local/lib/python3.7/dist-packages (from pandasql) (1.19.5)
Requirement already satisfied: pandas in /usr/local/lib/python3.7/dist-packages (from pandasql) (1.1.5)
Requirement already satisfied: sqlalchemy in /usr/local/lib/python3.7/dist-packages (from pandasql) (1.4.25)
Requirement already satisfied: pytz>=2017.2 in /usr/local/lib/python3.7/dist-packages (from pandasql) (2018.9)
Requirement already satisfied: python-dateutil>=2.7.3 in /usr/local/lib/python3.7/dist-packages (from pandasql) (2.8.2)
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.7/dist-packages (from python-dateutil>=2.7.3->pandasql) (1.15.0)
Requirement already satisfied: greenlet!=0.4.17 in /usr/local/lib/python3.7/dist-packages (from sqlalchemy->pandasql) (1.1.2)
Requirement already satisfied: importlib-metadata in /usr/local/lib/python3.7/dist-packages (from sqlalchemy->pandasql) (4.8.1)
Requirement already satisfied: typing-extensions>=3.6.4 in /usr/local/lib/python3.7/dist-packages (from importlib-metadata->sqlalchemy->pandasql) (3.7.4.3)
Requirement already satisfied: zipp>=0.5 in /usr/local/lib/python3.7/dist-packages (from importlib-metadata->sqlalchemy->pandasql) (3.6.0)
Building wheels for collected packages: pandasql
  Building wheel for pandasql (setup.py) ... done
  Created wheel for pandasql: filename=pandasql-0.7.3-py3-none-any.whl size=26781 sha256=96eb557b41bf8b12c4d850c9028c07088134d828afb39781ebccae5f15e3c04
d
  Stored in directory: /root/.cache/pip/wheels/5c/4b/ec/41f4e116c8053c3654e2c2a47c62b4fca34cc67ef7b55deb7f
Successfully built pandasql
Installing collected packages: pandasql
Successfully installed pandasql-0.7.3

In [ ]: import pandas as pd
import plotly.graph_objects as go

In [ ]: from pandasql import sqldf
pysqldf = lambda q: sqldf(q, globals())



## Load data



```
In []: df = pd.read_csv('/content/Twitter/_Twitter - Data/tweets_2021.csv')

/usr/local/lib/python3.7/dist-packages/IPython/core/interactiveshell.py:2718: DtypeWarning:
Columns (0,4,5,38) have mixed types.Specify dtype option on import or set low_memory=False.

In []: twitter = df[['user.id_str','user.name','user.screen_name','user.created_at','user.location','id_str','created_at','full_text','lang','entities.hashtags']]

In []: twitter.rename(columns = {'user.id_str':'user_id', 'user.name':'username',
 'user.screen_name':'user_screenname',
 'user.created_at':'user_created_at','user.location':'user_location', 'id_str':'tweet_id',
 'created_at':'tweet_created_at',
 'lang':'tweet_lang', 'full_text':'tweet_text','entities.hashtags':'hashtags', 'quoted_status.id_str':'quoted_status_id',
 'quoted_status.full_text':'quoted_status_text',
 'quoted_status.entities.hashtags':'quoted_status_hashtag',
 'user.friends_count':'friends_count', 'user.followers_count':'followers_count'}, inplace = True)

/usr/local/lib/python3.7/dist-packages/pandas/core/frame.py:4308: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame
See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy

In []: twitter.head(10)
```



|   | user_id      | username     | user_screenname | user_created_at           | user_location       | id_str              | tweet_created_at          | tweet_text                                        | tweet_lang | h                          |
|---|--------------|--------------|-----------------|---------------------------|---------------------|---------------------|---------------------------|---------------------------------------------------|------------|----------------------------|
| 0 | 1.319008e+18 | Tongo Boozie | Noneofthemknew1 | 2020-10-21 20:08:07+00:00 | South West, England | 1345359931550134272 | 2021-01-02 13:22:57+00:00 | So ready 🎉 for the next #DeppMovieNight\n\nFil... | en         | {'indices': 'DeppMovi...   |
| 1 | 6.323772e+06 | Nor33 FR     | Anglex0101      | 2007-05-25 18:55:38+00:00 | France              | 1345359929507459075 | 2021-01-02 13:22:57+00:00 | #Johnuary #DeppMovieNight #JusticeForJohnnyDep... | und        | {'indice': 'text': 'Jol... |


```

2	9.126742e+17	Vive Harris	viverachel	2017-09-26 13:44:20+00:00	NaN	1345359711101624321	2021-01-02 13:22:05+00:00	#DeppMovieNight #Johnn... #Justic...	en	[[{"indices": "0", "text": "#DeppMovieNight"}, {"indices": "1", "text": "#Johnn..."}, {"indices": "2", "text": "#Justic..."}]]
3	1.325068e+18	pirate 🇫🇷 #justiceforjohnnydepp	sharron67204447	2020-11-07 13:30:15+00:00	Hastings	1345359532659265536	2021-01-02 13:21:22+00:00	Amber Heard is an abuser a... liar and a fraud, s...	en	[[{"indices": "0", "text": "Amber Heard is an abuser a..."}, {"indices": "1", "text": "liar and a fraud, s..."}]]
4	1.243815e+18	Liono	f_liono	2020-03-28 08:20:34+00:00	NaN	134535869795047168	2021-01-02 13:18:03+00:00	@_missyc97_... 2021 to Amber... Heard. 🎉 https://t.co...	en	
5	1.230585e+18	Pæpp	pæpp_hub	2020-02-20 20:07:14+00:00	Napoli	1345358493126189056	2021-01-02 13:17:14+00:00	@nadiaexoxo #oggicosi... #domaniriciclo no preocc...	it	[[{"indices": "0", "text": "@nadiaexoxo #oggicosi..."}, {"indices": "1", "text": "#domaniriciclo no preocc..."}]]
6	6.323772e+06	Nor33 FR	Angiex0101	2007-05-25 18:55:38+00:00	France	1345358250112376832	2021-01-02 13:16:17+00:00	#Johnnary #DeppMovieNight... #JusticeForJohnnyDepp	und	[[{"indices": "0", "text": "#Johnnary #DeppMovieNight..."}, {"indices": "1", "text": "#JusticeForJohnnyDepp"}]]
7	3.342474e+09	Black Rose🌹	Jennyf1ower	2015-06-23 08:55:31+00:00	In the wood	1345358033149431810	2021-01-02 13:15:25+00:00	@JohnLe412 She's so... fake!!!\n#AmberHeardIsAnAb...	en	[[{"indices": "0", "text": "@JohnLe412 She's so..."}, {"indices": "1", "text": "fake!!!\n#AmberHeardIsAnAb..."}]]
8	1.296110e+18	Life's a bitch. Now so am I!	hearmeroarXx	2020-08-19 15:41:29+00:00	NaN	1345357703099666433	2021-01-02 13:14:06+00:00	Amber Heard's face is so... triggering to me, let...	en	
9	7.101272e+08	frank drebin	danblock4	2012-07-22 05:03:35+00:00	NaN	1345357307115307009	2021-01-02 13:12:32+00:00	When Amber Heard is in the... mood but her mortal...	en	

Exploratory Data Analysis

Top 50 Users with Most Tweets

```
In [ ]: tweets = pysqldf(''':SELECT username, user_screenname as screenname, count(id_str) as tweets from twitter GROUP BY user_screenname ORDER BY "tweets" DESC LIMIT 50''')
```

Out[]:	username	screenname	tweets
0	Teri Carson ☺ IT ☀ ci ☀	TeriCarson	2535
1	Libby 🇫🇷 us #JusticeForJohnnyDepp	DeppSoldier_22	2379
2		Ciang385	1770
3	Sam Cooke 😊 😊 🇬🇧	Scooke2045	1674
4	JusticeForJohnny	Hansen7Ane	1666
5	Nor33 FR	Angiex0101	1662
6	Ewinters Wald-Mignon	ElizaDFTW	1356
7	For Johnny	Platoon1979	1334
8	Linda Lou - us 🇫🇷 🇫🇷	PlizeExplain512	1316
9		KTN1220	1194
10	Ghost	KatKatButterfly	1128
11	Marley M	quietheartbeatz	1096
12	deanna pronounced DEENA	bryzwyf	955
13	Cheryl Drake us ❤️ ❤️	CherylD59995761	938
14	inchhighpi	SouthernGirlTea	926
15	💜 Mellie 💜 AU	milk976	899
16	Vaielena	Vaidaelena	857
17	the dynamo	thefordtweets	807
18	💜 Jayne B Waldmignon 💜 GB	jayneb68910675	806
19	Kris	Kris_Wils38	795
20	Princess Consuela Bananahammock	PrinConsuela_	794
21	🇫🇷 Tongo Bozzie 🇫🇷	Noneofthemknew1	781
22	sheila	sheilaw654321	760
23	Deva-Marie	DevaMarie	742
24	👉 Om 👉 🌟 🌟 🌟 🌟 🌟 se 🌟	Om39472295	737
25	Marvel.Fury	fury_marvel	728
26	LL	latt7465262	711
27	Eulogia Jean Rojas - Vocalist	JeanVocalist	685
28	Louise Hatfield	LouiseHatfield16	674
29	Belinda gb	Binx1969	672
30	Lakota Di	LakotaDi	660
31	Pamela 🇪🇸 Not a Bot	1coolwhipp	635
32	good will	aviaum	632
33	Angie	centauri_27	620
34	Horae of Peace	HoraeOf	613
35	ROSE	RosePagaza	603
36	Mewmew#JusticeForJohnnyDepp#Justice4JenHowell	Mewmewjusticef1	601
37	Support Johnny Depp ❤ Stream City of Lies 🎉	MyGrindelwald	599
38	p60p45	P60P45	586
39	Raúl Sobas #JusticeForJohnnyDepp	Ral314	584

40		Sol	patitopanhead	561
41		Dora	Dora89886781	554
42	Robin Wald-Mignon	ICAL support THE TRUTH!	RobinSi56774599	548
43	Nitawho WaldMignon	🧙‍♀️🧙‍♂️🧙‍♀️🧙‍♂️	lion_witch	547
44	ForDaMik	⚡️⚡️⚡️#JohnnyDeppIsInnocent#Justice	KarMarDanMik	527
45		💜classicpaws	classicpaws1	526
46		Serena	GraceShineOo	525
47		NinaRoxx8825	roxx8825	524
48		Shell63746	Shell63746	521
49		Sandra Deanne	SandraDeanne	519

```
In [ ]: fig = go.Figure(data=[go.Bar(
    x=tweets.screenname, y=tweets.tweets,
    text=tweets.username,
    textposition='auto',
)])
fig.show()
```

* From this We can see the top user with most tweets and there user and screen name whose tweets count is ranging from Appox 500 to 2500 tweets

Top Friends and Followers count

```
In [ ]: fig = go.Figure(data=[
    go.Bar(name='Friends Count',x =tweets.screenname, y=tweets.friends_count),
    go.Bar(name='Followers Count',x =tweets.screenname, y=tweets.followers_count)
])
# Change the bar mode
fig.update_layout(barmode='group')
fig.show()
```

First and Last Tweet in this dataset

```
In [ ]: print('The time series starts from: ', twitters(tweet_created_at.min()))
print('The time series ends on: ', twitters(tweet_created_at.max()))

The time series starts from: 2021-01-01 00:00:07
The time series ends on: 2021-04-25 23:59:06
```

- The data is consist of 4 Months ranging from 1 January 2021 to 25 April 2021

Per Months Tweets by all users

```
In [ ]: import plotly.express as px

In [ ]: fig = go.Figure(data=[go.Bar(
    x=twitters(tweet_created_at_month_name.value_counts().index, y=twitters(tweet_created_at_month_name.value_counts().values,
    text=twitters(tweet_created_at_month_name.value_counts().values,
    textposition='auto'),
)])
fig.show()
```

Tweets per Day

```
In [ ]: fig = go.Figure(data=[go.Bar(
    x=twitters(tweet_created_at_day_name.value_counts().index, y=twitters(tweet_created_at_day_name.value_counts().values,
    text=twitters(tweet_created_at_day_name.value_counts().values,
    textposition='auto',
    marker_color=twitters(tweet_created_at_day_name.value_counts().values
    ))))
fig.show()
```

Total Tweets in 4 Months

```
In [ ]: pd.crosstab([twitters["tweet_created_at_hour"]], twitters["tweet_created_at_minutes"],
margins = True).style.background_gradient(cmap = "summer_r")
```

tweet_created_at_minutes	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	2	
tweet_created_at_hour	0	197	161	160	162	147	149	175	191	170	171	158	156	172	156	142	185	149	153	140	146	141	137	148	139	16
1	143	128	129	130	158	153	135	146	154	149	146	136	127	134	124	145	118	129	130	134	135	121	127	116	13	
2	114	98	115	133	130	117	115	117	124	115	113	122	114	134	144	119	141	104	104	120	124	113	110	139	11	
3	121	102	119	105	103	118	102	119	113	109	135	112	97	122	114	111	102	112	125	109	97	118	103	133	10	
4	87	98	100	95	81	88	90	83	121	100	90	94	94	101	114	80	86	85	93	98	88	84	74	87	8	
5	102	89	86	103	94	83	101	83	95	85	92	79	95	80	71	86	77	85	91	97	80	78	92	81	8	
6	119	98	117	94	94	98	81	106	94	75	87	77	78	76	98	99	80	91	96	89	87	97	81	82	8	
7	91	91	121	81	92	98	94	91	95	94	95	114	104	96	90	91	87	100	100	103	91	92	90	105	10	

3	121	102	119	105	103	118	102	119	113	109	135	112	97	122	114	115	102	112	125	109	97	118	103	133	10
4	87	98	100	95	81	88	90	83	121	100	90	94	94	101	114	80	86	85	93	98	88	84	74	87	8
5	102	89	86	103	94	83	101	83	95	85	92	79	95	80	71	86	77	85	91	97	80	78	92	81	8
6	119	98	117	94	94	98	81	106	94	75	87	77	78	76	98	99	80	91	96	89	87	97	81	82	8
7	91	91	121	81	92	98	84	91	95	94	85	114	104	86	90	91	87	100	100	103	91	92	90	105	10
8	94	96	131	107	109	113	105	99	89	101	108	103	110	101	99	106	117	98	106	105	120	96	114	104	10
9	114	91	90	108	118	109	104	104	109	93	104	108	116	99	97	113	108	104	117	106	99	113	115	95	9
10	153	114	133	147	144	159	154	146	149	121	143	118	143	158	144	157	131	164	144	141	128	142	136	145	12
11	143	133	159	138	147	145	150	123	137	136	137	134	139	167	134	152	163	138	140	151	165	158	151	142	13
12	189	151	158	167	159	139	179	155	152	132	180	154	150	151	150	163	159	157	156	171	187	173	160	175	15
13	181	155	178	201	174	160	179	176	176	139	148	161	166	178	167	191	210	168	157	168	191	202	170	186	18
14	205	192	177	178	190	181	181	177	199	168	184	199	182	163	197	185	187	207	196	189	178	182	184	199	22
15	211	221	209	220	207	208	202	197	210	191	185	179	192	188	202	208	195	205	187	234	201	216	195	218	21
16	244	220	232	221	211	189	223	208	202	203	226	219	211	210	201	199	207	210	206	197	206	241	232	254	22
17	229	212	232	217	241	241	214	214	210	231	245	268	286	239	243	248	260	203	246	266	277	237	268	235	22
18	254	210	236	216	221	215	240	218	237	223	214	249	237	229	208	235	245	249	243	241	241	236	220	251	28
19	234	222	251	224	212	208	217	250	219	216	207	214	248	214	212	265	257	214	207	217	233	241	204	242	21
20	257	245	209	209	214	205	217	178	219	212	222	223	185	222	203	223	208	204	189	228	223	225	236	208	20
21	251	227	226	233	214	204	234	210	205	215	176	224	215	211	213	215	204	213	224	194	194	207	203	188	22
22	203	215	220	202	198	203	200	188	182	196	205	214	187	191	191	193	218	220	210	217	192	190	175	220	20
23	212	213	184	190	196	199	187	173	180	170	195	168	172	175	139	189	206	175	186	191	187	197	170	169	19
All	4148	3782	3972	3881	3854	3782	3869	3752	3841	3645	3785	3825	3820	3785	3697	3962	3915	3788	3793	3912	3865	3896	3758	3913	391

```
In [ ]: fig = go.Figure(data=[go.Bar(
    x=rslt_df['tweet_created_at_hour'].value_counts(sort=False).index,
    y=rslt_df['tweet_created_at_hour'].value_counts(sort=False).values,
    textposition='auto',
    marker_color=rslt_df['tweet_created_at_hour'].value_counts(sort=False).values
)])
fig.show()
```

Top User Per Hour Tweets top Users

```
In [ ]: rslt_df = twitters.loc[twitters['user_screenname'] == 'TeriCarson']

In [ ]: pd.crosstab([rslt_df["tweet_created_at_hour"]], rslt_df["tweet_created_at_minutes"],
                  margins = True).style.background_gradient(cmap = "summer_r")

Out[ ]:   tweet_created_at_minutes  0  1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36
          tweet_created_at_hour
          0  1  0  0  2  2  2  5  3  0  2  2  0  3  1  5  0  0  3  4  0  4  2  1  2  1  0  2  4  3  0  2  4  2  2  1  1  1  1  0  2  0  0  0  2  0  0  0
          1  1  1  0  1  1  1  2  2  2  0  1  2  0  1  0  0  1  2  3  1  2  1  2  2  3  0  3  1  2  1  2  1  0  0  0  1  2  2  1  0  0  0  0  0  0
          2  1  4  1  3  1  0  0  0  1  2  2  2  2  1  0  1  0  3  3  2  3  0  0  0  0  2  2  1  1  1  2  2  0  1  4  3  1  1  1  1  1  1  1  1
          3  3  2  1  1  1  0  2  0  0  5  3  1  2  0  1  3  0  0  3  1  0  1  1  1  1  1  1  0  2  0  0  0  2  0  0  0  0  0  0  0  0  0  0  0  0
          4  0  4  0  0  1  0  0  2  4  5  5  2  2  6  10  5  1  4  1  3  1  0  0  0  1  5  0  1  1  0  1  0  1  1  2  2  2  1  1  1  1  1  1  1  1  1  1
          5  1  2  2  3  0  0  2  2  1  1  1  1  2  2  2  1  1  1  2  3  2  5  2  1  0  4  2  0  2  0  1  2  2  1  3  2  1  2  1  1  1  1  1  1  1  1  1
          6  0  0  2  5  4  1  1  1  0  0  0  0  0  0  0  0  1  2  0  0  0  0  3  1  1  0  3  1  0  1  1  1  1  0  2  1  1  1  0  2  1  1  1  1  1  1
          7  5  3  7  4  2  1  0  0  4  2  3  2  1  3  0  0  1  3  3  1  1  0  2  3  3  2  1  2  2  2  1  1  1  5  2  3  1  0  0  0  0  0  0  0  0
          8  4  1  2  3  4  0  0  1  2  2  2  2  1  5  2  4  5  1  4  3  5  3  3  5  1  2  1  1  3  3  1  1  1  2  2  2  2  4  4  1  1  1  1  1  1  1  1
          9  1  0  2  6  6  5  5  4  7  5  4  3  6  5  7  5  4  3  10  4  1  0  4  1  0  1  6  3  3  3  4  2  6  2  0  1  1  1  1  1  1  1  1  1  1
          10 4  1  5  3  0  2  1  3  2  0  3  4  1  0  3  1  3  0  4  4  4  3  4  1  0  1  2  4  3  10  0  3  4  1  2  2  1  1  1  1  1  1  1
          11 1  1  1  2  4  1  2  1  0  0  2  2  1  2  1  2  0  1  1  2  1  0  1  0  0  1  2  1  4  0  1  1  2  0  1  1  0  2  1  0  2  1
          12 0  0  1  2  1  2  4  3  0  0  4  2  1  2  3  4  3  6  0  4  3  1  0  2  1  1  1  3  2  3  2  1  1  0  2  1  1  1  0  2  1  0  2  1
          13 0  1  0  4  3  6  4  5  5  3  4  3  3  2  2  1  3  4  2  1  3  4  1  0  1  2  3  2  1  0  3  3  3  0  2  2  2  1  1  1  1  1  1  1
          14 1  3  3  2  0  2  1  3  1  0  0  0  2  0  2  1  1  1  5  2  2  0  0  2  0  1  0  0  0  3  2  2  0  0  0  0  0  0  0  0  0  0  0  0
          15 4  0  1  1  2  4  1  1  5  3  0  0  1  1  3  2  1  2  0  3  2  2  3  1  1  3  2  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
          16 1  0  2  1  2  0  2  1  2  3  3  2  1  2  2  2  2  1  3  3  3  0  0  3  3  5  3  5  2  0  3  3  3  2  6  5  0  1  1  1  1  1  1
          17 3  3  0  2  3  5  6  1  2  3  6  3  2  3  1  7  4  3  2  0  3  0  2  4  2  6  4  4  2  0  1  2  1  2  1  2  2  4  4  1  1  1  1  1
          18 2  1  6  2  4  2  4  2  1  2  2  1  3  1  3  4  1  0  2  4  5  4  3  2  2  0  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
          19 2  3  3  4  5  2  0  3  2  3  2  1  3  3  4  1  0  2  4  5  4  3  2  2  0  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
          20 1  3  1  3  2  1  3  0  1  2  2  2  2  1  1  0  1  4  2  5  2  2  2  2  2  3  0  6  1  5  8  2  1  3  3  5  1  1
          21 6  4  3  2  4  1  2  1  1  0  3  2  2  2  4  2  1  1  1  0  3  0  0  1  1  5  4  0  5  0  1  1  2  3  0  1  4
          22 0  2  0  0  2  0  2  2  2  1  1  2  3  1  1  0  0  0  1  1  0  0  0  1  0  0  2  2  0  0  0  1  0  0  0  1  3
          23 7  5  3  5  1  1  2  0  4  1  0  0  1  1  1  3  0  0  0  2  1  0  3  2  3  4  4  5  4  2  2  3  2  2  2  2  2
          All 49 44 46 61 55 39 51 41 49 47 54 39 46 44 58 47 35 50 62 54 43 28 37 41 44 39 50 47 43 40 46 37 46 39 33 36 4
```

Top User Tweets Per Month and Day

```
In [ ]: tweetz = pysqldf('''SELECT username, user_screenname as screenname, count(id_str) as tweets,tweet_created_at_month_name from tweetsdfs GROUP BY username, tweetz
```

	username	screenname	tweets	tweet_created_at_month_name	
0	Libby 🎉	#JusticeForJohnnyDepp	DeppSoldier_22	1176	April
1		Ciarg385	CiaraFutalan	917	March
2	JusticeForJohnny		Hansen7Ane	878	March
3		Ciarg385	CiaraFutalan	848	April
4	Teri Carson 🌟 IE 🌟 ct 🌟		TeriCarson	835	March
...
59122	Ø li_lтурпентин Ø		andi_knox	1	March
59123	Ø		226x_	1	February
59124	ØLazarusØ		0k2cryy	1	April
59125	Ø		M_ax21	1	March
59126	Øcantante di trappiØ		kfriedstripper	1	February

59127 rows × 4 columns

```
In [ ]: fig = px.bar(tweetm, x="screenname", y="tweets", color='tweet_created_at_month_name', title="Top User Tweets Per Month", barmode='group', height=400)  
fig.show()
```

```
In [ ]: import plotly.express as px  
fig = px.bar(tweetm, x="screenname", y="tweets", color="tweet_created_at_month_name", title="Top User Tweets Per Month")  
fig
```

```
In [ ]: import plotly.express as px  
fig = px.bar(tweet, x="screenname", y="tweets", color="day", title="Top User Tweets Per Day")  
fig
```

```
In [ ]: fig = px.treemap(tweet, path=['month','day','screenname'], values='tweets', color='day')  
fig.update_layout(margin = dict(t=50, l=25, r=25, b=25))  
fig.show()
```

Top Hashtag Trends

```
In [ ]: wordcloud = WordCloud(width=1600, stopwords=stopwords,height=800,max_font_size=200,max_words=100,collocations=False, background_color='black').generate  
plt.figure(figsize=(40,30))  
plt.imshow(wordcloud, interpolation="bilinear")  
plt.axis("off")  
plt.show()
```



