Facebook

Web Monitoring Group

# Preliminaries

Load and attach packages, as well as custom functions

suppressPackageStartupMessages(  
 invisible(  
 lapply(c("DBI", "RSQLite", "Rfacebook", "dplyr", "ggplot2", "tidyr"),  
 library,  
 character.only = TRUE)  
 )  
)

## Warning: package 'dplyr' was built under R version 3.4.3

source("fb-functions.R")

# Data collection

Fetch the Page’s Newsfeed from the local database. A summary of the available data is displayed.

## Observations: 111  
## Variables: 11  
## $ from\_id <chr> "145175075891647", "145175075891647", "14517507...  
## $ from\_name <chr> "National Environmental Standards & Regulations...  
## $ message <chr> "Happening Now. \n\nCourtesy call on the DG NES...  
## $ created\_time <chr> "2018-01-31T10:49:54+0000", "2018-01-01T11:40:4...  
## $ type <chr> "photo", "photo", "photo", "photo", "photo", "v...  
## $ link <chr> "https://www.facebook.com/NESREANigeria/photos/...  
## $ id <chr> "145175075891647\_355234958218990", "14517507589...  
## $ story <chr> NA, "National Environmental Standards & Regulat...  
## $ likes\_count <dbl> 27, 59, 10, 40, 556, 15, 13, 28, 60, 17, 231, 1...  
## $ comments\_count <dbl> 2, 5, 0, 5, 5, 0, 0, 2, 0, 3, 0, 0, 0, 1, 2, 0,...  
## $ shares\_count <dbl> 4, 19, 15, 14, 9, 2, 1, 11, 8, 4, 14, 4, 5, 9, ...

## Observations: 2,962  
## Variables: 3  
## $ from\_name <chr> "Udoka Ezeudembah", "Martin Enenwaene", "Miranda Ama...  
## $ from\_id <chr> "1472314569516878", "146500446103605", "184660826226...  
## $ post\_id <chr> "145175075891647\_324562367952916", "145175075891647\_...

## Observations: 153  
## Variables: 8  
## $ from\_id <dbl> 5.638983e-308, 3.398606e-309, 1.071436e-309, 5....  
## $ from\_name <chr> "Haruna Adokwe", "Mohammed Adamu Saleh", "Umar ...  
## $ message <chr> "Our Amiable CEO/DG", "Yes! This is my DG/CEO, ...  
## $ created\_time <chr> "2017-10-27T07:53:43+0000", "2017-10-27T09:12:1...  
## $ likes\_count <int> 1, 1, 2, 1, 1, 1, 0, 0, 2, 1, 1, 1, 1, 1, 1, 1,...  
## $ comments\_count <int> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,...  
## $ id <chr> "324562367952916\_324577607951392", "32456236795...  
## $ post\_id <chr> "145175075891647\_324562367952916", "14517507589...

Note that the function getPage() is used to collect these posts through the Facebook API/Rfacebook package. It can equally be used to harvest data from others’ public posts via the page argument.

# Data cleaning

We have a user-defined function we have called prepare\_data() that lives in the file *fb-functions* that was sourced earlier and it will help us do some data cleaning very quickly.

The function:

* takes a data frame as an argument
* checks that the column names match those of typical Facebook post data
* removes non-human readable characters from the ‘message’ variable
* changes ‘type’ from a character to a categorical variable
* converts ‘time’ into a Date-Time object (POSIX standard)
* returns the modified data frame

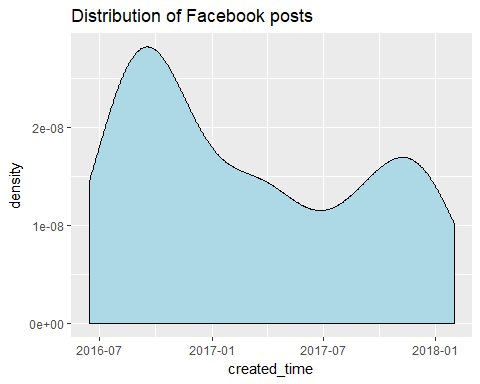
This is what the function definition looks like:

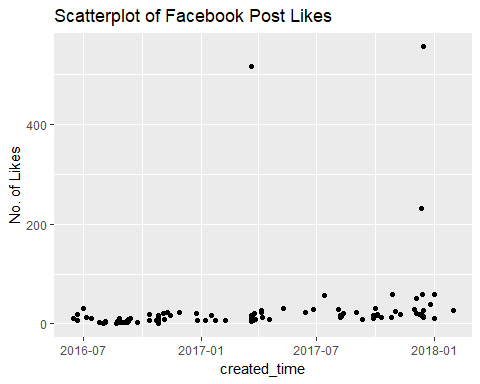
## function(df = data.frame()) {  
## cnames <-  
## c(  
## "from\_id",  
## "from\_name",  
## "message",  
## "created\_time",  
## "type",  
## "link",  
## "id",  
## "story",  
## "likes\_count",  
## "comments\_count",  
## "shares\_count"  
## )  
##   
## if (!identical(colnames(df), cnames))  
## stop("Loaded data are not compatible with this function")  
##   
## df$type <- as.factor(df$type)  
##   
## df$created\_time <- df$created\_time %>%  
## gsub("T", " ", .) %>%  
## gsub("\\+", " \\+", .) %>%  
## as.POSIXct(.)  
## df  
## }

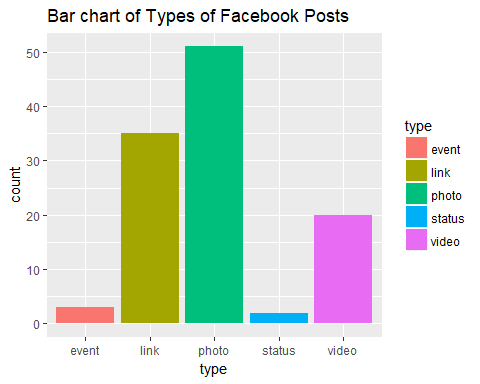
Also columns 1 and 2 are redundant for the purpose of these particular analyses and will be removed. This is how it’s done and the data now look like this

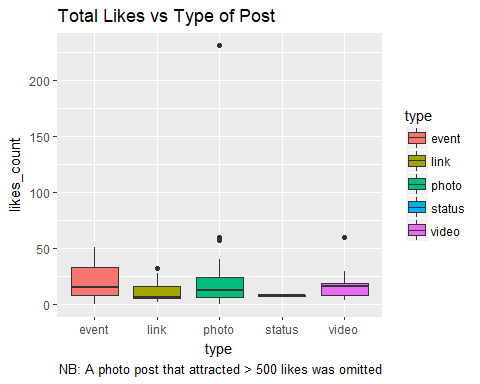
posts <- posts %>%  
 prepare\_data() %>%  
 select(message:shares\_count)  
  
glimpse(posts)

## Observations: 111  
## Variables: 9  
## $ message <chr> "Happening Now. \n\nCourtesy call on the DG NES...  
## $ created\_time <dttm> 2018-01-31 10:49:54, 2018-01-01 11:40:47, 2018...  
## $ type <fctr> photo, photo, photo, photo, photo, video, phot...  
## $ link <chr> "https://www.facebook.com/NESREANigeria/photos/...  
## $ id <chr> "145175075891647\_355234958218990", "14517507589...  
## $ story <chr> NA, "National Environmental Standards & Regulat...  
## $ likes\_count <dbl> 27, 59, 10, 40, 556, 15, 13, 28, 60, 17, 231, 1...  
## $ comments\_count <dbl> 2, 5, 0, 5, 5, 0, 0, 2, 0, 3, 0, 0, 0, 1, 2, 0,...  
## $ shares\_count <dbl> 4, 19, 15, 14, 9, 2, 1, 11, 8, 4, 14, 4, 5, 9, ...

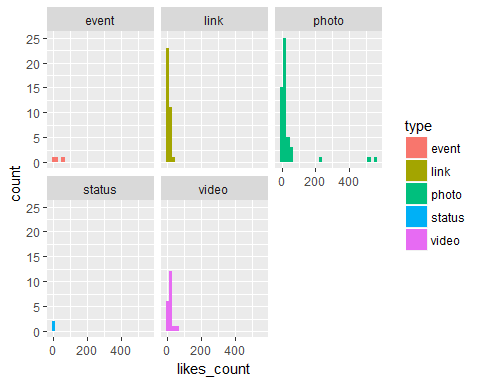


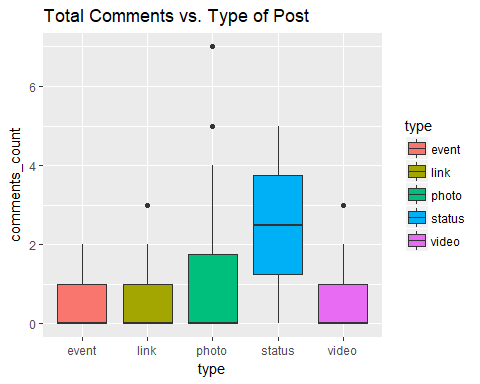




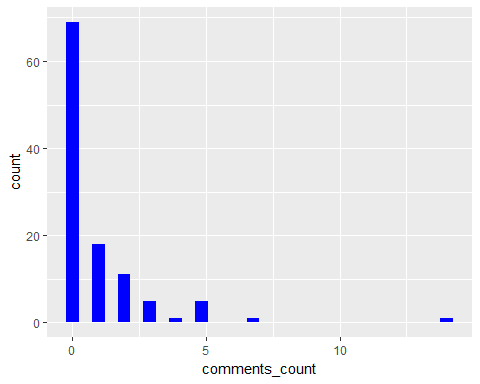


## `stat\_bin()` using `bins = 30`. Pick better value with `binwidth`.

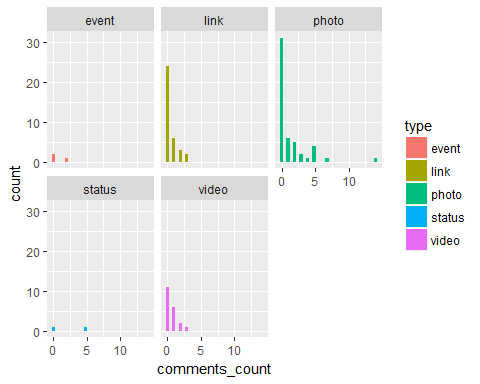




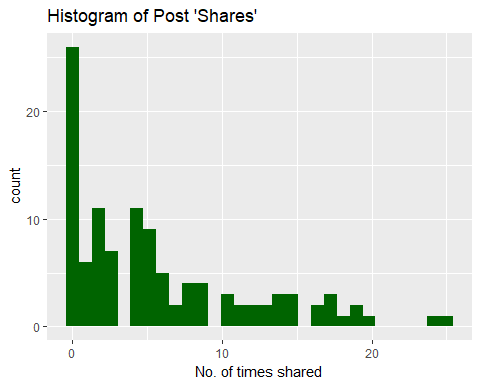
## `stat\_bin()` using `bins = 30`. Pick better value with `binwidth`.



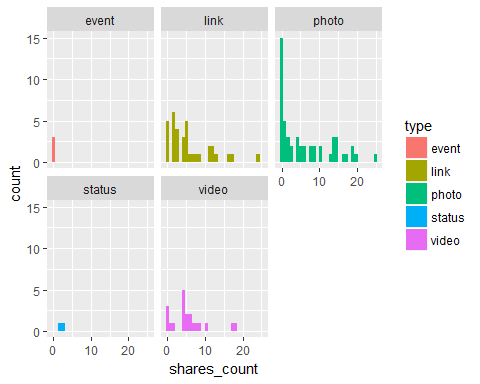
## `stat\_bin()` using `bins = 30`. Pick better value with `binwidth`.

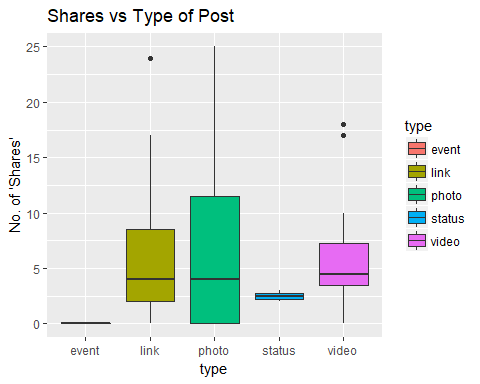


## `stat\_bin()` using `bins = 30`. Pick better value with `binwidth`.



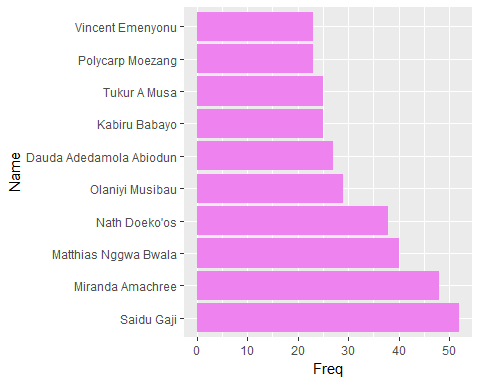
## `stat\_bin()` using `bins = 30`. Pick better value with `binwidth`.





Like details

## Name Freq  
## 1 Saidu Gaji 52  
## 2 Miranda Amachree 48  
## 3 Matthias Nggwa Bwala 40  
## 4 Nath Doeko'os 38  
## 5 Olaniyi Musibau 29  
## 6 Dauda Adedamola Abiodun 27  
## 7 Kabiru Babayo 25  
## 8 Tukur A Musa 25  
## 9 Polycarp Moezang 23  
## 10 Vincent Emenyonu 23



## # A tibble: 10 x 2  
## Name Freq  
## <fctr> <int>  
## 1 Chukwudi Nwabuisiaku 16  
## 2 Rey Bruno Igbadumhe 9  
## 3 Ola Abd'Raheem Amode 5  
## 4 Christian Nwaeseni 4  
## 5 Christopher Onotu 4  
## 6 Maiwada Omar 4  
## 7 Matthias Nggwa Bwala 4  
## 8 Theresa Iwenofu 4  
## 9 Umar Suleiman 4  
## 10 Haruna Adokwe 3

