R-Ladies Bucharest

Text mining with R

Aurore Paligot, Data Analyst Consultant

Tue, 20 October 2020

Mișcare globală care promovează egalitatea de șanse în comunitatea de R prin întâlniri, networking și sesiuni de lucru aplicate într-un mediu sigur și prietenos.

Logo creat de **Andra Garoi,** R-Ladies Bucharest team member (Designer)

Please read and respect our Global Code of Conduct!

Urmărește @WeAreRLadies pe twitter

Bucharest

1

Share, blog or tweet: **#Rladies #RLadiesBucharest #rstats**

Înscrie-te în directorul de membri

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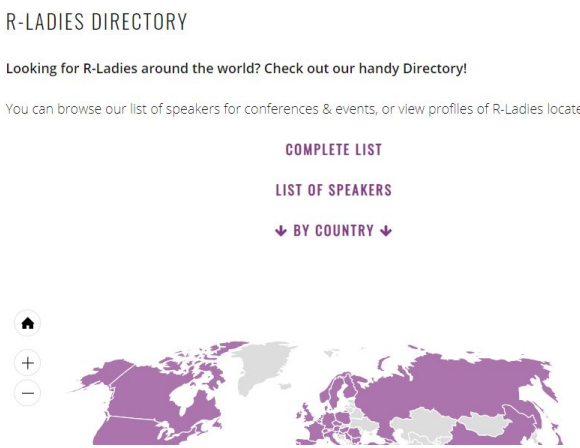
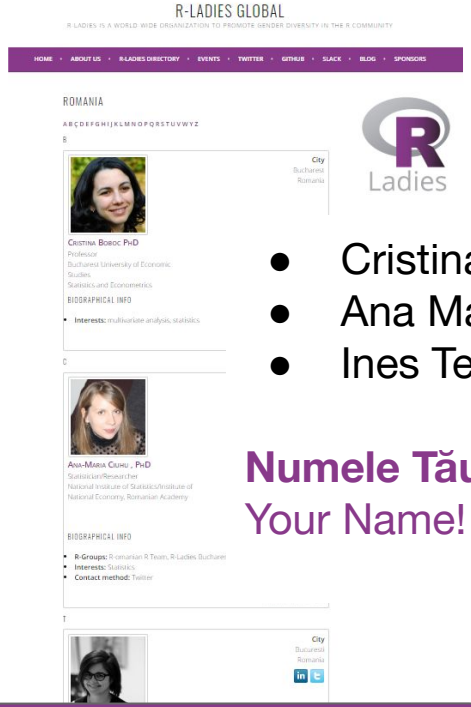
2 **Directorul R-Ladies global**: https://rladies.org/r-ladies-directory-form/





- Cristina Boboc
- Ana Maria Dobre
- Ines Teacă

Numele Tău!
Your Name! ...

Share, blog or tweet: **#Rladies #RLadiesBucharest #rstats**

Participă la discuțiile din slack

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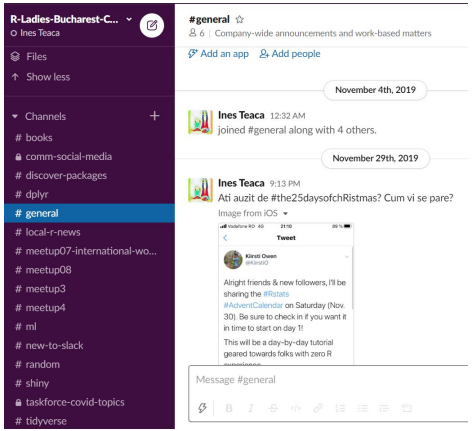
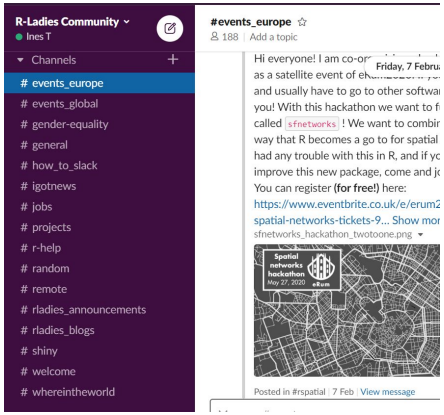
3 **R-Ladies-Bucharest-Community: http://tiny.cc/slack30days**



Global Slack Rladies-Community



Share, blog or tweet: **#Rladies #RLadiesBucharest #rstats**

4

SPREAD THE WORD!
TELL YOUR FRIENDS

agenda

- 19:15 Text mining with R, **Aurore Paligot**

Be Safe! #wear-A-mask

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Hello!

I'm Aurore Paligot and
I create stuff with data.
Visit my webpage here.

Introduction :
#Instagram The Dam project

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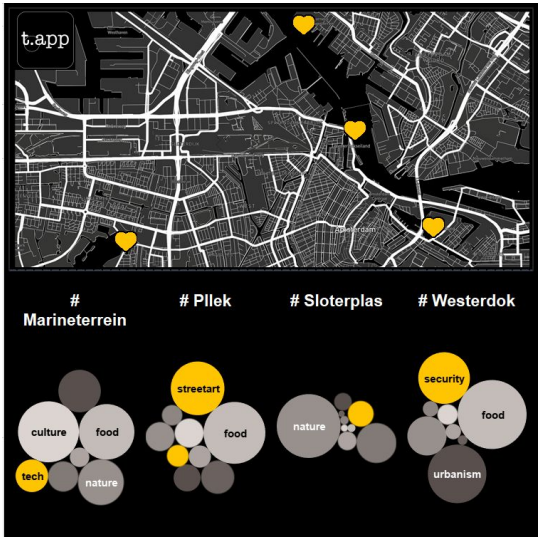

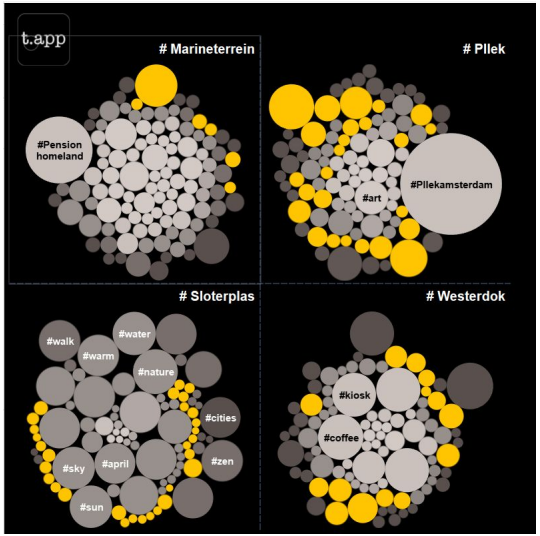

#StrongTogether: the Covid19 crisis through the lenses of Instagramers

- Currently collecting data
- Amsterdam, Brussels, Bucharest, … ?
- Observation, documentation, research
- Open for collaborations !

My Goal: take you through the research process

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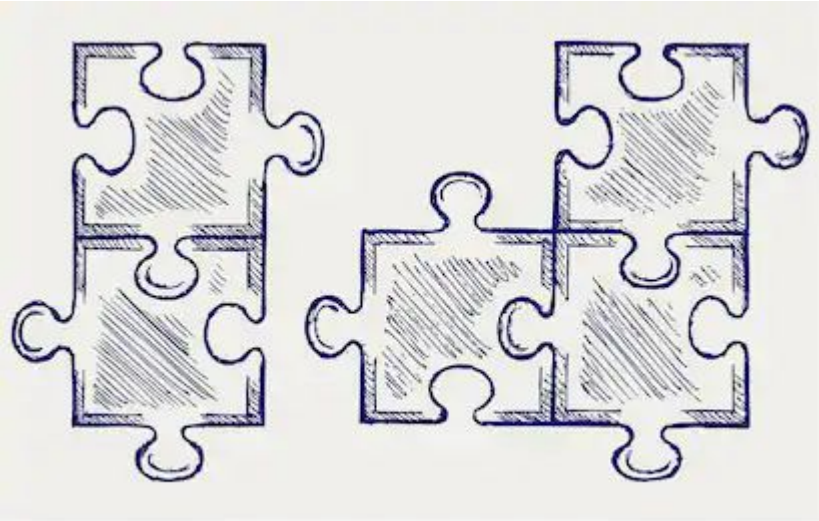


STEP 1 : Instagram Crawling

STEP 2 : Hashtags Frequency

STEP 3 : Hashtags Evolution

STEP 1 : InstaCrawleR

*"**InstaCrawlR** is a collection of R scripts that can be used to **crawl public Instagram data without the need to have access to the official API**. Its functionality is limited compared to what is possible using the official API. However, it seems to be the only option for non-developers to gather and analyze Instagram data."*

Author : InstaCrawleR de Jonas Schröder (University of Mannheim, July 2018)

1.1: jsonReader.R

Bucharest

Get InstaData using geolocalized (or any other) #hashtags

#amsterdam

#adam

#baneasa

#mokum

#lipscani

#amsterdamcentral

#bucharest

Open jsonReader.R

Choose a hashtag

```
#-------------------------------------------------------------
#Download JSON File from Instagram for a specific Hashtag
#-------------------------------------------------------------
hashtag <- "bucharest"
```

Run the Script

```

#Start the Madness
extractInfo(index)

```

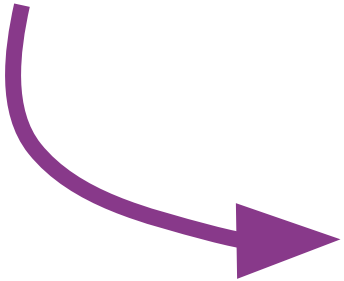
Name and save your file

```
filename <- str_glue("Bucharest.csv")
write.csv(table, filename, fileEncoding = "UTF-8")
```

1.2. Clean and anonymize data

What data do you need? For which purpose?

	A	B	C	D	E	F
		ID	Post_URL	Img_URL	Likes	Owner
1		CGjAztMplmW	http://instagram.com/p/CGjAztMplmW	https://scontent-bru2-1.cdninstagram.com/v/t51.2885-15/e35/122044617_191727872504399_4(	2	7094695825
2		CGi__0bpFb5	http://instagram.com/p/CGi__0bpFb5	https://scontent-bru2-1.cdninstagram.com/v/t51.2885-15/e35/122012113_425209508467887_5(	3	7094695825
3		CGi_m_cB_Nm	http://instagram.com/p/CGi_m_cB_Nm	https://scontent-bru2-1.cdninstagram.com/v/t51.2885-15/e35/p1080x1080/121806171_6374195	1	5651260764
4		CGi-grVnR8L	http://instagram.com/p/CGi-grVnR8L	https://scontent-bru2-1.cdninstagram.com/v/t51.2885-15/e35/s1080x1080/122019583_3419595	1	36892690096
5		CGi9cpLJr0O	http://instagram.com/p/CGi9cpLJr0O	https://scontent-bru2-1.cdninstagram.com/v/t51.2885-15/e35/121981485_843030196439769_5(	0	38027929492
6		CGi5JWIpcMW	http://instagram.com/p/CGi5JWIpcMW	https://scontent-bru2-1.cdninstagram.com/v/t51.2885-15/e35/s1080x1080/121970430_3520439	6	582727360
7		CGi4aoHBB6i	http://instagram.com/p/CGi4aoHBB6i	https://scontent-bru2-1.cdninstagram.com/v/t51.2885-15/e35/s1080x1080/122081896_1644606	21	14323258420



	A	B	C	D	E
1	X	Likes	Text	Date	
2	1	2	FondÃ© en 18	20-10-20	
3	2	3	"Thankfulness	20-10-20	
4	3	1	#smile #gym #	20-10-20	
5	4	1	#bucharest	20-10-20	
6	5	0	#tnb #nationa	20-10-20	
7	6	6	River #romani	20-10-20	
8	7	21	Teschio nell'e	20-10-20	

1.3. HashtagExtractor.R

Calculates the frequency of the #hashtags contained in the captions

Locate your file

```
18 htags <- data.frame()
19 data <- read_excel("Data/R Ladies Data/Bucharest.xlsx") #locate your data
20
```

Check the column number (text)

```
27 for(i in 1:maxrows){
28   text[i] <- as.character(data[i,2]) #the column number is hard coded
29   htemp <- str_extract_all(text[i], "#\\S+", TRUE)
```

Run the script and save your file

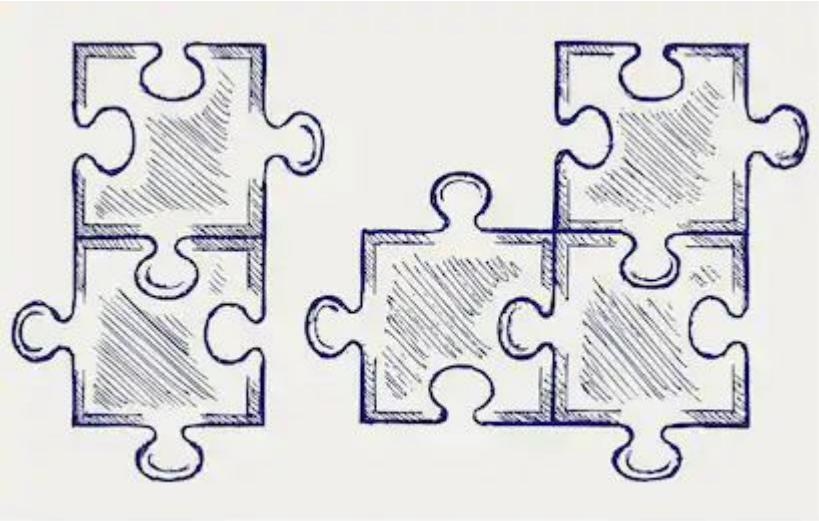
```
41
42 write.csv(df_htags, "Bucharest_corona_sort.csv") #sorted list with frequencies
43
```

Create a corona variable manually

Take your last file “Bucharest_corona_sort.csv” and identify all the hashtags that are related to the coronavirus topic

Hashtags	Frequency	Corona
#love	1918	no
#iamsterdam	1806	no
#amsterdam<U+0001F1F3><U+00	1731	no
#art	1692	no
#photooftheday	1680	no
#travelphotography	1649	no
#instagood	1498	no
#Amsterdam	1403	no
#amsterdamworld	1385	no
#europe	1368	no
#amsterdamlife	1363	no
#amsterdamcanals	1353	no
#streetphotography	1345	no
#fashion	1238	no
#travelgram	1088	no
#picoftheday	1055	no
#visitamsterdam	1041	no
#igersamsterdam	1030	no
#amsterdamview	990	no
#stayhome	970	yes
#corona	955	yes

Now that we have some data, let's explore !



STEP 1 : Instagram Crawling

STEP 2 : Hashtags Frequency

STEP 3 : Hashtags Evolution

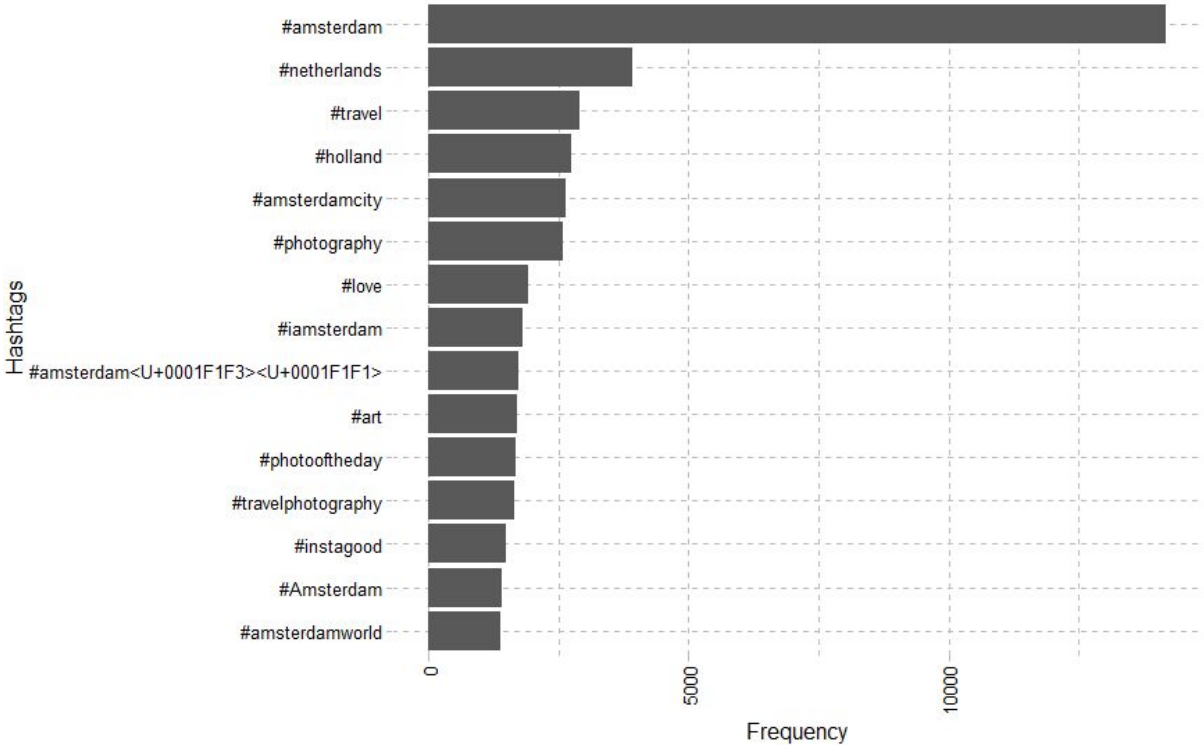
Bucharest

Explore_Amsterdam.R

Load your Frequency file and start visualizing some data

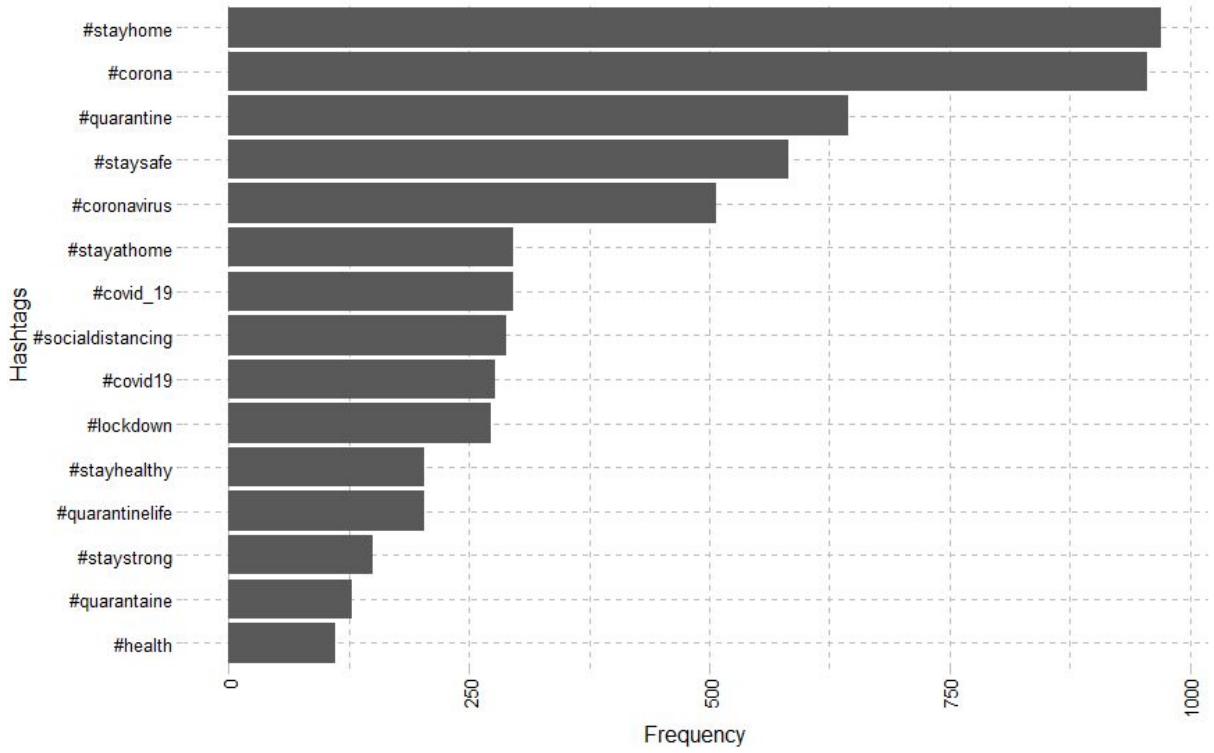
```
24 ########################## STEP 2 : Hashtags Frequency ######################
25
26 data <- read_excel("Data/R Ladies Data/Amsterdam_Frequencies.xlsx")
27
28 #1. explore & format data
29
30 summary(data)
31
```

STEP 2 : Hashtags Frequency



Top 15 Hashtags of Amsterdam

STEP 2 : Hashtags Frequency



Top 15 Hashtags with Corona

STEP 2 : Hashtags Frequency

Proportion of hashtags with a corona related topic compared to whole dataset

Data Evolution

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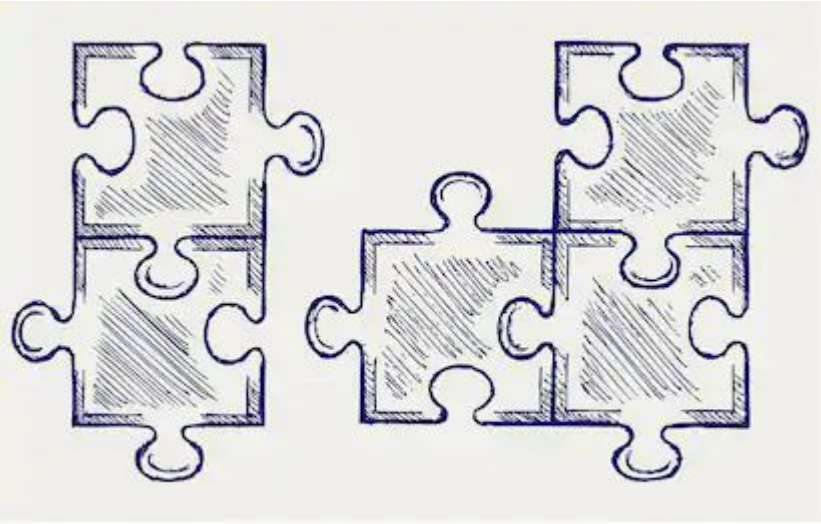


STEP 1 : Instagram Crawling

STEP 2 : Hashtags Frequency

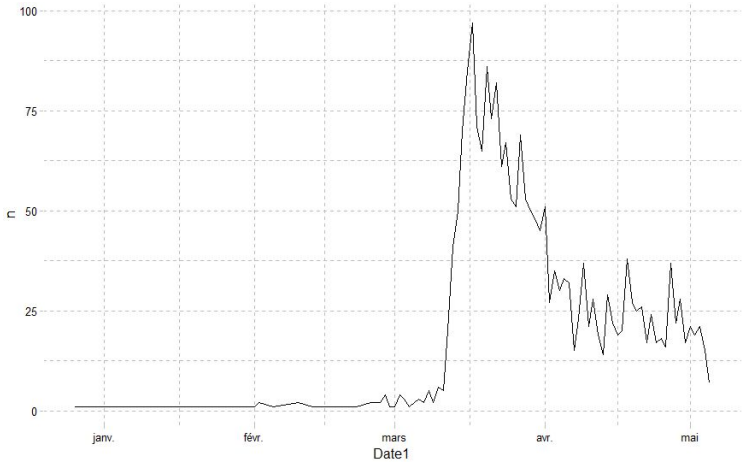
STEP 3 : Hashtags Evolution

Explore_Amsterdam.R

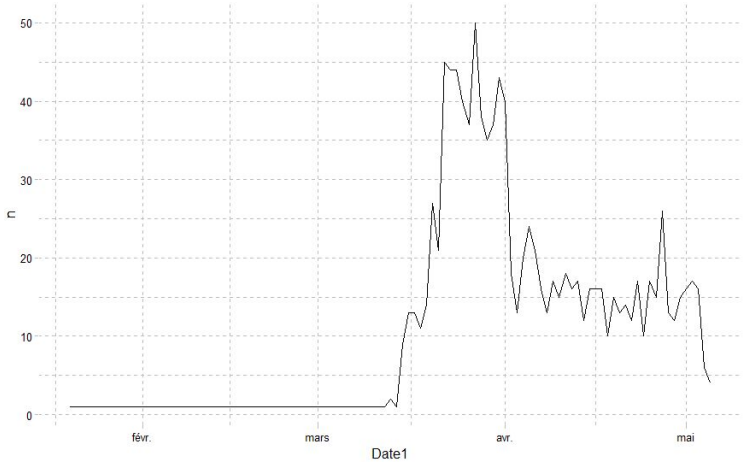
Load your anonymized file and start visualizing some data

```
79 ########################## STEP 3 : Hashtags Evolution ####################
80
81 adata <- read_excel("Data/R Ladies Data/Amsterdam_AnonymisedData.xlsx")
82
83 summary(adata)
84
85 #1. Identify captions that contain the hashtag or word corona
86
87 corona_vector <- stringr::str_detect(adata$captions, "corona")
88
```

STEP 3 : Hashtags Evolution



#corona



#stayhome

What are your project ideas?
What do you want to observe, create or analyse with text, data, and social media?

Bucharest

ending

Thank you | Multumesc | Merci