

# Final\_Project\_6

March 10, 2023

## Plots

```
[1]: import pandas as pd
import numpy as np
pd.set_option('display.max_colwidth', None)
pd.reset_option('display.max_rows')
from itertools import compress
from pyspark.sql.functions import *
from pyspark.sql.types import *
import seaborn as sns
import matplotlib.pyplot as plt
warnings.filterwarnings(action='ignore')
```

```
[2]: from pyspark.sql import SparkSession
from pyspark import SparkContext
from pyspark.sql import SQLContext
from pyspark.sql import Row
from pyspark.sql.functions import col
```

```
[8]: spark.conf.set("spark.sql.repl.eagerEval.enabled", True)
```

```
[3]: %%time
twitter = spark.read.parquet('gs://chen26-bdp/original_data')
```

CPU times: user 8.75 ms, sys: 1.02 ms, total: 9.77 ms

Wall time: 10.1 s

23/03/07 17:47:53 WARN org.apache.spark.sql.catalyst.util.package: Truncated the string representation of a plan since it was too large. This behavior can be adjusted by setting 'spark.sql.debug.maxToStringFields'.

```
[4]: #tweet location distribution
```

```
[21]: t_loc = twitter.select('place')
```

```
[22]: t_loc = t_loc.filter(col('place').isNotNull())
```

```
[23]: t_loc.printSchema()
```

```

root
|-- place: struct (nullable = true)
|   |-- bounding_box: struct (nullable = true)
|   |   |-- coordinates: array (nullable = true)
|   |   |   |-- element: array (containsNull = true)
|   |   |   |   |-- element: array (containsNull = true)
|   |   |   |   |   |-- element: double (containsNull = true)
|   |   |-- type: string (nullable = true)
|   |-- country: string (nullable = true)
|   |-- country_code: string (nullable = true)
|   |-- full_name: string (nullable = true)
|   |-- id: string (nullable = true)
|   |-- name: string (nullable = true)
|   |-- place_type: string (nullable = true)
|   |-- url: string (nullable = true)

```

```
[24]: t_loc = t_loc.select(t_loc.place.country.alias('country'), t_loc.place.
      ↪full_name.alias('place'))
```

```
[25]: t_loc
```

```
[25]: +-----+-----+
|          country|          place|
+-----+-----+
|Republic of the P...| Del Carmen, Caraga|
|      United States|   Louisville, KY|
|      United States|   Lakeside, FL|
|      United States|   Duluth, MN|
|      United States|   Quincy, MA|
|      United States| North Carolina, USA|
|      United States|   Columbus, OH|
|      United States|   Quincy, MA|
|      United States|   Mesa, AZ|
|      United States|   Middletown, RI|
|      Nigeria|Victoria Island, ...|
|      United States|   Oklahoma City, OK|
|      Australia|Kingaroy, Queensland|
|      Thailand|Amphoe Huai Thala...|
|      United States|   Sandusky, OH|
|      Japan|   Meguro-ku, Tokyo|
|      Belgium|   Louvain, Belgium|
|      United States|North Ridgeville, OH|
|      United States|   Texas, USA|
|      United Kingdom|Ballymena, Northe...|
+-----+-----+
```

only showing top 20 rows

```
[26]: country_ct = t_loc.groupby('country').agg(count('*').alias('count')).
      ↪orderBy(col('count').desc())
```

```
[27]: ct = country_ct
```

```
[27]: +-----+-----+
      |           country| count|
      +-----+-----+
      |      United States|554287|
      |   United Kingdom| 73793|
      |           India| 46194|
      |Kingdom of Saudi ...| 38942|
      |           Canada| 24913|
      |           Nigeria| 24515|
      |           Australia| 10546|
      |   South Africa| 10072|
      | |... 9248|
      |           Kenya| 7481|
      |           Ireland| 6951|
      |Republic of the P...| 6430|
      |           Pakistan| 6155|
      |           Uganda| 5450|
      |           Ghana| 4784|
      |           Indonesia| 2431|
      |   New Zealand| 2087|
      |           Malaysia| 1987|
      |United Arab Emirates| 1638|
      |           France| 1628|
      +-----+-----+
      only showing top 20 rows
```

```
[32]: ud = twitter.select(twitter.user.id.alias('user_id'), twitter.user.location.
      ↪alias('user_loc'))
```

```
[34]: u_ct = ud.groupby('user_loc').agg(count('*').alias('count')).
      ↪orderBy(col('count').desc())
      u_ct_df = u_ct.limit(10).toPandas()
```

```
[35]: u_ct_df
```

```
[35]:      user_loc      count
0      None  39095205
1  United States  1268115
```

```

2   Lagos, Nigeria    521610
3       Nigeria      443069
4           USA       408068
5       India        372519
6   California, USA   352838
7   Los Angeles, CA   345411
8       Texas, USA    314914
9   Florida, USA      294376

```

```
[36]: # check the amount of verified users
```

```
[37]: veri = twitter.select([twitter.user['id'].alias('user_id'),
                             twitter.user['verified'].alias('verified')])
```

```
[38]: verify = veri.filter(col('verified') == 'true')
```

```
[39]: perc = verify.count()/veri.count()
```

```
[40]: perc
```

```
[40]: 0.016028286880471698
```

```
[41]: 1-perc
```

```
[41]: 0.9839717131195282
```

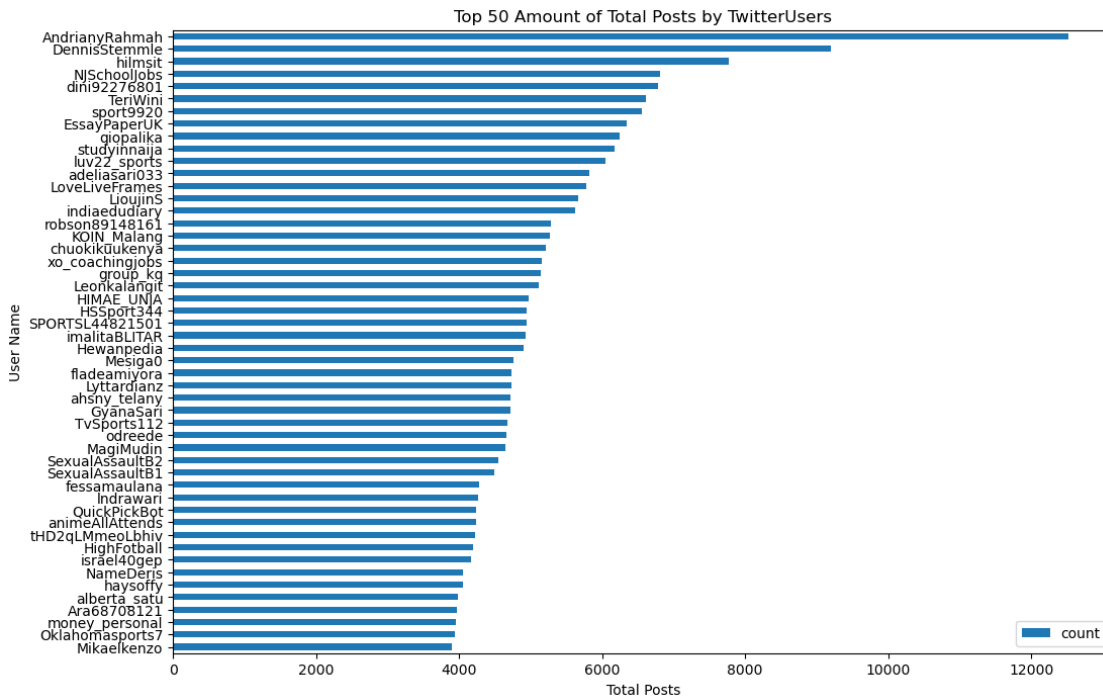
```
[42]: influencer = spark.read.parquet('gs://chen26-bdp/infl')
```

```
[43]: influencer.orderBy(col('count').desc())
```

```
[43]: +-----+-----+-----+-----+-----+
      +-----+
      |count|          user_id|      user_name|Max_reach|
      |user_descrip|total_rct|
      +-----+-----+-----+-----+-----+
      +-----+
      |12520|1128225338775953408| AndrianyRahmah|      218| hs game update news|
      13|
      | 9201|          219401992|  DennisStemmle|     3804|Founder - College...|
      410|
      | 7769|1508968207259869185|      hilmsit|      353|      ...|      17|
      | 6809|          66263683|   NJSchoolJobs|     4252|The leading adver...|
      540|
```



```
plt.show()
```



```
[56]: top50 = top50.rename(columns={'total_rct': 'total_number_retweets',
    ↳ 'user_descrip': 'Description', 'Max_reach': 'followers',
    'count': 'Total_posts'})
```

```
[58]: top50
```

```
[58]:
```

	Total_posts	user_id	user_name	followers	\
0	12520	1128225338775953408	AndrianyRahmah	218	
1	9201	219401992	DennisStemmle	3804	
2	7769	1508968207259869185	hilmsit	353	
3	6809	66263683	NJSchoolJobs	4252	
4	6780	1576939116230455296	dini92276801	84	
5	6609	1577029442488061953	TeriWini	37	
6	6549	1463182041147576321	sport9920	95	
7	6337	879496394691805184	EssayPaperUK	803	
8	6241	1582053513357537293	qiopalika	18	
9	6178	1473922978073165834	studyinnaija	48	
10	6039	1422259384525090818	luv22_sports	139	
11	5823	1338108136561856517	adeliasari033	25	
12	5776	1214364378150998019	LoveLiveFrames	4919	
13	5658	1597301580914601985	LioujinS	63	
14	5624	73707872	indiaedudiary	1213	

15	5289	1329639203144011776	robson89148161	35
16	5263	901030512	KOIN_Malang	172
17	5209	1472159008886870028	chuokikukenya	97
18	5162	2203526911	xo_coachingjobs	5954
19	5139	1468164097355264002	group_kq	199
20	5107	1145005218	Leonkalangit	197
21	4966	1704823393	HIMAE_UNJA	194
22	4950	1557075320859402241	HSSport344	1353
23	4940	1399767823258243072	SPORTSL44821501	77
24	4934	342040769	imalitaBLITAR	125
25	4904	1389413689	Hewanpedia	127
26	4766	1290982957142835200	Mesiga0	36
27	4731	160974553	fladeamiyora	106
28	4726	86883793	Lyttardianz	101
29	4713	1600486037113143298	ahsny_telany	31
30	4713	984117782	GyanaSari	175
31	4674	1133112961675870209	TvSports112	67
32	4656	1258543958	odreede	240
33	4646	1363680066	MagiMudin	181
34	4551	1448701295318216704	SexualAssaultB2	22
35	4485	1448410354363551747	SexualAssaultB1	9
36	4280	1673150558	fessamaulana	116
37	4269	1495367992443478017	lndrawari	1073
38	4243	1518977694951739394	QuickPickBot	2
39	4231	1238273276994039809	animeAllAttends	72
40	4223	1170532065965555712	tHD2qLMmeoLbhiv	11
41	4194	1368437431	HighFotball	47
42	4163	1442890904	israel40gep	144
43	4055	601588639	NameDeris	24
44	4052	1146822133	haysoffy	146
45	3986	1597814626942472192	alberta_satu	220
46	3963	1055387006132400128	Ara68708121	31
47	3961	1066624777807429632	money_personal	1482
48	3940	1524714923741171712	Oklahomasports7	14
49	3899	1524734802603114498	Mikaelkenzo	9

Description \

0

hs game update news

1 Founder - College Success Academy, #1 Best-Selling Author, Entrepreneur, Speaker, Lecturer at The Wall College of Business - Coastal Carolina University

2

High School Today

3 The leading advertiser of education jobs for New Jersey's Schools since 1999! #nj #teaching #administrative #coaching #education #teachingjobs #newjersey

4  
None  
5  
None  
6 Welcom TV listing for all\nEnjoy your  
watching live sports - Football,Basketball and more (Click the link below the  
description)  
7  
I AM The Documentary  
8  
None  
9  
Find All Private & Public Universities, Colleges and TVETs and Courses Offered  
in Nigeria.  
10 Welcom TV listing for all Live sports\nEnjoy your  
watching live sports - Football,Basketball and many more (Click the link below  
the description)  
11 -  
| High School Football America\n https://nbc.ontv-  
sport.com/hsf.php  
12 \nPost Every Love Live!  
Nijigaku!! . 1 Frame each 5 minutes \nJoin us on Discord  
\nhttp://discord.com/invite/5T6cXH4...  
13  
None  
14 One Stop Platform on #Education. Follow Us to know the latest in  
Indian & Global Education , research, books, literature, academics and education  
sector news  
15  
High School Sports  
16  
None  
17 Find All  
University & College Courses Offered in Kenya. Private & Public Universities,  
Colleges and TVETs  
18 College & high school job postings for coaches. Visit  
https://t.co/mgqZWfkP3B for complete list. For resume, portfolio, & interview  
help https://t.co/s4l88TujnS  
19 THIS WEBSITE PROVIDE LATEST NEWS ON EDUCATION.  
Continue To help US FOR LATEST NEWS AND WE WILL PROVIDE BEST OF OUR EFFORTS TO  
MAKE YOU UPDATED  
20  
student athlete  
21  
None  
22  
official account of all matches\n visit our facebook page



23

24

None

25

None

26

Sports Live Broadcast

27

None

28

United States

29

None

30

There's nothing to lose

31

sports

32

thank you for following us

33

None

34

Raising awareness for sexual assault prevention. Resources and facts are posted daily.

35

None

36

None

37 High School Soccer\nBest Public High Schools\nBest High Schools\nTop 10 Private High Schools\nMyinstantoffer com Offer\nHigh School Diploma\nBest Private High Schools

38

None

39

None

40

We like Suits.We like Outdoor fashion and Sneakers too.\n

41

None

42

None

43

None

44

None

45

None

46

Te

47

Follow for exclusive #deals and #selfhelp resources. #OnlineDeals for you.

48

None

49

None

	total_number_retweets
0	13
1	410
2	17
3	540
4	6
5	1
6	69
7	3
8	3
9	5
10	1
11	5
12	2219
13	3
14	62
15	2
16	3
17	14
18	575
19	46
20	1
21	7
22	79
23	3
24	1
25	2
26	7
27	2
28	7
29	3
30	4
31	9
32	17
33	1
34	2

```

35          1
36          4
37          6
38          1
39         25
40          3
41          4
42          2
43          5
44          4
45         13
46          1
47        308
48          2
49          1

```

```
[59]: veri = veri.dropDuplicates(['user_id'])
```

```
[60]: user_veri = influencer.join(veri, influencer.user_id == veri.user_id, 'inner').
      ↳ drop(veri.user_id)
```

```
[ ]: user_veri
```

```
[Stage 36:=====> (1236 + 6) / 1323]
```

```
[63]: top50_rt = user_veri.orderBy(col('total_rct').desc()).limit(50).toPandas()
```

```
[65]: top50_rt = top50_rt.rename(columns={'total_rct': 'total_number_retweets',
      ↳ 'user_descrip': 'Description', 'Max_reach': 'followers',
      ↳ 'count': 'Total_posts'})
```

```
[66]: top50_rt
```

```
[66]:
```

	Total_posts	user_id	user_name	followers	\
0	52	1326229737551912960	libsoftiktok	1893691	
1	17	878284831	OccupyDemocrats	504212	
2	17	3317348164	NasimiShabnam	71862	
3	15	1268223690480615424	NoLieWithBTC	338956	
4	10	26257166	SportsCenter	41400369	
5	49	1915033663	davidhogg111	1267103	
6	51	286998245	Phil_Lewis_	300076	
7	1	14335586	Public_Citizen	535244	
8	1	576320750	JonWTOL	2973	
9	13	1016021178	ColIegeStudent	1876945	
10	66	3066800573	realchrisrufo	490037	

11	10	292929271	charliekirk11	1912374
12	24	890891	BleacherReport	13501984
13	17	148529707	RBRreich	1585497
14	71	1507068807038349314	FratSecrets	381302
15	10	1225603175748685824	ElyKreimendahl	147400
16	10	85583894	QasimRashid	355854
17	26	818893114979061761	JoJoFromJerz	758665
18	1	119458432	tweetsbyNAS	1343
19	35	4765364386	ChuckCallesto	415557
20	83	246939630	shannonrwatts	601731
21	2	24996233	benyahr	44328
22	28	2557521	espn	44930065
23	70	1332809596885405702	piper4missouri	81086
24	11	318673863	AskAnshul	1128620
25	41	1246599649835786244	BigBroKnowsBest	607135
26	1	1442696255025582084	briantheruller	203634
27	1	104040220	theestallion	7600799
28	48	897726186612248576	KIITUniversity	31552
29	44	1243266944226201606	NYUfratguy	484656
30	1	19725644	neiltyson	14805242
31	27	886398296146706432	davenewworld_2	274522
32	22	1050779471731707904	PeterObi	2862455
33	14	1068014810804174848	lovedoveclarke	142570
34	41	1140709434735378433	MuscularJocks	408485
35	13	32871086	kylegriffin1	1396393
36	21	342863309	BetoORourke	2603236
37	8	1009577803304656896	itsJeffTiedrich	1058766
38	6	1021540770598346761	spinubzilla	21821
39	34	199399909	NicholasFerroni	129051
40	6	1194402576197775360	imzarvinnn	58848
41	3	1340985810741391360	imzarvinnn	21195
42	1	44196397	elonmusk	106476100
43	1	255036353	LisPower1	32333
44	9	451046378	jordanfibonacci	5524
45	3046	1349451631390289920	HBCUSports1	42049
46	13	27493883	joncoopertweets	1179308
47	29	452540168	DailyLoud	1339716
48	2	866102366	BusinessmanWiz	115410
49	12	6688542	lisalibrarian	16247

Description \

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1 Pro-Democrat political organization & news website. NY Times reported  
that our reach dominated Trump on Facebook before his ban. Founder:  
@OmarRiverosays

2 Policy Special Advisor to the  
UK Minister of State for Refugees. Agent: info@theblairpartnership.com  
@TBP\_agency

3 Podcast covering the top  
stories & interviews with the biggest names in politics. Hosted by  
@briantylercohen

4  
Download the ESPN App

5  
Supposedly a "multi-millionaire, American spy, and paid actor"  
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7 Public Citizen has been standing up to corporate power and holding  
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corporate money.

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NW Ohio native. Reporter/Photographer for @WTOL11Toledo and @Go\_419

9  
Contact: CollegeStudentofficial@gmail.com

10 Writer, filmmaker, activist. Manhattan Institute  
and City Journal. Sign up for my newsletter:  
<http://christopherrufo.com/newsletter>.

11 Founder &  
President: @TPUSA • Host: The Charlie Kirk Show • Click the link below to  
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12  
Become a B/R Insider and help shape the future of the app

13 Berkeley professor, former Secretary of Labor. Co-founder,  
\n@InequalityMedia. Substack: <http://robertreich.substack.com> | Mastodon:  
@rbreich@masto.ai

14  
Being a part of the brotherhood means we keep each other's secrets

15 writer, comic, queer. i live tweeted the  
birth of my baby. @funnyordie @newrootsartists @humordarling mgmt: waldorf  
entertainment

16 Human Rights Lawyer • Author •  
Dad Jokes • Host of The Qasim Rashid Show on Sirius XM Channel 126 Sundays @  
10am EST

17 jersey. democrat. news junkie. lover of puns. Lebanese. hothead.  
mom. geek. Blocked by Chachi. <http://jojofromjerz.com>. [https://ko-](https://ko-fi.com/jojofromjerz)  
[fi.com/jojofromjerz](https://ko-fi.com/jojofromjerz)

18  
It matters now, but not here.

19 | Father and Former Candidate | #FL03 | Political Strategist | Start Ups |  
Marketing Growth Manager | Let's Grow | R/T's Not Endorsements | BREAKING

HEADLINES |

20 Founder of @MomsDemand, grassroots army of @Everytown / @AmericanU Fellow /  
Author of Fight Like a Mother / Boards @WeAdvancePeace, @EmergeAmerica /  
#MizzouMade

21

Goofball | Actress | Short King | Lip Sync Assassin |  
<http://www.Instagram.com/benyahr>

22

Serving sports fans. Anytime. Anywhere.

23

Teacher, podcaster,  
and former Democratic Nominee for State Representative in MO HD1.  
#DirtRoadDemocrat

24 | News Junkie | Politics | Foreign Affairs | National Security | Observer &  
Analyst | i tweet informative facts and opinions |  
<http://www.youtube.com/AskAnshul>

25

One thing I've learned is that my older brother knows best.

26

turn notis on

27

thee real Htown Hottie

28

We are celebrating 25 glorious years of #KIIT\n#KIITat25

29

21 year old college athlete at NYU. Kapa Sigma. Looking for my little bro

30

Astrophysicist

31

Freelance Reporter / "An important member of the media"  
-Twitter's legal team / Trump's FBI subpoenaed my social media data for no  
reason

32

Former Governor, Anambra State. Tweets by him are signed -PO.

33

dove clarke's Public Online Diary #mmip

34

If you like muscular jocks who aren't afraid to have fun together, welcome home

35

Executive Producer. MSNBC's @AymanMSNBC and  
@MehdiHasanShow. Opinions mine. Do not congratulate.  
<https://post.news/kylegriffin1>

36

I'm running for governor to serve ALL the people of Texas.

37

don't blame me, I voted for the email lady

38

patron saint of sad boys she/her writer of @tinyfairytale

39

As a kid, I wanted to be a superhero,

psychologist, philanthropist, philosopher, actor and comedian... So I became a teacher.

40

•second acc:@nopainpost•http://sayout.me/say/imzarvinnn•

41 for promotions collab ,rt's & partnerships

bbencaniete@gmail.com Paypal account & Gcash account : 09657324551 YES PO NEW  
ACT KOTO dump: @mrnjcntt

42

None

43

Director of Media Intelligence

@mmfa. Philly born. #FlyEaglesFly F&M alum. Former TFA Miami. Views are mine alone.

44

,

. l O'Hare & Drax |

@BigPippinFX

45

HBCU Most Viewed Sports Twitter Site \n Your #1 Source of HBCU Daily News and Sports

46 Former National Finance Chair of Draft Biden, LI Campaign Chair for Barack Obama. Hit "Super Follow" for tips to boost your messaging and grow your followers!

47

| #1 Source For Hip-Hop / Viral News | Follow Us And Stay Updated | Email For Promo & Business TheDailyLoud@gmail.com | New Content & IG Below

48

Religiously Financially Historically Politically

I have but two goals: liberate your minds & enrich your souls/bank accounts!

49

Professor @IllinoisLibrary & Affiliate Faculty @iSchoolUI; Faculty Board of @IllinoisPress; Boards of @ScholarlyPub & @ORCID\_Org; Chef @ScholarlyKitchn

	total_number_retweets	verified
0	482067	False
1	414295	True
2	293392	True
3	291413	True
4	250517	True
5	206630	True
6	197817	True
7	193203	True
8	185946	True
9	181667	False
10	181261	True
11	177580	True
12	176982	True
13	175297	True
14	172417	False

15	171951	False
16	168907	True
17	167801	False
18	160350	False
19	158604	True
20	158155	True
21	156440	False
22	155383	True
23	154380	True
24	151074	True
25	146182	False
26	144214	False
27	142205	True
28	141749	True
29	141225	False
30	140754	True
31	135219	False
32	134576	True
33	133533	False
34	129666	False
35	129375	True
36	128688	True
37	127128	False
38	120740	False
39	118242	True
40	117241	False
41	117241	False
42	116620	True
43	115704	True
44	115110	False
45	111771	False
46	110298	True
47	109678	False
48	108450	False
49	108293	False

```
[69]: len(top50_rt[top50_rt['verified'] == True])
```

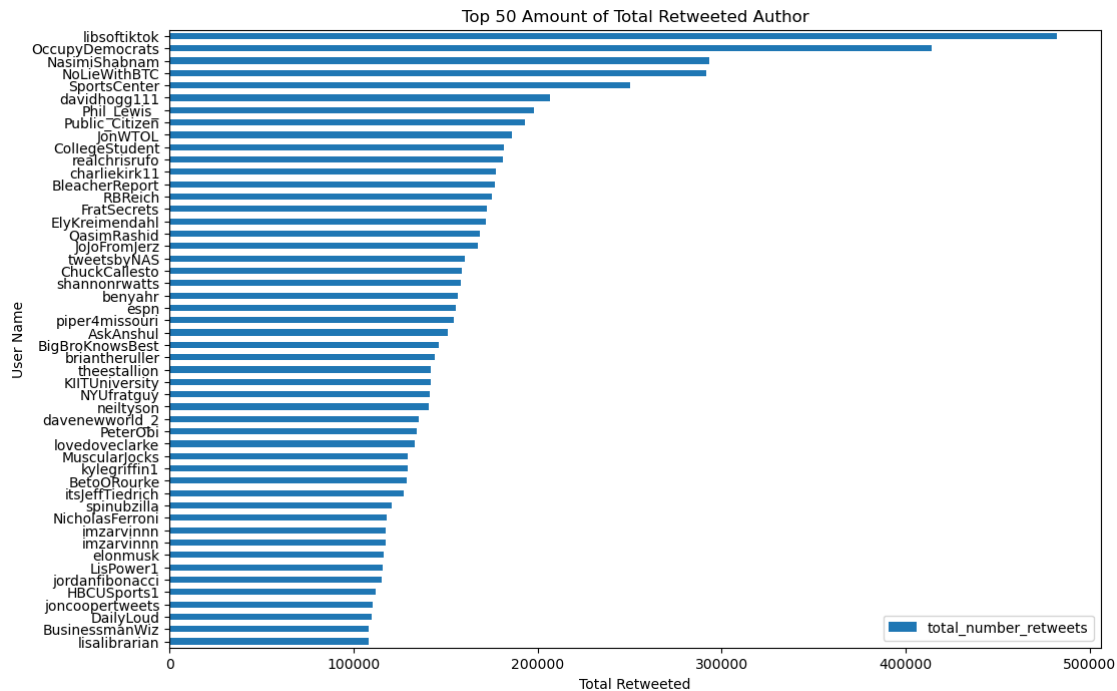
```
[69]: 28
```

```
[71]: ax = top50_rt.plot(x='user_name', y= 'total_number_retweets', kind='barh',
    ↳figsize = (12, 8))

ax.set_ylabel('User Name')
ax.set_xlabel('Total Retweeted')
ax.set_title('Top 50 Amount of Total Retweeted Author')
ax.invert_yaxis()
```



```
# show the plot
plt.show()
```



```
[72]: user_veri = user_veri.withColumn('t_avg_reach', col('total_rct')/col('count'))\
      .withColumn('inf_score',
      ↪col('t_avg_reach')*col('Max_reach'))
```

```
[73]: user_veri
```

```
[73]: +-----+-----+-----+-----+-----+-----+
      |count|user_id|user_name|Max_reach|user_descrip|total_rct|verified|
      |t_avg_reach|inf_score|
      +-----+-----+-----+-----+-----+-----+
      | 2| 418|dens| 83191|I like to build t...| 10| true|
5.0| 415955.0|
      | 1| 7499|Naija| 4668|We handle what ma...| 3| false|
3.0| 14004.0|
      | 4| 10078|reidhoffman| 652434|Entrepreneur. Inv...| 38| true|
9.5| 6198123.0|
      | 1| 10178|stoweboyd| 19020|The past, present...| 2| false|
```

2.0	38040.0					
4	10237	Chuckumentary	10314	boreal human with...	2	false
0.5	5157.0					
6	40403	rosemary	1235	Design web etc at...	2	
false	0.3333333333333333	411.66666666666663				
4	41243	adliterate	12719	High octane brand...	3	false
0.75	9539.25					
2	60033	andybudd	65955	Design Founder, s...	8	false
4.0	263820.0					
7	77983	pickwick	2167	leftie feminist s...	10	
false	1.4285714285714286	3095.714285714286				
9	618373	superflippy	3264	I believe art & s...	1	
false	0.1111111111111111	362.66666666666663				
9	649713	rom	3506	Proud member of t...	3	
false	0.3333333333333333	1168.6666666666665				
1	711913	_eseidel	14140	Leading http://sh...	18	false
18.0	254520.0					
1	739743	shareski	38984	Trying to spread ...	1	true
1.0	38984.0					
5	755284	logic	9184	Pseudogeek   Free...	30	false
6.0	55104.0					
1	755959	fuzheado	21523	Wikimedian-at-lar...	12	false
12.0	258276.0					
2	783136	UsmanKemal	706	An entrepreneur, ...	1	false
0.5	353.0					
3	785137	michaelwhitney	13073	go bills. fundrai...	6	false
2.0	26146.0					
6	795789	carynrose	10922	Music writer, res...	33	true
5.5	60071.0					
1	807515	jonfroehlich	5052	Associate Profess...	14	false
14.0	70728.0					
1	814261	moritherapy	5078	making lives bett...	2	false
2.0	10156.0					

```
+-----+-----+-----+-----+-----+-----+
-----+-----+-----+-----+-----+-----+
```

only showing top 20 rows

```
[ ]: topinf = user_veri.orderBy(col('inf_score').desc()).limit(50).toPandas()
```

```
[75]: topinf
```

```
[75]:
```

	count	user_id	user_name	Max_reach \
0	1	44196397	elonmusk	106476100
1	3	18839785	narendramodi	84850082
2	1	19725644	neiltyson	14805242

3	1	23375688	selenagomez	65889944
4	1	1339835893	HillaryClinton	31426778
5	1	122453931	ImranKhanPTI	17789483
6	1	104040220	theestallion	7600799
7	10	26257166	SportsCenter	41400369
8	4	1349149096909668363	POTUS	29370914
9	2	216776631	BernieSanders	15731059
10	1	884378714	SMTOWNGLOBAL	11294965
11	2	30354991	KamalaHarris	19817342
12	3	19923144	NBA	42052619
13	4	5402612	BBCBreaking	51629170
14	1	409486555	MichelleObama	22224422
15	1	192947735	davido	11358735
16	1	139162440	pattonoswalt	4759822
17	1	16548023	9GAG	16834659
18	1	2893511188	VancityReynolds	21111665
19	28	2557521	espn	44930065
20	1	2233154425	StephenKing	6898034
21	2	39344374	DonaldJTrumpJr	9570559
22	1	471741741	PMOIndia	51115349
23	1	3004231	SnoopDogg	21008579
24	1	256883252	sza	7023472
25	1	348379865	Dior	8794149
26	1	2455740283	MrBeast	13958152
27	6	428333	cnnbrk	64160677
28	1	1349154719386775552	FLOTUS	3945634
29	1	14335586	Public_Citizen	535244
30	1	226222147	PeteButtigieg	3715458
31	24	890891	BleacherReport	13501984
32	1	737453313352962048	griffinbarrowsx	937968
33	7	803694179079458816	VP	13793901
34	1	1006419421244678144	GretaThunberg	5068177
35	1	2719753171	PawanKalyan	5173372
36	1	783792992	IlhanMN	3066097
37	1	152251488	dhanushkraj	10743392
38	1	36686040	RepMaxineWaters	1696868
39	2	51263592	AdamSchefter	10076219
40	1	4914384040	TheBabylonBee	2112259
41	1	453507741	MaryamNSharif	7634548
42	1	2526794479	MamataOfficial	6754321
43	2	1447949844	AmitShah	29472484
44	1	259001548	kayleighmcenany	3120884
45	3	34197952	anandmahindra	9279566
46	1	304679484	MarkHamill	5225664
47	1	1346439824	rajnathsingh	23339829
48	1	1032978119370723329	tommyinnit	3973324
49	1	216881337	RandPaul	4370941

user\_descrip

\

0

None

1

Prime Minister of India

2

Astrophysicist

3

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4 2016 Democratic Nominee, SecState, Senator, hair icon. Mom, Wife, Grandma

x3, lawyer, advocate, fan of walks in the woods & standing up for our democracy.

5 Chairman

Pakistan Tehreek-e-Insaf & former Prime Minister of Islamic Republic of Pakistan

6

thee real Htown Hottie

7

Download the ESPN App

8 46th President of the United States, husband to @FLOTUS, proud dad &

pop. Tweets may be archived: <http://whitehouse.gov/privacy>\nText me: (302)

404-0880

9

U.S. Senator for Vermont. Not me, us.

10

SMEntertainment Group Official Twitter

11

Fighting for the people. Wife, Momala, Auntie. She/her. Official account is @VP.

12 The 2022-23 NBA season continues

Monday on NBA TV! 7:30pm/et: @Lakers/@BrooklynNets | 10pm/et:

@ATLHawks/@trailblazers

13 Breaking news alerts and updates from the BBC. For news, features, analysis

follow @BBCWorld (international) or @BBCNews (UK). Latest sport news @BBCSport.

14 Girl from the South Side and

former First Lady. Wife, mother, dog lover. Always hugger-in-chief.

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15

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16 New @Netflix special WE ALL SCREAM now

streaming!!!MINOR THREATS from @DarkHorse out now! I like making stuff. IG:

pattonoswalt

17

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18

owner: @aviationgin - @MintMobile - @maximumeffort - @Wrexham\_AFC

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20

Author

21 Future leader Ministry of Truth, Father, Outdoorsman, Meme War General,  
founder: MxM News, Field Ethos Journal, Winning Team Publishing Pronouns:  
The/she/it

22

Office of the Prime Minister of India

23

"I STILL GOT IT" mixtape OUT NOW

24

None

25

"Women, with their intuitive instinct, understood that I dreamed not only of making them more beautiful, but happier too." Christian Dior

26

I want to make the world a better place before I die

27 Breaking news from CNN Digital. Now 64M strong. Check @cnn for all things  
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28

First Lady of the United States Jill  
Biden. Community college educator. Military mother. Grandmother. Wife of @POTUS.

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Personal account. For official updates, follow  
@SecretaryPete. Husband, father, veteran, writer, South Bend's former Mayor  
Pete. (he/him)

31

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<http://OnlyFans.com/GriffinBarrows> - [http://tumblr.com/griffin-](http://tumblr.com/griffin-barrows-x)  
barrows-x - Instagram: GriffinBarrowsXX - Email:  
[griffinbarrowscontact@gmail.com](mailto:griffinbarrowscontact@gmail.com)

33

Vice President of the United  
States. Wife to the first @SecondGentleman. Momala. Auntie. Fighting for the  
people.

34

Climate- and environmental activist with Asperger's Born at 375 ppm

35

, , .. JaiHind!

36 Mom, Refugee and Congresswoman for #MN05. Progressive Caucus Whip. Fighting  
for a more just world. Grassroots funded progressive <http://HC.com/IlhanOmar>

37

ASURAN/Actor

38

Proudly serving the people of California's 43rd  
District in Congress. Chairwoman of the House Financial Services Committee  
(@FSCDems).

39

ESPN Senior NFL Insider. \nInterview & Podcast Requests:  
[ESPNPR@espn.com](mailto:ESPNPR@espn.com)\nHost of the Adam Schefter  
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40 Fake news you can trust. Follow our podcast account @babylonbeepod JOIN US at #BeeLIVE Feb. 24.

41 We cloak our cowardice with the ill-fitting garment of political correctness. To a coward, courage always looks like stupidity. Fortune favours the brave.

42 The Official Twitter of Mamata Banerjee, founder Chairperson All India Trinamool Congress. Honourable Chief Minister, West Bengal.

43 Union Home Minister, Minister of Cooperation and MP, Gandhinagar Lok Sabha.  
<http://www.instagram.com/amitshahofficial>

44 Co-host @OutnumberedFNC. Fmr. White House Press Secretary. Author of "For Such a Time as This." Harvard Law. Georgetown SFS.

45 Chairman & Team member, Covid-19 Fighters, Mahindra Group

46 Believe in yourself! Work hard, never give up & anything's possible!  
OR: Kick back, relax & aim low: You'll never be disappointed... I IGNORE ALL DMs!

47 , Defence Minister of India

48 incredibly influential gamer - you can pre-order mine & wilbur's book here  
<http://tommyinnit.com/>

49 U.S. Senator for Kentucky | I fight for the Constitution, individual liberty and the freedoms that make this country great.

	total_rct	verified	t_avg_reach	inf_score
0	116620	True	116620.000000	1.241724e+13
1	80295	True	26765.000000	2.271012e+12
2	140754	True	140754.000000	2.083897e+12
3	25761	True	25761.000000	1.697391e+12
4	48751	True	48751.000000	1.532087e+12
5	65561	True	65561.000000	1.166296e+12
6	142205	True	142205.000000	1.080872e+12
7	250517	True	25051.700000	1.037150e+12
8	92863	True	23215.750000	6.818678e+11
9	84233	True	42116.500000	6.625371e+11
10	55483	True	55483.000000	6.266785e+11
11	40615	True	20307.500000	4.024407e+11
12	24773	True	8257.666667	3.472565e+11
13	24352	True	6088.000000	3.143184e+11
14	13839	True	13839.000000	3.075638e+11
15	26465	True	26465.000000	3.006089e+11
16	59394	True	59394.000000	2.827049e+11
17	16293	True	16293.000000	2.742871e+11
18	12227	True	12227.000000	2.581323e+11

19	155383	True	5549.392857	2.493346e+11
20	33423	True	33423.000000	2.305530e+11
21	45641	True	22820.500000	2.184049e+11
22	4020	True	4020.000000	2.054837e+11
23	8938	True	8938.000000	1.877747e+11
24	25846	True	25846.000000	1.815287e+11
25	13342	True	13342.000000	1.173315e+11
26	7842	True	7842.000000	1.094598e+11
27	10052	True	1675.333333	1.074905e+11
28	26422	True	26422.000000	1.042515e+11
29	193203	True	193203.000000	1.034107e+11
30	27446	True	27446.000000	1.019745e+11
31	176982	True	7374.250000	9.956701e+10
32	102388	False	102388.000000	9.603667e+10
33	46501	True	6643.000000	9.163288e+10
34	17972	True	17972.000000	9.108528e+10
35	17411	True	17411.000000	9.007358e+10
36	28348	True	28348.000000	8.691772e+10
37	7900	True	7900.000000	8.487280e+10
38	49622	True	49622.000000	8.420198e+10
39	16547	True	8273.500000	8.336560e+10
40	38996	True	38996.000000	8.236965e+10
41	10718	True	10718.000000	8.182709e+10
42	11817	True	11817.000000	7.981581e+10
43	5327	True	2663.500000	7.849996e+10
44	24875	True	24875.000000	7.763199e+10
45	25028	True	8342.666667	7.741633e+10
46	13912	True	13912.000000	7.269944e+10
47	2662	True	2662.000000	6.213062e+10
48	14263	True	14263.000000	5.667152e+10
49	12875	True	12875.000000	5.627587e+10

```
[78]: topinf = topinf.rename(columns={'total_rct': 'Total_Number_Retweets',
    ↳ 'user_descrip': 'Description', 'Max_reach': 'Followers',
    ↳ 'count': 'Total_Posts', 't_avg_reach':
    ↳ 'Average_Reach', 'inf_score': 'Influence_Score'})
```

```
[79]: topinf
```

```
[79]:
```

	Total_posts	user_id	user_name	followers	\
0	1	44196397	elonmusk	106476100	
1	3	18839785	narendramodi	84850082	
2	1	19725644	neiltyson	14805242	
3	1	23375688	selenagomez	65889944	
4	1	1339835893	HillaryClinton	31426778	
5	1	122453931	ImranKhanPTI	17789483	
6	1	104040220	theestallion	7600799	

7	10	26257166	SportsCenter	41400369
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9	2	216776631	BernieSanders	15731059
10	1	884378714	SMTOWNGLOBAL	11294965
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13	4	5402612	BBCBreaking	51629170
14	1	409486555	MichelleObama	22224422
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16	1	139162440	pattonoswalt	4759822
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27	6	428333	cnnbrk	64160677
28	1	1349154719386775552	FLOTUS	3945634
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34	1	1006419421244678144	GretaThunberg	5068177
35	1	2719753171	PawanKalyan	5173372
36	1	783792992	IlhanMN	3066097
37	1	152251488	dhanushkraj	10743392
38	1	36686040	RepMaxineWaters	1696868
39	2	51263592	AdamSchefter	10076219
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41	1	453507741	MaryamNSharif	7634548
42	1	2526794479	MamataOfficial	6754321
43	2	1447949844	AmitShah	29472484
44	1	259001548	kayleighmcenany	3120884
45	3	34197952	anandmahindra	9279566
46	1	304679484	MarkHamill	5225664
47	1	1346439824	rajnathsingh	23339829
48	1	1032978119370723329	tommyinnit	3973324
49	1	216881337	RandPaul	4370941

Description

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0



None

1

Prime Minister of India

2

Astrophysicist

3

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4 2016 Democratic Nominee, SecState, Senator, hair icon. Mom, Wife, Grandma  
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5

Chairman  
Pakistan Tehreek-e-Insaf & former Prime Minister of Islamic Republic of Pakistan

6

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7

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13 Breaking news alerts and updates from the BBC. For news, features, analysis  
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20

Author

21 Future leader Ministry of Truth, Father, Outdoorsman, Meme War General,  
founder: MxM News, Field Ethos Journal, Winning Team Publishing Pronouns:

The/she/it

22

Office of the Prime Minister of India

23

"I STILL GOT IT" mixtape OUT NOW

24

None

25

"Women, with their intuitive instinct, understood that I dreamed not only of making them more beautiful, but happier too." Christian Dior

26

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28

First Lady of the United States Jill Biden. Community college educator. Military mother. Grandmother. Wife of @POTUS.

29 Public Citizen has been standing up to corporate power and holding government accountable for 50 years. We're people-powered and accept no corporate money.

30

Personal account. For official updates, follow @SecretaryPete. Husband, father, veteran, writer, South Bend's former Mayor Pete. (he/him)

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<http://OnlyFans.com/GriffinBarrows> - <http://tumblr.com/griffin-barrows-x> - Instagram: GriffinBarrowsXX - Email: [griffinbarrowscontact@gmail.com](mailto:griffinbarrowscontact@gmail.com)

33

Vice President of the United States. Wife to the first @SecondGentleman. Momala. Auntie. Fighting for the people.

34

Climate- and environmental activist with Asperger's Born at 375 ppm

35

, , .. JaiHind!

36 Mom, Refugee and Congresswoman for #MN05. Progressive Caucus Whip. Fighting for a more just world. Grassroots funded progressive <http://HC.com/IlhanOmar>

37

ASURAN/Actor

38

Proudly serving the people of California's 43rd District in Congress. Chairwoman of the House Financial Services Committee (@FSCDems).

39

ESPN Senior NFL Insider. \nInterview & Podcast Requests: [ESPNPR@espn.com](mailto:ESPNPR@espn.com)\nHost of the Adam Schefter Podcast\n<http://Instagram.com/AdamSchefter>

40

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41

We cloak our cowardice with the ill-fitting garment of political correctness. To a coward, courage always looks like stupidity. Fortune favours

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42 The Official Twitter of Mamata Banerjee, founder  
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43 Union Home Minister, Minister of  
Cooperation and MP, Gandhinagar Lok Sabha.  
<http://www.instagram.com/amitshahofficial>

44 Co-host @OutnumberedFNC. Fmr. White House  
Press Secretary. Author of "For Such a Time as This." Harvard Law. Georgetown  
SFS.

45  
Chairman & Team member, Covid-19 Fighters, Mahindra Group

46 Believe in yourself! Work hard, never give up & anything's possible!  
OR: Kick back, relax & aim low: You'll never be disappointed... I IGNORE ALL  
DMs!

47  
, Defence Minister of India

48 incredibly  
influential gamer - you can pre-order mine & wilbur's book here  
<http://tommyinnit.com/>

49 U.S. Senator for Kentucky | I fight for the  
Constitution, individual liberty and the freedoms that make this country great.

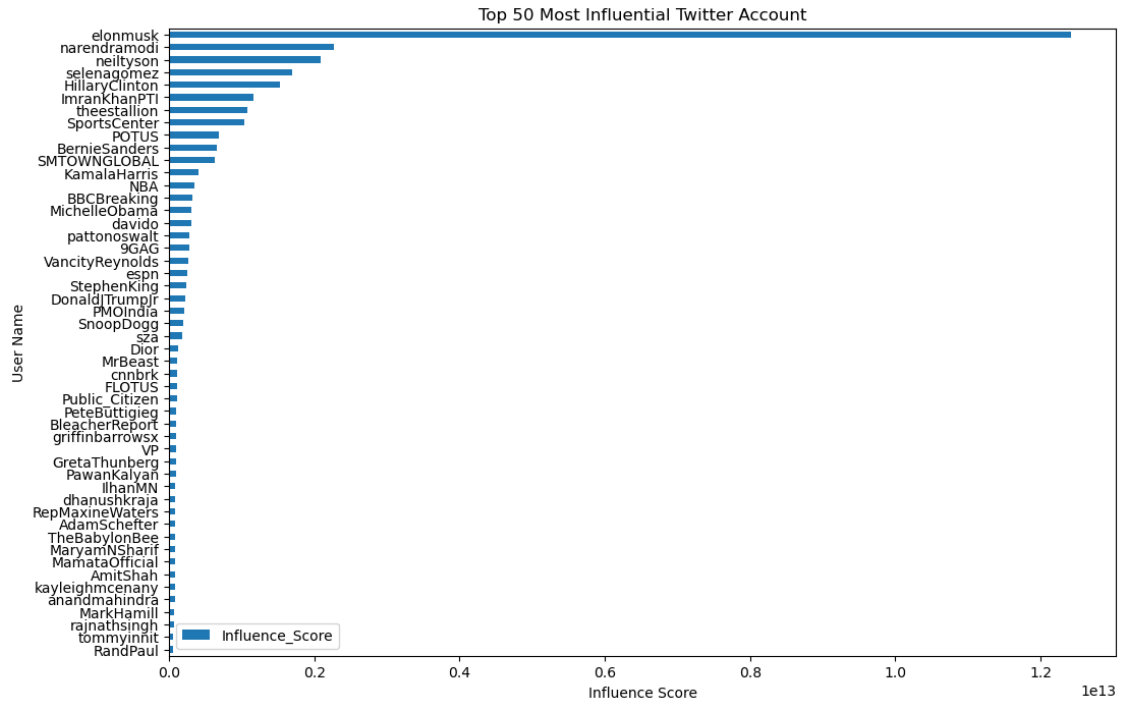
	total_number_retweets	verified	Average_Reach	Influence_Score
0	116620	True	116620.000000	1.241724e+13
1	80295	True	26765.000000	2.271012e+12
2	140754	True	140754.000000	2.083897e+12
3	25761	True	25761.000000	1.697391e+12
4	48751	True	48751.000000	1.532087e+12
5	65561	True	65561.000000	1.166296e+12
6	142205	True	142205.000000	1.080872e+12
7	250517	True	25051.700000	1.037150e+12
8	92863	True	23215.750000	6.818678e+11
9	84233	True	42116.500000	6.625371e+11
10	55483	True	55483.000000	6.266785e+11
11	40615	True	20307.500000	4.024407e+11
12	24773	True	8257.666667	3.472565e+11
13	24352	True	6088.000000	3.143184e+11
14	13839	True	13839.000000	3.075638e+11
15	26465	True	26465.000000	3.006089e+11
16	59394	True	59394.000000	2.827049e+11
17	16293	True	16293.000000	2.742871e+11
18	12227	True	12227.000000	2.581323e+11
19	155383	True	5549.392857	2.493346e+11
20	33423	True	33423.000000	2.305530e+11
21	45641	True	22820.500000	2.184049e+11
22	4020	True	4020.000000	2.054837e+11

23	8938	True	8938.000000	1.877747e+11
24	25846	True	25846.000000	1.815287e+11
25	13342	True	13342.000000	1.173315e+11
26	7842	True	7842.000000	1.094598e+11
27	10052	True	1675.333333	1.074905e+11
28	26422	True	26422.000000	1.042515e+11
29	193203	True	193203.000000	1.034107e+11
30	27446	True	27446.000000	1.019745e+11
31	176982	True	7374.250000	9.956701e+10
32	102388	False	102388.000000	9.603667e+10
33	46501	True	6643.000000	9.163288e+10
34	17972	True	17972.000000	9.108528e+10
35	17411	True	17411.000000	9.007358e+10
36	28348	True	28348.000000	8.691772e+10
37	7900	True	7900.000000	8.487280e+10
38	49622	True	49622.000000	8.420198e+10
39	16547	True	8273.500000	8.336560e+10
40	38996	True	38996.000000	8.236965e+10
41	10718	True	10718.000000	8.182709e+10
42	11817	True	11817.000000	7.981581e+10
43	5327	True	2663.500000	7.849996e+10
44	24875	True	24875.000000	7.763199e+10
45	25028	True	8342.666667	7.741633e+10
46	13912	True	13912.000000	7.269944e+10
47	2662	True	2662.000000	6.213062e+10
48	14263	True	14263.000000	5.667152e+10
49	12875	True	12875.000000	5.627587e+10

```
[80]: ax = topinf.plot(x='user_name', y= 'Influence_Score', kind='barh', figsize =(12, 8))

ax.set_ylabel('User Name')
ax.set_xlabel('Influence Score')
ax.set_title('Top 50 Most Influential Twitter Account')
ax.invert_yaxis()

# show the plot
plt.show()
```



[ ]: