

## Analysis of Twitter User Responses to the Aqua Billboards Series #DiRumahAJa

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### ABSTRACT

Advertising is a marketing communication to promote or sell a product with several purposes and characteristics. There are two characteristics of it, commercial and non-commercial advertising, such as public service advertisement. Public service advertisement aims to inform a message of public importance. A mineral water company, AQUA, has made a public service advertisement about Covid-19. AQUA use billboard as the media to inform message to the public. This billboard has been a hot topic on social media, especially on Twitter. The aftermath of this billboard is incredible. Users on Twitter do interact with this billboard picture. This research aims to analyze users' sentiment about this billboard. The author uses a descriptive qualitative method in this research. The author collects the data from Twitter directly, taking a screenshot of each user's response to the billboard picture. The author collects all responses and categorizes the responses into positive, negative, and neutral. The author uses a programming language, Python, to obtain a graphic for research needs, and the result is analyzed with Sentiment Analysis theory. The result shows that positive responses are more significant with 73.2%.

### Keywords:

*Advertisement*

*Twitter*

*Sentiment Analysis*



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### INTRODUCTION

Advertising is a medium of communication from producers to consumers. Based on the purpose, advertisements are divided into three, namely informative advertisements, persuasive advertisements, and reminder advertisements. Based on its nature, advertising is divided into two, namely, commercial advertising and non-commercial advertising. Commercial advertisements aim to sell products or services offered by the company, while non-commercial advertisements are soft-selling, meaning that the company does not directly sell its products or services (Kriyantono, 2013). One example of non-commercial advertising is public service advertising. Public service advertisements invite the public for the common good, and one example is advertisements regarding Covid-19.

Since its appearance in Indonesia in early 2020, Covid-19 has attracted much attention from all Indonesian people. Covid-19 is an infectious disease caused by acute respiratory syndrome. The virus's rapid spread has forced the government to make various efforts, from lockdown to social distancing. All activities are carried out online to prevent the spread of Covid-19. According to Kasatriyanto, Wibowo, & Nasir (2021), in their research, he said that Covid-19 also made us very dependent on existing technology. The existing technology makes it easier for anyone to reach their audience, whether entertainment, education, or others. Government agencies routinely appeal to the community, but several companies also show concern for the community by urging people to stay at home and minimize activities outside the home. AQUA is one company that appeals to and shows its concern for the community. Furthermore, here is a photo of AQUA's billboard regarding the Covid-19 advertisement.



Fig 1. Billboard AQUA Series #DiRumahAja Source: twitter.com/txtfrombrand

Through the billboards displayed on Jl. TB Simatupang, South Jakarta, AQUA urges the entire community to take care of themselves by staying at home. The AQUA billboard is an example of a non-commercial outdoor advertisement. Billboard AQUA above had become a conversation on one of the social media platforms, namely Twitter, after a user uploaded it to his page. Various responses appeared related to the photo of the billboard above, which, of course, attracted the attention of researchers to be the object of research.

Twitter is one of the social media extensively used in this digital world. The report says that Twitter uses up to 12GB of data daily. It is specialized to accommodate users to express their opinions on general topics, businesses, government, and analysis of specific subjects and people (Chintalapudi et al., 2021).

Sentiment analysis is an analytical method used to analyze personal information (Liu, 2012). Sentiment analysis has several analytical methods, machine and manual, and in this study, the researcher used manual annotation as an analytical method (Atteveldt, Velden, & Boukes, 2021). Several researchers have carried out research using the sentiment analysis method, one of which is a study by Ikasari, Fajarwati, & Widiastuti (2020) about the sentiments of Twitter users regarding the uploads of the Jakarta MRT. The positive and negative results of the research can be used as reference material by the public to choose and view reviews about MRT Jakarta

Different responses made by users regarding the billboards above will be analyzed using media ecology theory and sentiment analysis methods. Of course, not all Twitter users' responses to AQUA's billboards are positive. There are also harmful and neutral responses. Positive, Negative, and Neutral are the most common classification in sentiment analysis (Liu & Liu, 2021). The relationship between media ecology theory and sentiment analysis is that the media used by a person can create perceptions and thought patterns and produce actions at something, which are not always favorable because humans have different criteria and mindsets (McLuhan, 2013). Ratana (2018) stated that the respondents spent approximately 6.6 hours on social media. Even we will find it difficult to escape from the media today. The number of messages and information that we can receive from each media used will later shape the mindset to the decision to act on something. It follows the first assumption of the media ecology theory that humans cannot escape from the media (West & Turner, 2017). McLuhan has three assumptions about ecology theory; first, the media covers every societal action. Second, media improves the audience's perceptions and organize their experiences, and the third is that media unite the world (Batubara, 2014). These three assumptions are the current conditions where the media, especially Twitter, have become a tool to influence people's assumptions and experiences, uniting a world that is so large and simultaneously encompassing all activities in society. One example is the interaction on Twitter in response to the Aqua billboard. This interaction then generated many comments that were not always the same. These different comments then become sentiments towards the object at hand. Differences in comments in response to an image need to be dug deeper to determine the author's intent. Sentiment classification will be seen from comments in Twitter user statements, whether in positive, negative, or neutral statements (Li et al., 2022).

Until now, sentiment analysis approaches have been widely used, which can easily be divided into document, sentence, and aspect analysis levels. Jiang et.al, (2021) [13]. Based on some of the results of previous research, this research aims to identify and analyze Twitter users' responses to the Aqua billboard series #DiRumahAja based on comments made. Comments from Twitter users are categorized as positive, negative, or neutral. The aim is to find out how the sentiments of Twitter users towards the Aqua billboard series #DiRumahAja as a form of preventing the spread of Covid-19. Also, what the Twitter user most uses sentiment after seeing this billboard and conclude what sentiment to this billboard.

## METHOD

This research uses descriptive qualitative research. Qualitative research is descriptive and uses an inductive approach to analyze (Leavy, 2017). The object of this research is Twitter users who interact directly with uploads related to the #DiRumahAja series of AQUA billboard photos. This study obtained the data source from Twitter in screenshots of users interacting with AQUA's billboard photos. The Sentiment classification that uses in this research is sentence level. The sentence is subjective; it classifies it in positive or negative opinions (D'andrea et al., 2015). Users interact by responding to comments and retweets in the comment column. The data obtained by the researcher is categorized into three categories; positive, negative, and neutral. The data analysis technique is carried out using sentiment analysis theory as an analytical method. Python programming language is used in addition to getting the graphs needed by researchers for research needs.

After observing and collecting data, the researcher found that the total replies received by uploaders related to AQUA billboards were 218 replies and 477 quotes-retweets. The following are some of the data obtained by researchers related to research on Twitter user responses. This initial data found that the Aqua billboard series #DiRumahAja contains much sentiment from Twitter users, so it is necessary to analyze what sentiments are. It is possible to get the community's initial response about the pandemic and stay at home. The data displayed is data that has been transferred to Microsoft Excel. The data displayed may not match the total amount of data submitted because the user's reply or response will not be seen if the user locks their account.

1	Username	Respon
2	fara_novanda	Yang bikin konsep ini layak diacungi jempol
3	intaniane	S3 marketing + copywriter
4	simanusiasilver	Maunya apasi Logo BK, tulisan MCD, twit aqua :"[ Oh bentak kesatuan pancasila ya \my/
5	Usuyceong	ntap!
6	Mplik98	Aquanjeng
7	baedjank	Tahan tahan jangan emosi
8	lockedavvay	Salute
9	savagerius	give the one who came up with this idea a damn raise @sehatAQUA
10	Marsahonday6	Marketingnya bagus nih
11	tarooaca	(emoji tepuk tangan)
12	alvarinea	Wah mantep tim marketingnya hahaa
13	eylysian	so cool!
14	kanibaleri	serah u y
15	Ddiduk	Keren
16	cahwadan_	Keren lah
17	gmkudo_	Copy nya kreatif
18	vegagusta	Bajilak
19	chillweel	Konyol Cuma bener juga lop aqua
20	dcafrina	Keren nih copy writernya hahahahahahaha sama kayak kasus n** greentea kemaren
21	legalancar	aqua... ding ding ding diiiiing... ding ding
22	chipsndcola	(emoji tepuk tangan)
23	Orangdonk	Gw fokus ke Ciptadent. Ga turun <sup>2</sup> sampe hitam putih
24	gilangnabela	S3 Harvard Balihology
25	andra_frz	All of my honour is your's
26	sarahavina	tolong org kreatifnya dinaikin gajinya
27	itsmeadyth	S3 marketing
28	soyunavesalvaje	Dan pemasangan reklame itu mengumpulkan orang, membuatnya tidak #dirumahaja. Tiada yang memikirkan ini
29	knowfake17	Boleh bolehhh
30	itsuchay	YATERUS NGAPA DIPAMPANG GITU ANJIRIT
31	adndesty	Mntf!
32	MCholidi89	Salut (emoji tepuk tangan)
33	gybrium	Mau #tetapdirumah asal dibayarin Netflix ama sembako
34	putrinovsr	Aku harus bnyak belajar sama orang marketingnya Aqua nih

Fig 2. User Response Screenshot

Furthermore, here are some screenshots of the original response that researchers got from Twitter.

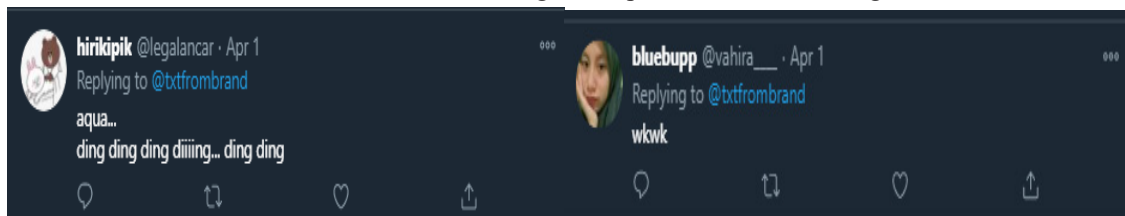




Fig 3. User Response Screenshot on Twitter

## RESULTS AND DISCUSSION

The classification process is done by entering all usernames and responses in the form of comments into Microsoft Excel. The first column is the column for the username, the second column is the response, and the third column is the rate. The addition of a rate is needed to facilitate the classification process in the Python programming language because if we do not use a rate, the system will find it difficult to read and classify which tweets are positive, negative, and neutral.

Numbers in the rate column are determined manually by the researcher with the provisions of (1) as a positive response, (2) as a negative response, and (0) as a neutral response, and there are no special provisions for the numbers used in the rate column. The classification of positive, negative, and neutral responses must have been adjusted to the context and observed one by one for each response. Manual classification carried out by researchers must have gone through various processes, including increasing accuracy, understanding context, and discussing with experts in this field.

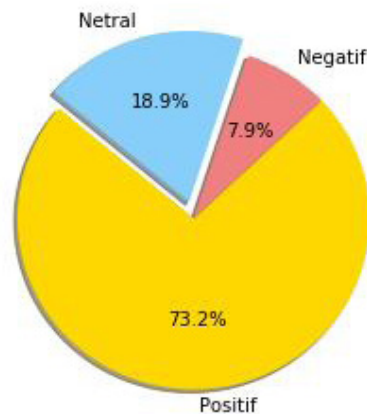


Fig 4. Percentage of User Response Category

After the researchers got the results in graphs obtained from the Python programming language, the next step was to analyze the percentage of responses using sentiment analysis theory.

### 1. Positive Response Sentiment Analysis

As many as 73.2% of Twitter users who interact directly with AQUA's billboard uploads responded positively. Researchers categorize some responses into positive responses, not without reason. One of the reasons is that users who respond with positive responses can capture the message that AQUA wants to convey to the community through billboards.



Fig 5. S screenshot of Twitter’s User

The picture above is an example of a response that researchers categorize as a positive response. The comment “Brilliant” made by the account @buruhkamera on AQUA’s billboard upload is a positive response because brilliant is included in words of praise. Suppose we position ourselves in a direct conversation. Someone presenting his work then gets a sharp response from his colleague; maybe the owner will feel happy because one or two people can understand the ideas poured out in his work. It is the same with the user’s response who conveyed his praise to AQUA for the billboard. It also indicates that the user can understand what the AQUA company wants to convey to the public through billboards.

A person can give many other words of appreciation to a work he sees. Such as “S3 Marketing” and “Copywriting.” S3 is the highest level in education, which indicates that someone who sits on the S3 bench means that they already have enough knowledge and, of course, have far more experience. Copywriting is a promotion in the form of writing. Copywriting aims to introduce the products owned by the company to the public. In this case, the AQUA company introduces its products to the public through billboards.

241	tuandapanbeias	Win the game. Kerent	1
242	novafit	Impressive	1
243	zulfan	Applause	1
244	aminoye_lamase	inlaid it. aqua!	1
245	ibrahim_z	hebat kamu aqua	1
246	ibputera	(Y)	1
247	dolar_sit_smet	Marketing printer check...	1
248	arongj	Cakep banget emang (mantan) kantor...	1
249	tufrombrand	Halo @/ sahatAQUA nih udsh di boost, tolong bagi saham	1
250	_chowellsgeurnae	Deep...	1
251	ocandow_	Goals aqua	1
252	mfqdevento	gor: this is literally brand flexing their money	1
253	masyoab	well played (emoji tepuk tangan)	1
254	alfianricky	S3 Marketing & Advertising Harvard	1
255	romardess	This ain't cheap bro	1
256	freakarod	Cyooocok MKV auto A	1
257	utakutik	Brilliant ad!! (emoji tepuk tangan)	1
258	masdimeum	Good guy Aqua	1
259	muhammadgaffari	bu... lersenyum melihat desain ini	1
260	muhaazif	This copywriting! Well done Aqua	1
261	ndkt_n	Tagging @/ putsart @/ aylai	0

Fig 6. Screenshot of Positive Responses

The image above is a screenshot of the positive responses. From the collection of responses above, there are many words of praise given by Twitter users to the upload of AQUA billboards. The sympathy and support given by Twitter users to AQUA’s billboards are also categorized as positive responses.

A user @thatranselboy “Salute to the big brands who dare to rent billboards even though they know it will not be crowded but still protect them.” The researcher can conclude users can see AQUA’s message through billboards, namely social messages. The AQUA company is famous for its social activities to protect the community. It is enough to prove that the social message in the form of an appeal given by the AQUA company so that people stay at home during the pandemic is well conveyed to the public.

## 2. Negative Response Sentiment Analysis

7.9% of users who interacted directly with uploads related to AQUA billboards gave negative responses. Like positive responses, negative responses have also gone through a manual category analysis process that researchers have carried out. At the time of categorization, the negative response was rated (2) by the researcher. The use of language and the choice of words in some of these negative responses are sufficient. To illustrate why the researcher categorizes the responses below as negative responses.

269	Mpik98	Aquanjeng		2
270	pipaaww	Gw selalu liat billboard ini tiap otw kantor :)		2
271	mrfkyrv	Sa aez yeee Yahudi		2
272	dimaspnn	terus dibuat billboard buat apa ker wkwk		2
273	vegagusta	Bajilak		2
274	itsuchay	YATERUS NGAPA DIPAMPANG GITU ANJIRIT		2
275	nastyge_	Mubazir, bikin banner mahal2 tapi supaya ga di liat orang, untung naroh billboardnya ga di pelosok ujung benua sekalian		2
276	fakboicikajang	Ya ngapain dibikin		2
277				

Fig 7. Screenshot of Negative Responses

Negative responses are indeed the fewest responses encountered by researchers. It can be seen that several users gave a similar response, namely, “why were these billboards installed?”. Users who responded with these comments included @dimaspnn, @itsuchay, @nastyge\_, and (@fakboicikajang). The category of the responses above is harmful because the user cannot capture the message content that AQUA wants to convey through billboards. In addition, the language used by some users to respond to the upload of AQUA billboards was considered not good by the researchers. One example is the response from the user @Mpik98. He wrote “AQUAnjeng” in the comment column. The word also has nothing to do with what is being discussed. Therefore, the researcher categorizes the responses of some of these users into the category of negative responses. A person’s meaning of something can indeed be different, depending on each individual’s environment, mindset, and emotional management.

### 3. Neutral Response Sentiment Analysis

The neutral response from Twitter users to upload AQUA billboards can be said to be quite a lot. Neutral here means that the response given is neither positive nor negative. If in a direct conversation, then a neutral response is a mediating response, or it can be pretty confusing. Neutral responses in direct conversation are a nod, a laugh, or just a smile. A d below are some collections of neutral responses from Twitter users who interacted directly with AQUA’s billboard uploads.

derianutama	Gimana? Gimana?	0
kanibaleri	serah u y	0
Diiem7	Daerah mana nih?	0
_boedjank	Tahan tahan jangan emosi	0
legalancar	aqua... ding ding ding diiiiing... ding ding	0
Orangdonk	Gw fokus ke Ciptadent. Ga turun <sup>2</sup> sampe hitam putih	0
Nhilass	:D	0
inskina	HHAHA	0

Fig 8. Screenshot of Neutral Responses

A neutral response is an intermediate response or unclear direction. Neither positive nor negative. As one of the responses given by the user @\_boedjank, he wrote, “Hold on, do not be emotional.” When positioning themselves in direct conversation, the researcher felt confused by the answer. Because researchers do not know the true feelings and thoughts. The researcher did not categorize the response into a negative response because the language used was quite good and looked calm, but the researcher could not categorize the response into a positive response because there were no words of praise, appreciation, or support given to users uploading billboards AQUA.

Another response from @Nhilass is also included in the neutral response category because the user only wrote “:D.” A colon and a capital D are laughing emoticons. The laugh response that is not followed by a complimentary word or sentence will undoubtedly make some parties confused in interpreting it, including the researcher himself. And when positioning themselves in direct conversation, if the researcher is presenting an idea in work and then only gets a response in the form of laughter, the researcher will be confused, whether the research partner agrees or does not agree with the idea that the researcher made. The user @Inskina also gave a similar response in the comment column.

Intonation rises and falls when the researcher positions himself in a direct conversation also makes the researcher categorize some responses into a neutral response. Things like this do happen sometimes. Some people sometimes get annoyed without knowing what they are talking about. Then after some time, they realize that it is not wrong.

## CONCLUSION

One of the great opportunities in the use of digital media today is to share thoughts, ideas and comments with users (Sutherland & Jarrahi, 2018). Sentiment analysis on social media, especially Twitter, can reference public perception in understanding something. This research concludes that the positive response value is more significant than 73.2%, with a negative value of 7.9% and a neutral value of 18.9%. It indicates that the message that the AQUA company wants to convey to the public through billboards is well conveyed. The perception and interpretation of each individual are undoubtedly different. It can be influenced by the environment and the mindset of each user. Most of Twitter’s user agrees that stay at home is an excellent way to prevent the spread of Covid-19.

**REFERENCES**

- [1] Atteveldt, W. Van., Velden, M. A. C. G. van der and Boukes, M. (2021). "The Validity of Sentiment Analysis: Comparing Manual Annotation, Crowd-Coding, Dictionary Approaches, and Machine Learning Algorithms," *Commun. Methods Meas.*, 15(2), pp. 121–140, 2021, DOI: 10.1080/19312458.2020.1869198.
- [2] Batubara, Abdul Karim. (2014). "Media Ecology Theory," *J. Iqra'*, vol. 08, no. 02, pp. 133–146
- [3] Chintalapudi, N., Battineni, G., Di Canio, M., Sagaro, G. G. and Amenta, F. (2021). "Text Mining With Sentiment Analysis On Seafarers' Medical Documents," *Int. J. Inf. Manag. Data Insights*, 1(1), p. 100005, 2021, DOI: 10.1016/j.jjime.2020.100005.
- [4] D'Andrea, A. Ferri, F., Grifoni, P. and Guzzo, T. (2015). "Approaches, Tools, and Applications for Sentiment Analysis Implementation," *Int. J. Comput. Appl.*, 125(3), pp. 26–33, DOI: 10.5120/ijca2015905866.
- [5] Ikasari, D., Fajarwati, Y., and Widiastuti. (2020) "Analisis Sentimen Dan Klasifikasi Tweets Berbahasa Indonesia Terhadap Transportasi Umum Mrt Jakarta Menggunakan Naïve Bayes Classifier," *J. Ilm. Inform. Komput.*, 25(1), pp. 64–75, 2020, doi: 10.35760/ik.2020.v25i1.2427.
- [6] Jiang, Q., Chan, C. S., Eichelberger, S. Ma, H. and Pikkemaat, B. (2021). "Sentiment analysis of online destination image of Hong Kong held by mainland Chinese tourists," *Curr. Issues Tour.*, 24(17), pp. 2501–2522 DOI: 10.1080/13683500.2021.1874312.
- [7] Kasatriyanto, B., Wibowo, A. A., and Mat Nashir, R. B. (2021). "Video Podcast As Alternative Education Media of Borobudur Temple Campaign During Pandemic Covid-19," *Int. J. Commun. S c.*, 3(2), pp. 130–139, [Online]. Available: <http://pubs2.ascee.org/index.php/IJCSIJCS@ascee.org>
- [8] Kriyantono, R. (2013). *Manajemen Periklanan: Teori dan Praktik*. Malang: Universitas Brawijaya Press
- [9] Leavy, P. (2017). "Research Design: Quantitative, Qualitative, Mixed Methods, Arts-Based, and Community-Based Participatory Research Approaches," vol. 91, pp. 1–320, DOI: 10.1017/CBO9781107415324.004.
- [10] Li, H., Chen, Q., Zhong, Z., Gong, R., and Han, G. (2022). "E-Word Of Mouth Sentiment Analysis For User Behavior Studies," *Inf. Process. Manag.*, vol. 59, no. 1, p. 102784, 2022, DOI: 10.1016/j.ipm.2021.102784.
- [11] Liu, S., and Liu, J. (2021). "Public Attitudes Toward COVID-19 Vaccines On English-Language Twitter: A Sentiment Analysis," *Vaccine*, 39(39), pp. 5499–5505, 2021, DOI: 10.1016/j.vaccine.2021.08.058.
- [12] Liu, B. (2012). *Sentiment Analysis and Opinion Mining*. Toronto: Morgan & Claypool
- [13] McLuhan, M. (2013). *Understanding Media: the extensions of man*, 3rd ed. California: Gingko Press, doi: 10.1017/CBO9781107415324.004.
- [14] Ratana, M. (2018). "The Effect of Social Media Marketing on Brand Equity (Photo Crowdsourcing Program from)," *J. Stud. Komun. Dan Media*, vol. 22, no. 1, pp. 13–28, 2018, DOI: <http://dx.doi.org/10.31445/jskm.2018.220102>.
- [15] Sutherland, W., and Jarrahi, M. H. (2018). "The Sharing Economy And Digital Platforms: A Review And Research Agenda," *Int. J. Inf. Manage.*, 43. February, pp. 328–341, 2018, DOI: 10.1016/j.ijinfomgt.2018.07.004.
- [16] West, R., and Turner, L. H. (2017). *Introducing Communication Theory Analysis And Application*, 6th ed. New York: McGraw-Hill

