

Untitled

2024-12-08

```
library(dplyr)
```

```
##  
## Attaching package: 'dplyr'  
## The following objects are masked from 'package:stats':  
##  
##   filter, lag  
## The following objects are masked from 'package:base':  
##  
##   intersect, setdiff, setequal, union
```

```
library(lubridate)
```

```
##  
## Attaching package: 'lubridate'  
## The following objects are masked from 'package:base':  
##  
##   date, intersect, setdiff, union
```

```
library(stringr)
```

```
setwd("/cloud/project/SentimentalAnalysisProject")
```

```
tweets_df <- read.csv("tweetsDF.csv", stringsAsFactors = FALSE)
```

```
tweets_df$created <- as.POSIXct(tweets_df$created, format = "%Y-%m-%d %H:%M:%S", tz = "UTC")
```

```
tweets_df$Created_At_Round <- as.POSIXct(tweets_df$Created_At_Round, format = "%Y-%m-%d %H:%M:%S", tz =
```

```
extract_device <- function(source) {  
  matches <- str_match(source, ">(.*?)<")  
  ifelse(!is.na(matches[, 2]), matches[, 2], source)  
}
```

```
tweets_df$statusSource <- sapply(tweets_df$statusSource, extract_device)
```

```
tweets_df <- tweets_df %>% distinct()
```

```
tweets_df$text <- str_trim(tweets_df$text)
```

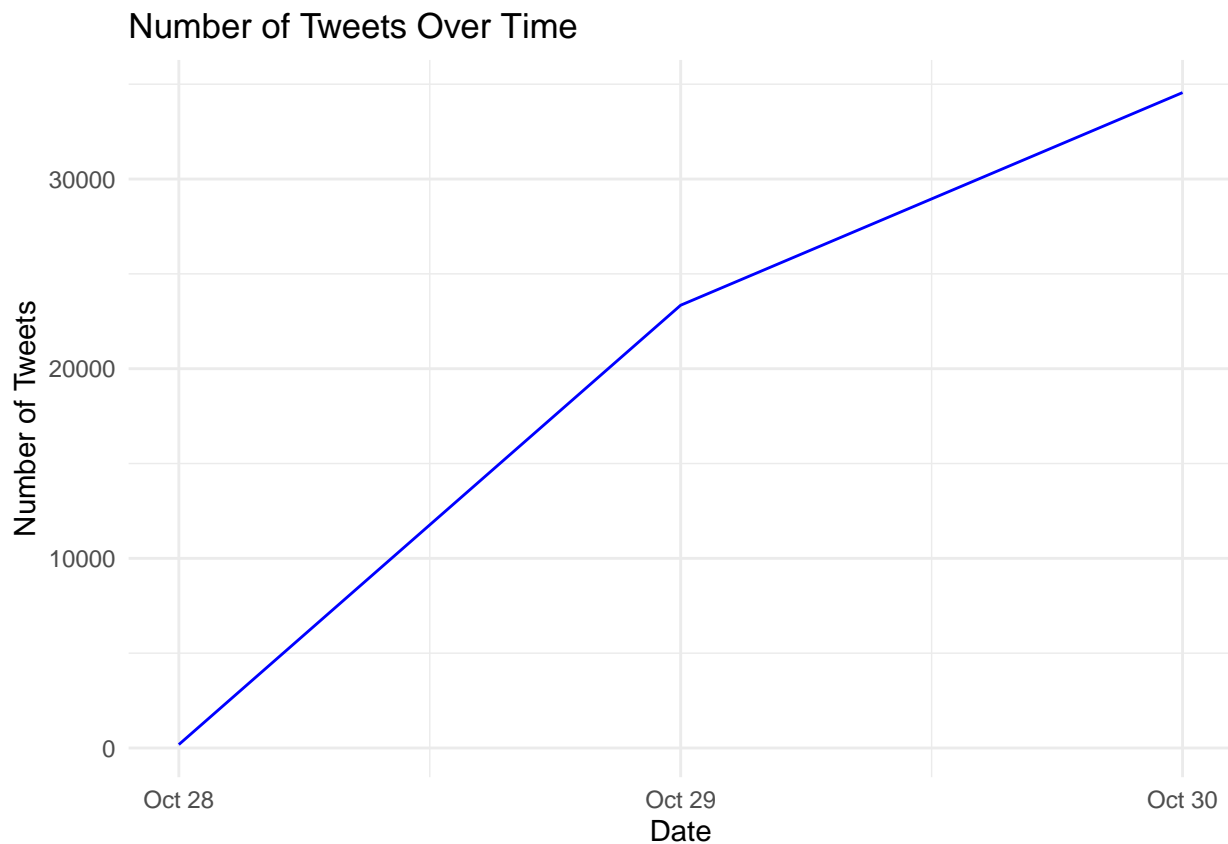
```
head(tweets_df)
```

```
##   X      screenName  
## 1 1      whourj31  
## 2 2      nnainot  
## 3 3  febry_sri_M  
## 4 4 telehuntwatch
```

```
## 5 5    Typing0824
## 6 6    niccijsmith
##
## 1      A soldier angry at the support fund consolation money for the bereaved family of the Itaewon
## 2                                             Nah this Itaewon
## 3
## 4 TRANSLATION : Seoul residents lay flowers at a makeshift memorial near the site of the crush in Itaewon
## 5 The Itaewon stampede incident really caught me off guard. Makes me notice how important it is to live
## 6 "What to do about my child? What to do about my child?" Park Ga-young's mother, Choi Seon-mi, said
##      created      statusSource Created_At_Round tweetSource
## 1 2022-10-30 23:59:43      FS_Poster_App      2022-10-31      others
## 2 2022-10-30 23:59:32 Twitter for Android      2022-10-31      android
## 3 2022-10-30 23:59:31 Twitter for Android      2022-10-31      android
## 4 2022-10-30 23:59:28      telehunt      2022-10-31      others
## 5 2022-10-30 23:59:20 Twitter for Android      2022-10-31      android
## 6 2022-10-30 23:59:04 Twitter for iPhone      2022-10-31      iphone
```

```
tweets_trend <- tweets_df %>%
  mutate(date = as.Date(created)) %>%
  group_by(date) %>%
  summarise(tweet_count = n())
```

```
library(ggplot2)
ggplot(tweets_trend, aes(x = date, y = tweet_count)) +
  geom_line(color = "blue") +
  labs(title = "Number of Tweets Over Time", x = "Date", y = "Number of Tweets") +
  theme_minimal()
```

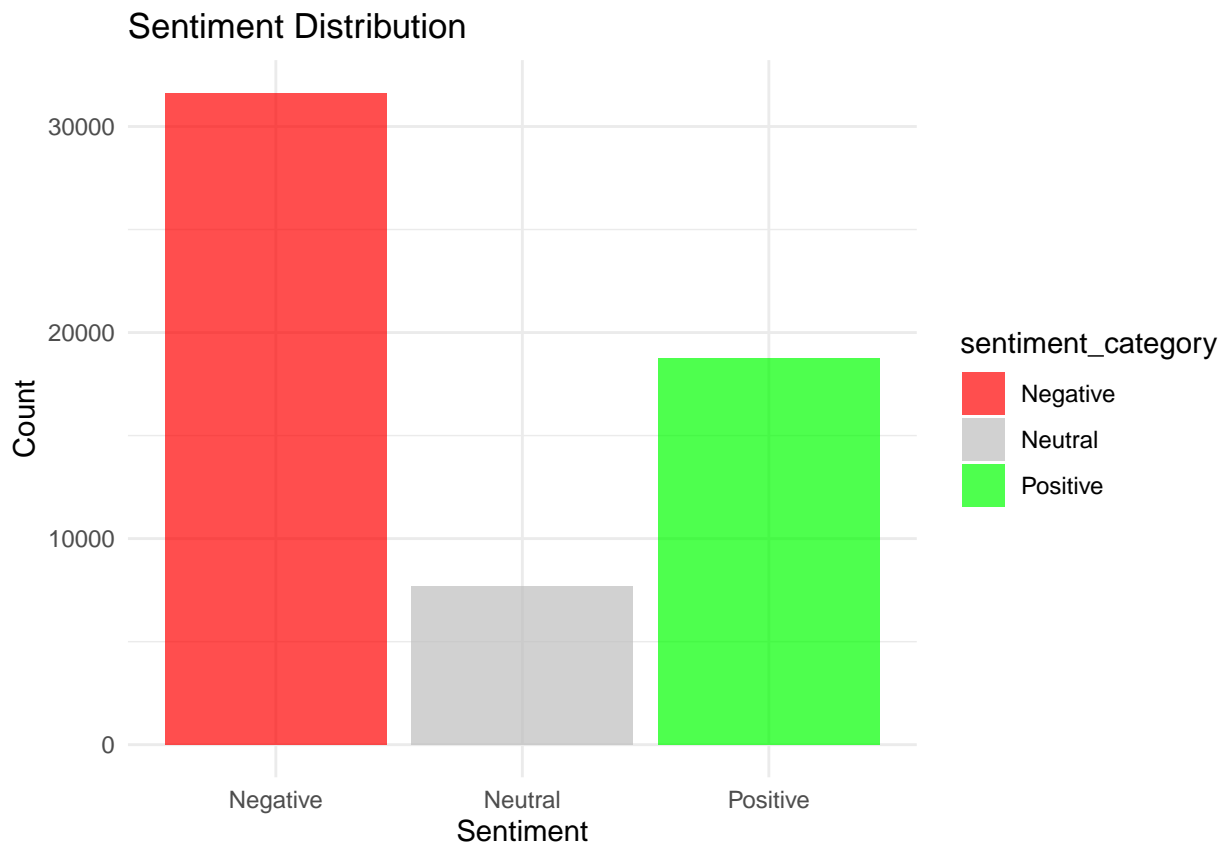


```
library(syuzhet)
tweets_df$sentiment <- get_sentiment(tweets_df$text)

# Classify sentiment into categories
tweets_df$sentiment_category <- ifelse(tweets_df$sentiment > 0, "Positive",
                                       ifelse(tweets_df$sentiment < 0, "Negative", "Neutral"))

sentiment_distribution <- tweets_df %>%
  group_by(sentiment_category) %>%
  summarise(count = n())

ggplot(sentiment_distribution, aes(x = sentiment_category, y = count, fill = sentiment_category)) +
  geom_bar(stat = "identity", alpha = 0.7) +
  labs(title = "Sentiment Distribution", x = "Sentiment", y = "Count") +
  theme_minimal() +
  scale_fill_manual(values = c("Positive" = "green", "Negative" = "red", "Neutral" = "gray"))
```



Trend Analysis -The volume of tweets over time increased that might indicate that a trend happened, it increased over time in an upward trend that reveals that topics still interests the users. This can also mean that maybe the brand of iphone and androids release new models of their phones that got the trend to go upward over time as it accumulates tweets talking and discussing about their latest models.

Sentiment Analysis -The overall sentiment distribution expresses strong negative emotional tones. It has brand monitoring that tracks how users feel about a product or event. The negative sentiments may give insights for the areas that needs concern or attention while the positive may give insights for monitoring customer satisfaction.

Use Case -We can use case as a sentiment analysis using social media for monitoring smartphone brands. Using the tweets coming from the users we may understand the sentiment of the public towards a certain

event, products, things. We can determine the sentiment of the users by analyzing their tweets and then determining whether they are positive, negative, or neutral. Providing this we can monitor the reactions of the users or customers whether they are satisfied or dissatisfied to such events or products.

Graph Insights: -The first graph gives insights for the trend that may have happened as the tweets go upward and increases in volume as days passes, this can give us an idea that maybe some things or events happened that cause so many to tweets and increase over time

-The second graph gives us the comparison of people who may be in favor or dissatisfied with the product or event that happened, and in this case most users tweet negatively and that gives a insight that a certain event or product made most of the user dissatisfied.