ANALYZING VARIETIES OF SOCIAL MEDIA BIG DATA OF FACEBOOK USING R PROGRAMMING

[1]Dr. Parag C. Shukla, [2]Dr. Hetal R. Thaker (Corresponding Author)
[1]Assistant Professor & HEAD, [2]Assistant Professor
[1]Department of MCA,
[1]Atmiya Institute of Technology & Science, Rajkot, India

Abstract : ***In this era of digital data, social media analytics is trending. There is an incredible volume of info in social media data. Before one or two-decade many organization was paying to marketplace investigation companies for polling customers and conduct focus groups to get the kind of information that nowadays converted into social media analytics. Many researchers, industrialists are focusing on social media data to identify the details of the user. Nowadays, most of the organization is concentrating on collecting and Evaluating data, so that they can extract the meaningful information and can take the better decision. Analysis of data is essential nowadays. Source of information is also not static; the source can be in diverse arrangement. It can be in structured or organized way like spreadsheets. It can be in a semi-structured manner like XML, JSON or markup language or it can be in an unstructured manner like webpage, document or text. Analysis of varieties of data is essential. In this research paper, we did the social media big data analytics using R programming. We did social media analytics of Facebook and we retrieve the list of likes of different pages by the user, we got the friend list of the user, extract the post from a specific page of Facebook, extracting comments from Facebook. In Twitter, we retrieve the details about the Twitter user, get the friends of the specified user, get the follower list of another user.***

IndexTerms - ANALYTICS, BIG DATA, BIG DATA ANALYTICS, SOCIAL MEDIA DATA, R ANALYTICS, FACEBOOK ANALYTICS

I. INTRODUCTION

In this era of digital data, social media analytics is trending. There is an incredible volume of info in social media data. Before one or two-decade many organization was paying to marketplace investigation companies for polling customers and conduct focus groups to get the kind of information that nowadays converted into social media analytics. Many researchers, industrialists are focusing on social media data to identify the details of the user. Nowadays, most of the organization is concentrating on collecting and Evaluating data, so that they can extract the meaningful information and can take the better decision. Analysis of data is essential nowadays. Source of information is also not static, the source can be in diverse arrangement. It can be in structured or organized way like spreadsheets. It can be in a semi-structured manner like XML, JSON or markup language or it can be in an unstructured manner like webpage, document or text. Analysis of varieties of data is essential. In this research paper, we did the social media big data analytics using R programming. First, we introduced what is R? and why R Programming? And then We did social media analytics of Facebook and we retrieve the list of likes of different pages by the user, we got the friend list of the user, extract the post from a specific page of Facebook, extracting comments from Facebook.

II. WHAT IS R?

R is open source, a free software environment for Analyzing data and graphics. It is a programming language and tool to analyze data. It is having good provision for high excellence data conception. We can analyze structured, unstructured datasets. Many industries like healthcare, financial etc.

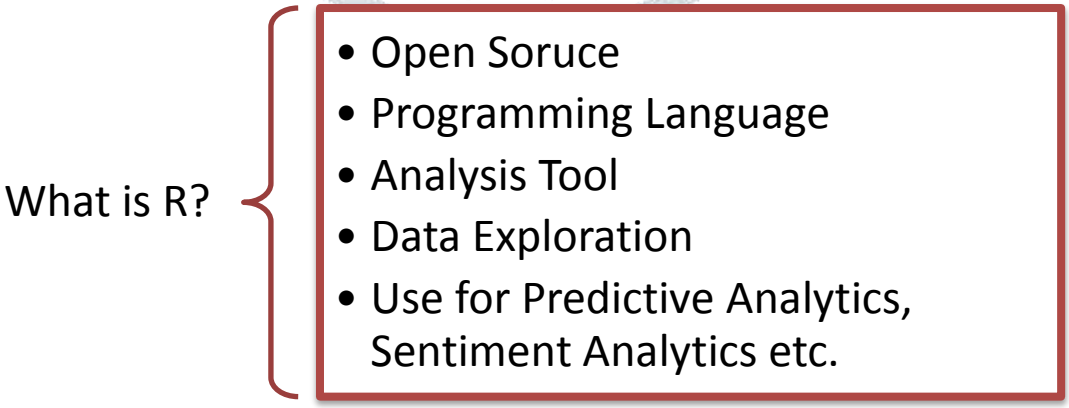

Figure-1 What is R?

R support many kinds of analysis test, it supports predictive analysis, sentiment analysis standard tests, time series, cluster analysis etc. It is used by data scientists/ database analyst or software developers. It is recommended by many researchers. It is the best tool for analysis of data.

Why R?

Figure-2 Why R?

R as a Programming Language

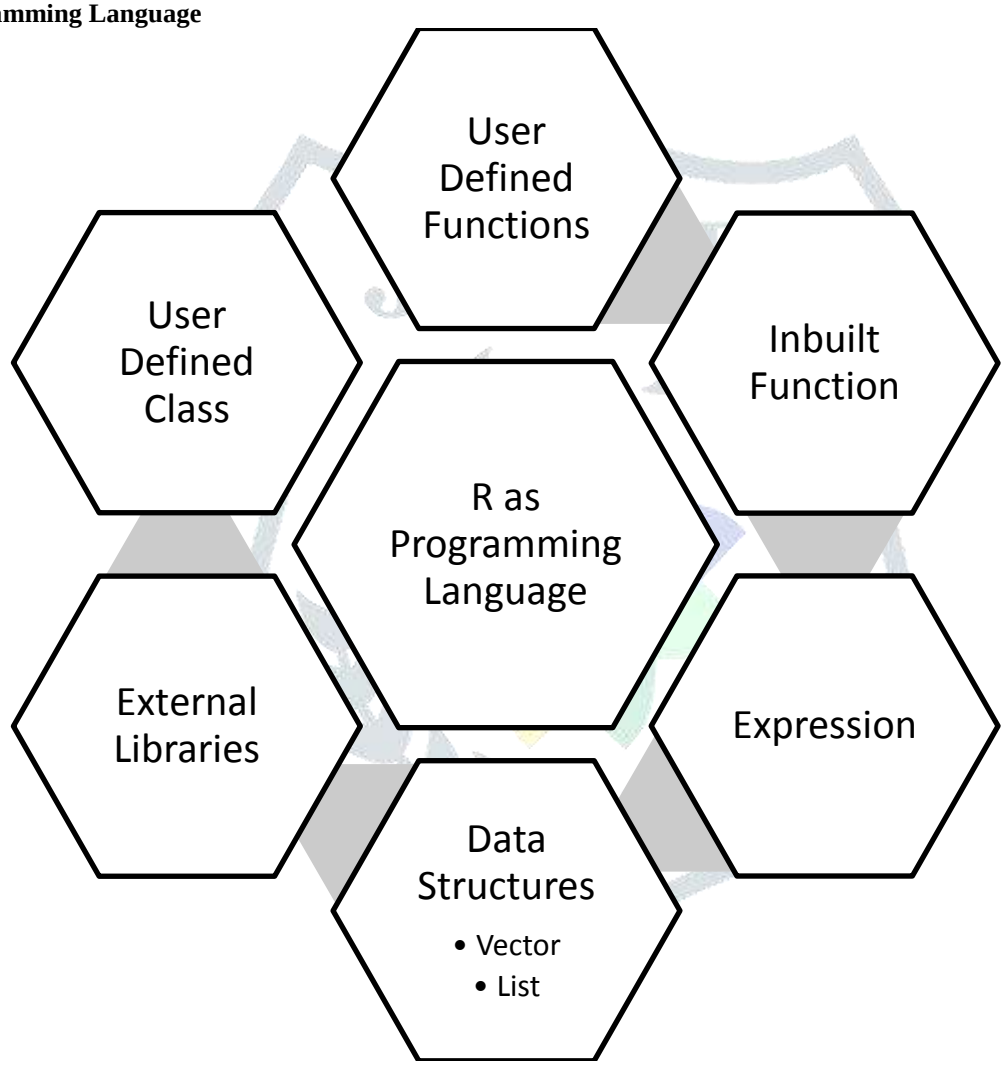

Figure-3 R as a programming Language

III. Analyzing Social media Data of Facebook

We can analyze Facebook data using so many ways. I am using here R platform to analyze Facebook data.

FBAnalytics.R

Source on Save

```
#Install the package RFacebook
install.packages("Rfacebook")
#Use the library Rfacebook
library("Rfacebook")

#Register your app at https://developers.facebook.com/apps/
#Get access token from the following https://developers.facebook.com/tools/explorer
my_oauth <- fbOAuth(app_id="My_APP_ID",app_secret="My_App_Secret")
save(my_oauth,file="my_oauth")
load("my_oauth")

me <- getUsers("me",token=my_oauth)
me$name
```

17:15 (Top Level)

Console C:/Users/Parag/Desktop/Analyzing Big Data/Analytics/

Figure-4 In above screenshot, I connect R with Facebook and getting the name of the user using getUsers() function.

Getting Likes on different pages by user

FBAnalytics.R my_likes

Filter

	id	names	website
1	177526890164	Narendra Modi	http://www.narendramodi.in
2	477865892573462	Kapil Shukla	http://www.kapilshukla.work
3	1119175021560071	Nariya Rvi	http://www.ibnglocal.com/
4	116196512346718	Tech Giants	NA
5	2028480200719609	Tech Vision	NA
6	154950568411145	Digital Developer	NA
7	243174716203057	Prabodh	http://www.hddevelopers.in/

Showing 1 to 8 of 124 entries

Console C:/Users/Parag/Desktop/Analyzing Big Data/Analytics/

```
> me <- getUsers("me",token=my_oauth)
> me$name
[1] "Parag Shukla"
```

Figure-5 This screen shows latest likes of the different Facebook page by user Parag Shukla

Getting Friends list of user

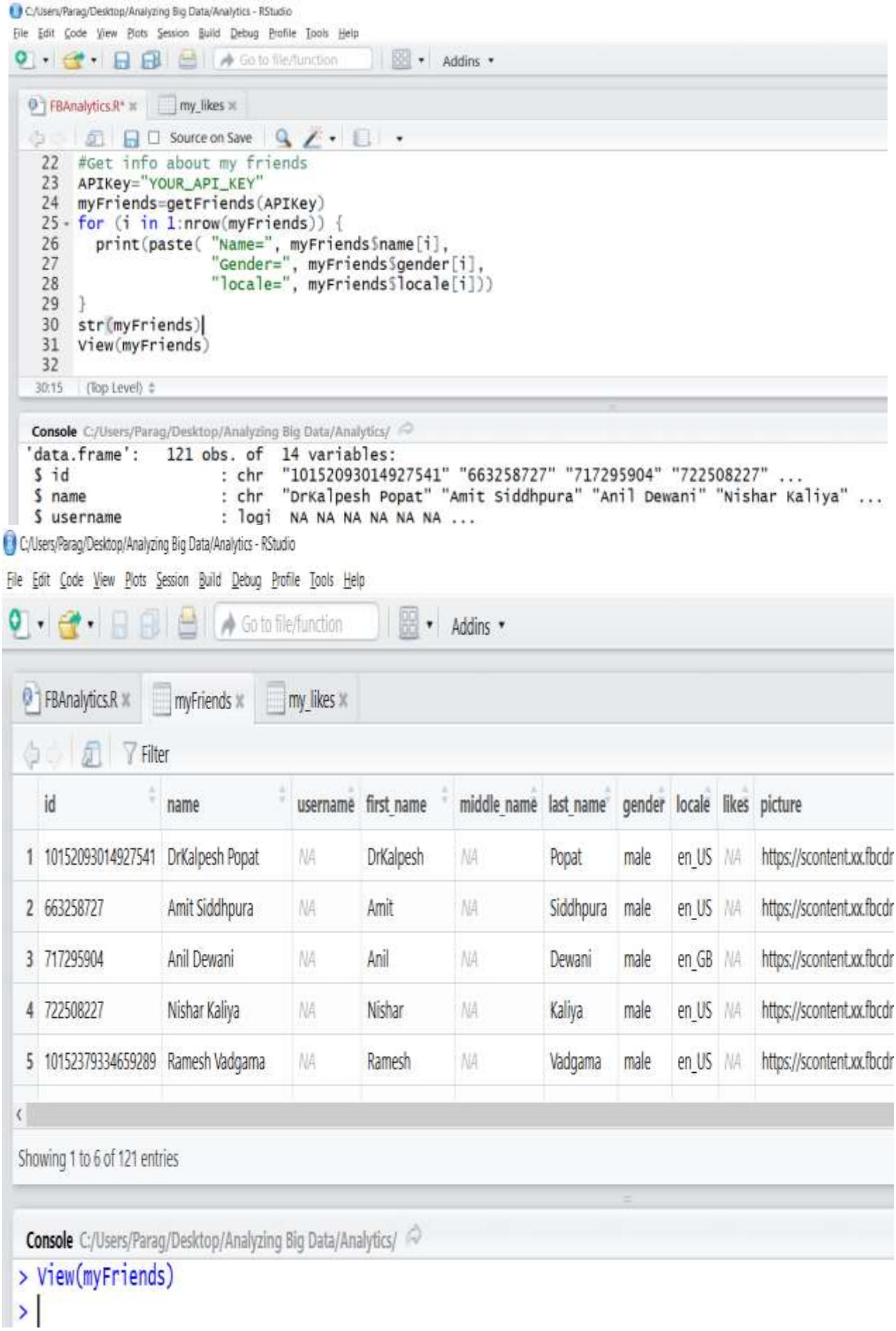

Figure-6 This screen shows information like name, gender, locale about the friends of the user

Extracting post from the facebook page

FBAnalytics.R | getpagedata | myFriends | my_likes

Filter

	from_id	from_name	message	created_time	type	link
1	177526890164	Narendra Modi	On Swachh Bharat Diwas, joined a programme to mark 3rd a...	2017-10-02T11:19:40+0000	photo	https://www.faceb
2	177526890164	Narendra Modi	Paid tributes to Mahatma Gandhi at Raj Ghat.	2017-10-02T07:05:44+0000	photo	https://www.faceb
3	177526890164	Narendra Modi	At Vijay Ghat, I paid homage to Lal Bahadur Shastri ji.	2017-10-02T05:34:11+0000	photo	https://www.faceb
4	177526890164	Narendra Modi	<U+0917><U+093E><U+0902><U+0927><U+0940> <U+...	2017-10-02T02:45:09+0000	video	https://www.faceb
5	177526890164	Narendra Modi	Birthday wishes to Rashtrapati ji. May Almighty bless him wit...	2017-10-01T07:34:32+0000	photo	https://www.faceb
6	177526890164	Narendra Modi	Joined Vijaya Dashmi celebrations in Delhi. http://nm-4.com/...	2017-09-30T14:49:42+0000	photo	https://www.faceb
7	177526890164	Narendra Modi	<U+0935><U+093F><U+091C><U+092F><U+093F><U+0	2017-09-30T01:42:45+0000	status	NA

Showing 1 to 8 of 10 entries

Figure-7 This screenshot shows latest 10 posts from the facebook page of Narendra Modi

Here, we can mention fbid in the first argument of the getPage function and the last argument of getPage() indicates n value means no of post that you want to extract from the Facebook.

Extracting comments from the facebook page

Analyzing Facebook Data Using R.R* | m | j$data

Source on Save

```
14
15  d <- getURL(url)
16  j <- fromJSON(d)
17  comments <- sapply(j$data,function(j) {list(comment=j$message)})
18  View(j$data)
19  View(comments)
20
21  #cleaning and analyzing
22
23
```

20:1 (Top Level)

Console C:/Users/Parag/Desktop/Analyzing Big Data/Analytics/

```
$comment
[1] "Congratulations sirji you deserve that...."

$comment
[1] "Congo sir"

$comment
[1] "congratulations..sirji.."

$comment
[1] "Congratulations"

$comment
[1] "Congratulations... Bhaila"

$comment
[1] "Congratulations sir..."
```

Figure-8 Retrieving comments from my fb post id 10205073210469381

IV. Conclusion

Finally, we conclude that in this era of digital data, social media analytics is trending. There is an incredible volume of info in social media data. Before one or two-decade many organization was paying to marketplace investigation companies for polling customers and conduct focus groups to get the kind of information that nowadays converted into social media analytics. We did social media analytics of

Facebook and we retrieve the list of likes of different pages by the user, we got the friend list of the user, extract the post from a specific page of Facebook, extracting comments from Facebook. Same thing we can do for Twitter and for LinkedIn. Analysis of data is essential nowadays. Source of information is also not static, the source can be in diverse arrangement. It can be in structured or organized way like spreadsheets. It can be in a semi-structured manner like XML, JSON or markup language or it can be in an unstructured manner like webpage, document or text. Analysis of varieties of data is essential.

V. Acknowledgment

We would like to thank online resources, Facebook for providing API and open source community. And all those who have helped us by fruitful discussions, technical advice and encouraging words at various stages in the successful completion of this research paper.

References

[1] From the Gartner IT Glossary: What is Big Data? [Online Resource] https://research.gartner.com/definition-whatis-big-data?resId=3002918&srcId=1-8163325102
[2] Big Data and Analytics – Wiley Publication, Seema Acharya, Subhashini Chellapan.
[3] Language R [online Resource] https://www.r-project.org/about.html
[4] Introduction to R Big Data University [online Resource] https://archive.bigdatauniversity.com/courses/introduction-to-r/
[5] Learn R https://archive.bigdatauniversity.com/learn/r-language/
[6] Using R with Databases https://cognitiveclass.ai/courses/using-r-with-databases/
[7] Introduction to R Big Data University [online Resource] https://archive.bigdatauniversity.com/courses/introduction-to-r/
[8] Social Media Analytics Using R [Online Resource] https://www.udemy.com/social-media-analytics-with-r/learn/v4/content
[9] [Online Resource] http://thinktostart.com/analyzing-facebook-with-r/
[10] Creating Word Cloud in R, Concept of text mining [Online Resource] http://www.sthda.com/english/wiki/text-mining-and-word-cloud-fundamentals-in-r-5-simple-steps-you-should-know
[11] Big Data Analytics [Online Resource] https://bigdataenthusiast.wordpress.com
[12] Analyzing Big Data in R using Apache Spark [Online Resource] https://courses.cognitiveclass.ai