Analysis of Popularity Sentiment in Opinion Presidential Election 2019 on Twitter

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Abstract. Presidential Election (Pilpres) 2019 which has been passed on 17 April 2019 which is being widely discussed in cyberspace, electronics and social media, one of them is on Twitter. Before the voting, there were many opinions and opinions about the 2019 presidential candidates who had their respective advantages, one that could be relied on in terms of popularity. Social media is one place for an effective and efficient campaign but raises many good, positive and negative opinions. In this study, it is expected to be able to see opinions in the community that contain positive and negative sentiments.

Keywords: sentiment analysis, presidential election, popular, twitter.

1 Introduction

The 2019 Presidential Election has been passed but for the winner of the 2019 Election results have not been announced by the KPU. If based on the Quick Count of 5 survey institutions, the average result of winning Jokowi - Maruf is 54% and Prabowo - Sandi is 45% [1], on the KPU website, the results for the Jokowi - Maruf are 54.89% and Prabowo - Passwords are 45.11% [2] but they have not been based on calculations and the official announcement of the 2019 Election from the KPU because the time in official calculations is at most 35 days [3]. If you look back before the nomination of the 2019 Presidential Election the names of candidates have been discussed in the real world and the virtual world.

The development of social media is so rapid from Facebook, Twitter, Path, Instagram, Twitter and others [4]. Social media is not only used for friendship but other activities such as trade promos to campaigns. Twitter is a communication tool that is still popular among internet users, even though it is recognized that it is still under Facebook and Instragram [4]. However, there are still many Twitter users who use it, there are 126 million users per day during the fourth quarter [5].

Twitter users in the campaigns before and after the 2019 Presidential nomination became a widely used event. Many hashtags are scattered on Twitter from "2019TetapJokowi", "2019GantiPresident", "2019PrabowoPresiden", "2019TetapJKW" and etc [6]. But from all that there is one side also campaigned on Twitter from this Presidential Election, namely in terms of popularity and religious support [7]. Actually the issue of religion has been used for a long time, especially in the 2017 DKI Jakarta Regional Election, moreover it is so thick in blasphemy in the leadership style [9]. In the 2019 Presidential Election, religious issues are still used [10], so the term Black Campaign in the world of social media is unstoppable. In fact, the religious issue in the 2019 Election is arguably the most severe during the elections that have been rolled out [11].

Sentiment analysis is an analysis that identifies users like likes, dislikes, comments and opinions which are then categorized into positive responses, neutral or neutral [12]. In this

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study looking at sentiment analysis in seeing opinions to the 2019 Presidential Candidates which then the categories are divided into positive, neutral or negative. Thus, it can analyze sentiment as a method of predicting the victory of President 2019 in terms of popularity in terms of person.

2 Related Research

Text mining is still a part of data mining [13] even though there are fundamental differences between the two methods, namely structured and unstructured data [14]. Text mining is also one that provides solutions in the organization, organization and grouping and analysis of large amounts of unstructured data, text mining activities are also included in sentiment analysis [15] [16] [17].

Research related to sentiment analysis using Natural Language Processing [15] [16], Naive Bayes [17] [18] [19] [20] and Support Vector Machine [15] [18] with these three methods analyzing public opinion and dividing positive and negative.

3 Proposed Method

In getting a tweet in analyzing the sentiment analysis, then first create an account on the Twitter API that is linked to a Twitter account and the API authentication process is done using the Python language [21]. The Twitter App is used to collect tweets from Jokowi, Probowo and Religion from opinions based on the literature relating to the 2019 Presidential Election. In taking tweets, the Twitter API accepts parameters and provides Twitter account data instead. Retrieving data Tweets are stored in a database that has follow like twitter_id, hashtag, tweet, retweet. From all of that, tweet data is collected, then analyzed and synchronized in positive or negative ways.

The process of retrieving API data that has been collected and stored in a database.

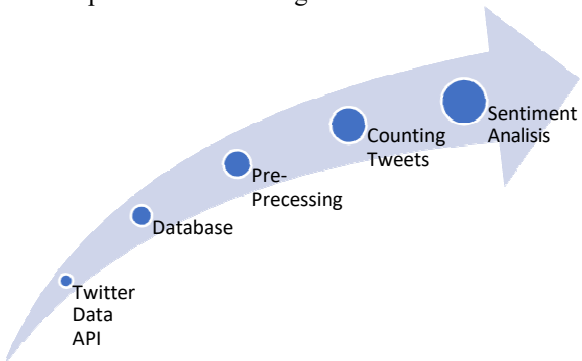

Fig.1. Process in Tweet Sentiment Analysis

Table 1. Hastag Used in Sentiment Analysis

Hashtag		
#Pemilu2019	#Pilpres2019	#IndonesiaMemilih

For sentiment analysis, using as many as 500 tweets, which means taking the existing Top 500 tweets. In seeing the results of sentiment analysis by defining the formula below:

if (all_polarity/500 > 0): print(all_polarity/500) print("") print("Positive")
else:
print(all_polarity/500) print("") print("Negative")

With the print function, there are 2 results polarity is used to see how positive and negative a text and subjectivity are to see the value of a tweet whether as an opinion or as a fact. If the higher subjectivity means that the tweet can be considered as an opinion while the higher the polarity, the more positive the tweet is. An algorithm for viewing sentiment analysis using Python is shown below :

```
import tweepy
from textblob import TextBlob
consumer_key= "4VehWDCXayD00b8vgcZvylroq"
consumer_secret="JVaiLnyXgr9i1IIy6JCjx9xptTxAzJZzaXh8Y4W8BYUWUbh88T"
access_token="187778257-osbPoaGv48SbxNLXIxJr545Q2kAwYcFgNoOEp0qp"
access_token_secret= "AqdmEkLLDhGLZ5p2AluihT1HXljXf0zYKYEukv0NOV1Fx" auth =
tweepy.OAuthHandler(consumer_key, consumer_secret) auth.set_access_token(access_token,
access_token_secret)
api = tweepy.API(auth)
public_tweets = api.search(q=["Prabowo", "Pemilu2019"], count=1500) all_polarity = 0
for tweet in public_tweets: print(tweet.text)
analysis = TextBlob(tweet.text)
an = analysis.translate(from_lang='id', to='en') print(an.sentiment)
all_polarity += an.polarity print("")
if (all_polarity/1500 > 0 ): print(all_polarity/1500) print("") print("Positive")
else:
print(all_polarity/1500) print("") print("Negative")
```

4 Discussion

Using 500 tweets with the Jokowi, Popular and hashtag keywords in table 1, use the search

API below:

Table 2. Search for Tweets in Python

Keyword			
Jokowi	#Pilpres2019	Prabowo	#Pilpres2019
Jokowi	#Pemilu2019	Prabowo	#Pemilu2019
Jokowi	#IndonesiaMemilih	Prabowo	#IndonesiaMemilih
Jokowi	#Noblackcampain	Prabowo	#Noblackcampain
Jokowi	#Indonesiabisa	Prabowo	#Indonesiabisa
Jokowi	#NKRI	Prabowo	#NKRI

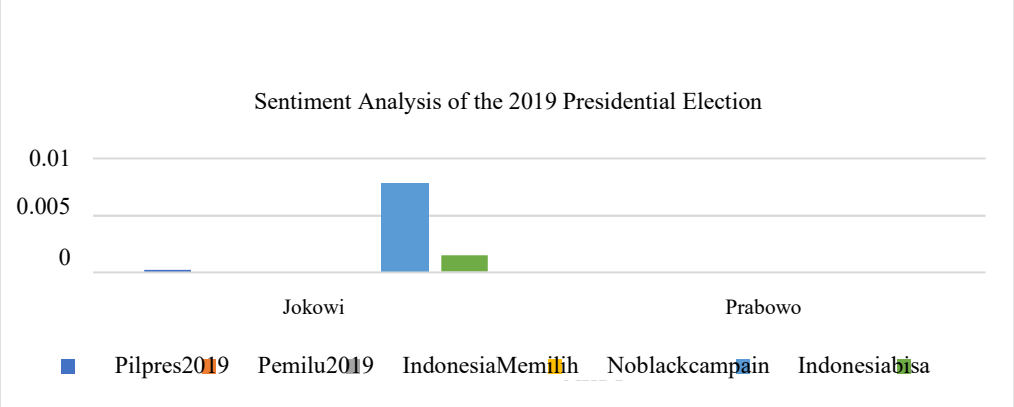

Fig.2. Grafic in Sentiment Analysis

Table 3. To See The Calculation of Tweet Data

Jokowi	#Pilpres2019	0.00025	Prabowo	#Pilpres2019	0
Jokowi	#Pemilu2019	0	Prabowo	#Pemilu2019	0
Jokowi	#IndonesiaMemilih	0	Prabowo	#IndonesiaMemilih	0
Jokowi	#Noblackcampain	0	Prabowo	#Noblackcampain	0
Jokowi	#Indonesiabisa	0.007817	Prabowo	#Indonesiabisa	0
Jokowi	#NKRI	0.00159	Prabowo	#NKRI	0

If we see that it is true that the popularity shown in Jokowi is seen in the #Indonesiabisa and #NKRI literature, both the value and response are quite good.

References

[1] Ghttps://nasional.kompas.com/read/2019/04/18/18495211/infografik-ini-hasil-quick- count-pilpres-2019-versi-5-lembaga.

[2] https://pemilu2019.kpu.go.id/#/ppwp/hitung-suara/.

[3] Pasal 413 ayat (1) Undang-Undang Nomor 17 Tahun 2017.

[4] https://www.statista.com/statistics/272014/global-social-networks-ranked-by- number-of-users/

[5] https://tekno.kompas.com/read/2019/02/09/11340027/untuk-pertama-kali-twitter-ungkap-jumlah-pengguna-harian

[6] https://news.detik.com/kolom/d-3997657/selamat-datang-perang-hashtag

[7] https://news.okezone.com/read/2018/12/07/605/1988295/isu-agama-berpotensi- dimainkan-untuk-kepentingan-politik-pilpres-2019.

[8] https://tirto.id/kuatnya-sentimen-agama-di-pilgub-jakarta-ciZn

[9] Marcus Mietzner, https://pilkada.tempo.co/read/868728/penyebab-ahok-kalah-versi- dua-peneliti-australia/full&view=ok

[10] https://news.okezone.com/read/2018/12/07/605/1988295/isu-agama-berpotensi- dimainkan-untuk-kepentingan-politik-pilpres-2019

[11] https://www.republika.co.id/berita/nasional/umum/19/01/01/pknbjn396-gorengan- isu-agama-di-pemilu-2019-paling-parah

[12] Pang, Bo and Lee, Lillian. Opinion mining and sentiment analysis. World Journal of Gastroenterology. 2016

[13] Hearst, M. A. (1997) Text data mining: Issues, techniques, and the relationship to information access. Presentation notes for UW/MS workshop on data mining, July 1997

[14] J. H. Kroeze, M. C. Matthee, and T. J. D. Bothma, "Differentiating Data- and Text- Mining Terminology," Proc. 2003 Annu. Res. Conf. South African Inst. Comput. Sci. Inf. Technol. Enablement through Technol., vol. 6, no. December, pp. 93–101, 2003.

[15] W. Budiharto and M. Meiliana, "Prediction and analysis of Indonesia Presidential election from Twitter using sentiment analysis," J. Big Data, vol. 5, no. 1, pp. 1–10, 2018.

[16] M. Z. Sarwani and W. F. Mahmudy, "Analisis Twitter Untuk Mengetahui Karakter," Semin. Nas. Sist. Inf. Indones., no. November, pp. 2–3, 2015.

[17] G. A. Buntoro, “Analisis Sentimen Calon Gubernur DKI Jakarta 2017 Di Twitter,” Integer J. Maret, vol. 1, no. 1, pp. 32–41, 2017.
[18] R. Sadida, M. R. Azkia, B. P. Candra, N. Rezeki, and M. O. C. Rendy, “Perancangan Sistem Analisis Sentimen Masyarakat Pada Sosial Media Dan Portal Berita,” Semnasteknomedia Online, vol. 5, no. 1, pp. 3–7, 2017.
[19] I. Sunni and D. H. Widyantoro, “Analisis Sentimen dan Ekstraksi Topik Penentu Sentimen pada Opini Terhadap Tokoh Publik,” Tugas Akhir, vol. 1, no. 2, pp. 200– 206, 2012.
[20] F. Nurhuda, S. Widya Sihwi, and A. Doewes, “Analisis Sentimen Masyarakat terhadap Calon Presiden Indonesia 2014 berdasarkan Opini dari Twitter Menggunakan Metode Naive Bayes Classifier,” J. Teknol. Inf. ITSmart, vol. 2, no. 2, p. 35, 2016.
[21] https://medium.com/@ahtuz/twitter-sentiment-analysis-bahasa-indonesia-dengan- textblob-f34e1ffdcdaa