Nike Campaign

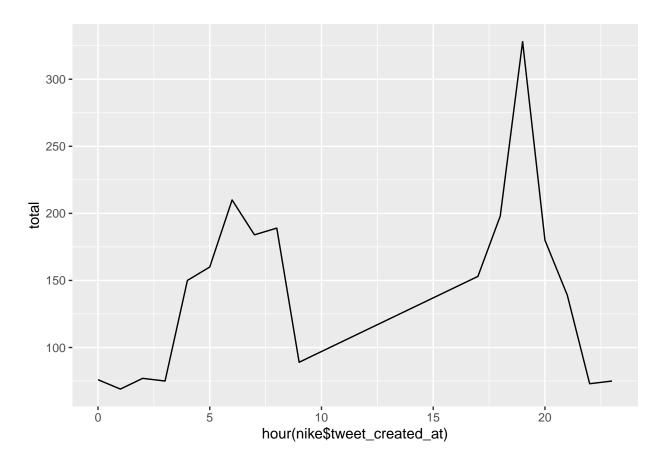
Steven Wang, Ava Zhang, Shikha Binani

3/12/21

[1] 2425 28

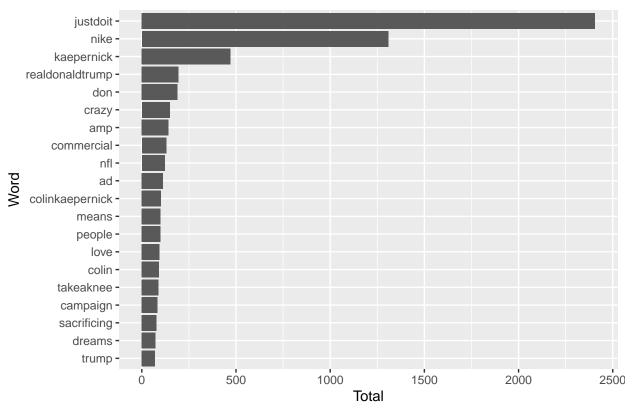
	Summary	οf	Tweets
--	---------	----	--------

=========	=========	========	=======	=====	=========	========	======	=======	=====	======
Statistic Tw	eet retweet (count User	follower	count	User Friend	Count Langua	age (1 i:	f English)	User	Verifi
N	2,425		2,425		2,425		2,42	 5		
Mean	2.58		6,791.62		3,189.81	L	0.98			
St. Dev.	22.53		64,725.28	3	8,008.78	3	0.15			
Min	0		0		0		0			
Pct1(25)	0		703		613		1			
Median	0		1,345		1,342		1			
Pct1(75)	1		3,654		2,865		1			
Max	748		2,896,006	3	129,726	3	1			



```
Rows: 2,425
Columns: 28
$ user_id
                                    <dbl> 1.040000e+18, 9.770000e+17, 9.320490~
$ user_created_at
                                    <chr> "Fri Sep 07 14:28:06 +0000 2018", "F~
$ user_name
                                    <chr> "Life, Love & Happiness", "Rawthschi~
$ user_screen_name
                                    <chr> "LifeLoveHappin3", "LordRawthschild"~
                                    <chr> "Spreading Love, Joy & Inspiration & ~
$ user_description
$ tweet created at
                                    <Period> 7H 52M 26S, 9H 20M 43S, 6H 49M 22~
                                    <chr> "[0, 48]", "[0, 280]", "[0, 72]", "[~
$ tweet_display_text_range
                                    <chr> "Just breath you can do it #JustDoIt~
$ tweet_full_text
$ tweet_favorite_count
                                    <int> 0, 1, 0, 2, 8, 0, 1, 1, 3, 2, 0, 2, ~
$ tweet_is_quote_status
                                    <int> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ~
$ tweet_possibly_sensitive
                                    <int> 0, 0, 0, NA, 0, 0, NA, NA, NA, 0, 0,~
$ tweet_retweet_count
                                    <int> 1, 1, 1, 1, 2, 1, 1, 1, 2, 1, 1, 1, ~
                                    <int> 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, ~
$ user_default_profile
$ user_default_profile_image
                                    <int> 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, ~
$ user_favourites_count
                                    <int> 0, 110, 17, 114, 2, 121, 25, 57, 116~
                                    <int> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ~
$ user_follow_request_sent
$ user_followers_count
                                    <int> 0, 2, 2, 3, 3, 5, 6, 8, 9, 9, 9, 11,~
                                    <int> 0, 3, 13, 17, 1, 107, 31, 61, 54, 53~
$ user_friends_count
$ user geo enabled
                                    <int> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ~
                                    <int> 0, 0, 0, 0, 0, 1, 0, 0, 0, 1, 1, 1, ~
$ user_has_extended_profile
$ user_is_translation_enabled
                                    <int> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ~
$ user_lang
                                    <int> 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, ~
$ user listed count
                                    <int> 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, ~
$ user_profile_use_background_image <int> 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, .
```

Most Used Word in Tweets



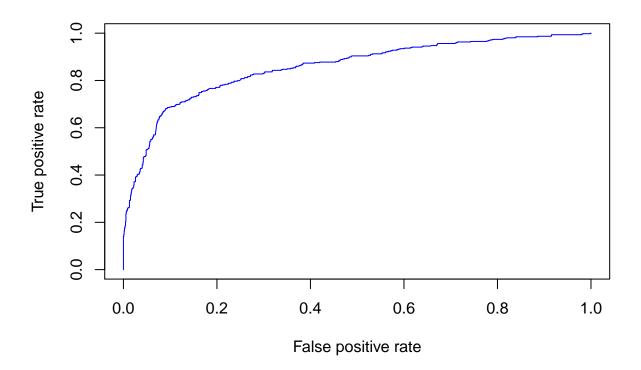
category
Negative Neutral Positive
604 559 1262

Rows: 2,425 Columns: 19 \$ retweets <dbl> 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, ~ \$ tweet_favorite_count <int> 0, 1, 0, 2, 8, 0, 1, 1, 3, 2, 0, 2, ~ \$ tweet_is_quote_status <int> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ~ \$ user_default_profile <int> 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, ~ \$ user_default_profile_image <int> 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, ~ \$ user_favourites_count <int> 0, 110, 17, 114, 2, 121, 25, 57, 116~ <int> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ~ \$ user_follow_request_sent \$ user_followers_count <int> 0, 2, 2, 3, 3, 5, 6, 8, 9, 9, 9, 11,~ \$ user_friends_count <int> 0, 3, 13, 17, 1, 107, 31, 61, 54, 53~ <int> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ~ \$ user_geo_enabled <int> 0, 0, 0, 0, 0, 1, 0, 0, 0, 1, 1, 1, ~ \$ user_has_extended_profile \$ user_is_translation_enabled <int> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ~ \$ user_lang <int> 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, ~ \$ user_listed_count <int> 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, ~

```
$ user_profile_use_background_image <int> 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
$ user_statuses_count
                                   <int> 13, 100, 192, 99, 63, 129, 35, 106, ~
                                   <int> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ~
$ user translator type
$ user_verified
                                   <int> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ~
$ sentiment
                                   <dbl> 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, ~
Call:
glm(formula = retweets ~ tweet_favorite_count + tweet_is_quote_status +
   user_default_profile + user_default_profile_image + user_favourites_count +
   user_follow_request_sent + user_followers_count + user_friends_count +
   user_geo_enabled + user_has_extended_profile + user_is_translation_enabled +
   user_lang + user_listed_count + user_profile_use_background_image +
   user_statuses_count + user_translator_type + user_verified,
   family = "binomial", data = df)
Deviance Residuals:
                 Median
                               3Q
   Min
             1Q
                                       Max
-4.5738 -0.6836 -0.5306 0.2807
                                    2.9582
Coefficients: (1 not defined because of singularities)
                                   Estimate Std. Error z value Pr(>|z|)
(Intercept)
                                 -1.493e+00 3.649e-01 -4.091 4.29e-05 ***
                                  4.217e-01 2.666e-02 15.821 < 2e-16 ***
tweet_favorite_count
tweet is quote status
                                  6.066e-02 1.455e-01
                                                       0.417 0.676695
user_default_profile
                                  6.415e-01 1.237e-01 5.184 2.17e-07 ***
                                 1.336e+01 2.580e+02 0.052 0.958696
user_default_profile_image
                                 -7.594e-06 1.989e-06 -3.817 0.000135 ***
user_favourites_count
user_follow_request_sent
                                         NA
                                                   NA
                                                           NA
                                                                    NA
user_followers_count
                                 2.180e-05 9.657e-06 2.258 0.023945 *
user friends count
                                 -4.984e-05 1.483e-05 -3.361 0.000778 ***
user_geo_enabled
                                 -4.384e-01 1.088e-01 -4.030 5.57e-05 ***
user_has_extended_profile
                                 1.268e-01 1.092e-01 1.161 0.245683
                                 -1.552e+00 1.091e+00 -1.422 0.154884
user_is_translation_enabled
user_lang
                                 1.301e-01 3.592e-01 0.362 0.717298
user_listed_count
                                 -5.930e-04 5.391e-04 -1.100 0.271270
user_profile_use_background_image -2.787e-01 1.453e-01 -1.919 0.055047 .
user_statuses_count
                                 4.720e-06 1.018e-06
                                                       4.639 3.50e-06 ***
                                 -3.750e-01 4.817e-01 -0.778 0.436289
user_translator_type
                                 -1.948e+00 5.391e-01 -3.613 0.000303 ***
user_verified
Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
(Dispersion parameter for binomial family taken to be 1)
   Null deviance: 3014.1 on 2424 degrees of freedom
Residual deviance: 2237.0 on 2408 degrees of freedom
```

Number of Fisher Scoring iterations: 12

AIC: 2271



[1] "AUC= 0.855806500814012"

Call:

```
glm(formula = retweets ~ tweet_favorite_count + user_favourites_count +
    user_followers_count + user_friends_count + user_lang + user_statuses_count +
    user_verified, family = "binomial", data = df)
```

Deviance Residuals:

```
Min 1Q Median 3Q Max -4.5842 -0.6527 -0.6003 0.2915 2.5340
```

Coefficients:

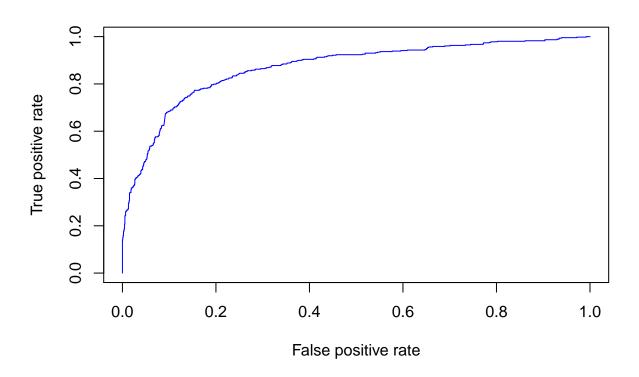
```
Estimate Std. Error z value Pr(>|z|)
                     -1.643e+00 3.491e-01
(Intercept)
                                           -4.707 2.51e-06 ***
tweet_favorite_count
                                2.639e-02 15.908 < 2e-16 ***
                      4.199e-01
user_favourites_count -5.542e-06
                                 1.902e-06
                                            -2.914 0.00356 **
user_followers_count
                      1.248e-05
                                 8.423e-06
                                             1.482
                                                    0.13829
user_friends_count
                     -4.440e-05
                                 1.433e-05
                                            -3.099
                                                    0.00194 **
user_lang
                      9.129e-02 3.510e-01
                                             0.260
                                                    0.79483
                      3.615e-06 9.397e-07
                                             3.847 0.00012 ***
user_statuses_count
user_verified
                     -2.086e+00 5.340e-01
                                           -3.906 9.40e-05 ***
Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' ' 1
```

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 3014.1 on 2424 degrees of freedom Residual deviance: 2300.3 on 2417 degrees of freedom

AIC: 2316.3

Number of Fisher Scoring iterations: 9



[1] "AUC= 0.869075210631543"

```
Call:
```

```
glm(formula = retweets ~ tweet_favorite_count + user_favourites_count +
    user_followers_count + user_friends_count + user_lang + user_statuses_count +
    user_verified + popularuser, family = "binomial", data = df)
```

Deviance Residuals:

```
Min 1Q Median 3Q Max -4.5665 -0.7011 -0.5290 0.2574 2.5425
```

Coefficients:

```
Estimate Std. Error z value Pr(>|z|)
(Intercept) -1.423e+00 3.537e-01 -4.023 5.76e-05 ***
tweet_favorite_count 4.263e-01 2.670e-02 15.962 < 2e-16 ***
user_favourites_count -4.286e-06 1.902e-06 -2.254 0.024207 *
```

```
1.701 0.089017 .
user_followers_count
                      1.478e-05 8.689e-06
user_friends_count
                      -3.934e-05 1.426e-05
                                           -2.758 0.005811 **
user_lang
                      1.538e-01 3.543e-01
                                             0.434 0.664123
                      4.605e-06 9.792e-07
                                             4.702 2.57e-06 ***
user_statuses_count
user_verified
                      -1.892e+00 5.414e-01
                                            -3.495 0.000474 ***
popularuser
                      -6.550e-01 1.137e-01
                                           -5.760 8.40e-09 ***
```

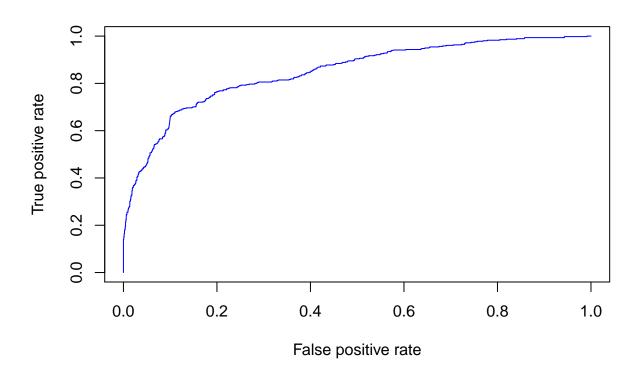
Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 3014.1 on 2424 degrees of freedom Residual deviance: 2266.7 on 2416 degrees of freedom

AIC: 2284.7

Number of Fisher Scoring iterations: 9



[1] "AUC= 0.848292234899346"

```
Call:
glm(formula = retweets ~ tweet_favorite_count + user_favourites_count +
    user_followers_count + user_friends_count + user_lang + user_statuses_count +
    user_verified + sentiment, family = "binomial", data = df)
```

Deviance Residuals:

Min 1Q Median 3Q Max -4.5856 -0.6540 -0.5997 0.2906 2.5414

Coefficients:

Estimate Std. Error z value Pr(>|z|)(Intercept) -1.663e+00 3.616e-01 -4.598 4.26e-06 *** tweet_favorite_count 4.199e-01 2.639e-02 15.908 < 2e-16 *** user_favourites_count -5.509e-06 1.908e-06 -2.887 0.003892 ** user_followers_count 1.250e-05 8.434e-06 1.482 0.138298 user_friends_count -4.441e-05 1.434e-05 -3.098 0.001950 ** user_lang 9.147e-02 3.509e-01 0.261 0.794382 3.610e-06 9.399e-07 3.841 0.000123 *** user_statuses_count user_verified -2.086e+00 5.343e-01 -3.905 9.43e-05 *** sentiment 2.495e-02 1.212e-01 0.206 0.836830

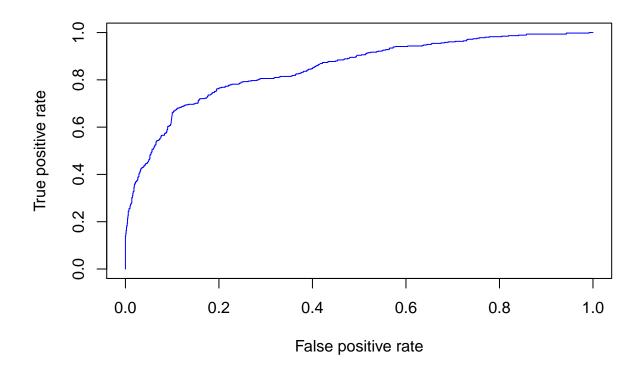
Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

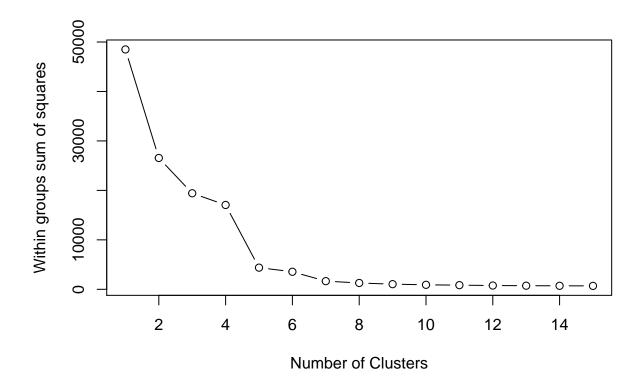
Null deviance: 3014.1 on 2424 degrees of freedom Residual deviance: 2300.2 on 2416 degrees of freedom

AIC: 2318.2

Number of Fisher Scoring iterations: 9



- [1] "AUC= 0.869246799494682"
- [1] -750.338
- [1] -753.3811
- [1] -759.5132
- [1] -753.3075



seg N 1: 1 539 2: 2 1529 3: 3 357

```
[,1]
                                              [,2]
                                                         [,3]
                              1.00000000
                                       2.0000000000
                                                   3.00000000
seg
                             -0.58029059
                                       0.1819453801
                                                   0.096868749
user_default_profile_n
user_default_profile_image_n
                             -0.03518714
                                       0.0206198033 -0.035187142
user_profile_use_background_image_n -1.44809466
                                       user_has_extended_profile_n
                              0.27514070 -0.0823356370 -0.062772129
                             user_geo_enabled_n
user_is_translation_enabled_n
                              0.03952483 -0.0233098002 0.040159108
                              user_translator_type_n
```

user favourites count n 0.34833532 -0.1685068153 0.195782030 user_followers_count_n 0.19230747 -0.0560860217 -0.050135017 user friends count n 0.50653283 -0.1612145499 -0.074297340 user_lang_n user_listed_count_n 0.34586499 -0.1070531886 -0.063688811 user statuses count n 0.55094269 -0.1920852946 -0.009130802 user verified n 0.15564767 -0.0566132466 0.007472154 tweet favorite count n 0.17302803 -0.0475547550 -0.057565508 tweet_is_quote_status_n -0.39278261 -0.4188081337 2.386743591 0.03967317 -0.0078148240 -0.026428490 $sentiment_n$ tweet_retweet_count_n 0.25005120 -0.0695193793 -0.079782820

Variables

user id: Twitter US id user created at: Time of Twitter Account creation user_name: STR user name user screen name: STR screen name user description: STR description user tweet created at: Time of tweet tweet_display_text_range: STR length tweet_full_text: STR of tweet tweet favorite count: Numbers of users who favorite the tweet tweet_is_quote_status: =1 if tweet quoted tweet_possibly_sensitive: =1 if sensitive tweet tweet retweet count: number of retweets user default profile: =1 if True user default profile image: =1 if True user favourites count: Number of times user favorites $user_follow_request_sent$: =1 if user request sentuser_followers_count: Number of followers user friends count: Number of friends user geo enabled: =1 if True user has extended profile: =1 if True $user_is_translation_enabled: =1 if True$ user lang: =1 if language is English user listed count: Number of listed user_profile_use_background_image: =1 if true user statuses count: Number of statuses $user_translator_type: =1 if True$ user verified: =1 if user verified