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Top Brand Award Ranking Analysis Using Social Network Analysis on Coffee Shops on Twitter Social Media

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Abstract

The coffee shop business is one of the very busy businesses. A number of coffee shop brands in Indonesia have begun to emerge. One of the fastest growing fast food coffee chains in Indonesia is Kopi Kenangan. Top Brand is conducting a poll in 2023 to determine the preferred level of consumption for local coffee. According to the findings of the Top Brand Award 2023 survey, Kenangan coffee with a value of 39.70% occupies the first position in the online and offline food and beverage category, while Janji Jiwa coffee is in second place with a value of 39.50%. Janji Jiwa Coffee is one of the fast-growing franchise companies in Indonesia. This study uses the Social Network Analysis (SNA) method to find out which coffee shop brands have higher activity by comparing network properties on Twitter social media. The source of this research data was obtained from the results of crawling data on Twitter social media with the keywords "Kopi Kenangan" and "Kopi Janji Jiwa" for 2 months from November 1, 2023 – December 30, 2023 using Python, with the results of Kenangan copies of 1605 tweets, and Janji Jiwa copies of 1653 tweets. Then text preprocessing is done using Python. Furthermore, visualization was carried out for both coffee shop brands using Python consisting of top word, wordcloud top word, top actor poster, and top mentioned account. After that, making a network pattern graph model using the Gephi application with the Yifan Hu Proportional layout. Followed by an analysis of the network property values of the two brands to be compared. The comparison of the value obtained between the two coffee shop brands, namely the Janji Jiwa coffee shop, excels in 3 network property values such as size, avg. degree, and modularity. While the Kenangan coffee shop is only superior to 1 network property value, namely avg. path length. Other network property values, namely network density and diameter of Kenangan coffee shop and Janji Jiwa coffee shop have the same value. The results of the ranking analysis get different results from brand ranking using the Top Brand Award, namely Janji Jiwa coffee shop ranked 1st and Kenangan coffee shop ranked 2nd. While in the Top Brand Award, Kenangan coffee shop ranked 1st and Janji Jiwa coffee shop ranked 2nd.

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1. Introduction

Given how advanced the business sector is today, public relations in it needs to continue to innovate in order to stay competitive. The coffee shop business is one of the businesses that is very busy and involves many people. Coffee is a type of drink with a distinctive aroma that is not owned by other beverage ingredients. Coffee is enjoyed by most people in different parts of the world and from various walks of life. This encourages entrepreneurs to come up with new ways to attract public attention through coffee drinks (Chayadi *et al*., 2021).

Robusta and arabica are two of the most famous types of coffee from Indonesia. One type of coffee that has longer beans and lighter colors is called arabica coffee. This type of coffee can be grown at altitudes between 1000 and 2100 meters above sea level. While robusta coffee can grow in the lowlands (Adhi & Yunus, 2022).

In this millennial era, coffee shops are everywhere. The emergence of coffee shops featuring interesting concepts complemented by a distinctive selection of drinks has led to a growing preference among young people (Sudarman, 2023). There are more and more coffee shops for all circles where people can relax and spend time with friends, co-workers, or other acquaintances (Selvi & Ningrum, 2020). Producing high-quality beverage products is a challenge for coffee shop owners. Since customers play an important role in the growth of a food and beverage business, the main goal of a coffee shop is to satisfy them. Quality products have a significant impact on client loyalty in addition to consumer satisfaction (Nugroho *et al.,* 2020).

A number of coffee shop brands in Indonesia have begun to emerge. One of the coffee shops that helped build the growth of the coffee shop industry in Indonesia is the Kenangan Coffee shop which already has hundreds of outlets in Indonesia (Prasiyuda *et al.* 2020). One of the fastest growing fast food coffee chains in Indonesia (Kopi Kenangan, 2023). Top Brand is conducting a poll in 2023 to determine the preferred level of consumption for local coffee. According to the findings of the Top Brand Award 2023 survey, kenangan coffee with a value of 39.70% occupies the first place in the online and offline food and beverage category, while Janji Jiwa coffee is in second place with a value of 39.50% (Top Brand, 2023). Janji Jiwa Coffee is one of the fast-growing franchise companies in Indonesia. The founder's goals and objectives for all products have an unforgettable impression and experience for consumers, according to their slogan "Coffee from the Heart" (Kopi Janji Jiwa, 2023).

The development of information and communication technology in the era of globalization is increasingly rapid. Technology has become an inseparable thing in human life. Internet and social media users are getting higher today also has an impact on marketing trends. Digital marketing trends are considered to make it easier for businesses to develop their marketing communication strategies (Madan & Rosca, 2022). Digital marketing is a marketing activity that begins by exploring, engaging, and discussing the market between the interaction of producers, market brokers, and consumers using horizontal media that encompasses many technologies and practices included in the category of internet marketing (Barat *et al.,* 2022).

As one of the most widely used social media, Twitter produces a considerable amount of data every day. Users use it to comment on the products and services of a company. Twitter is a personal social media that can be used as a potential promotional channel to bring buyers, so companies need to conduct in-depth analysis related to social media. One method that can be used is to conduct a top brand analysis using network properties in Social Network Analysis (SNA) (Bratawisnu *et al*., 2018).

This study uses the Social Network Analysis (SNA) method to find out which coffee shop brands have higher activity by comparing network properties on Twitter social media. The characteristics of social networks that need to be researched and compared are size, modularity, diameter, average degree, and average path (Li *et al.,* 2021). Size indicates the size of the social network, the number of actors interacting and then the number of interactions formed (Azer & Ranaweera, 2020). Modularity indicates the group formed regarding conversations on social media. The diameter shows the distance between the actors who interact, if the closer it is the better because the relationship between actors who talk about the brand is better. Average degree describes the average relationship on a social network. Average path length indicates the average number of user accounts a given user must pass through to interact (Bratawisnu *et al*., 2018).

Researchers decided to research based on the Top Brand Award the most popular coffee shops by using #kopikenangan for the Kenangan Coffee brand and #kopijanjijiwa for Janji Jiwa Coffee in 2023 using Twitter social media with the title "Top Brand Award Ranking Analysis Using Social Network Analysis on Coffee Shops on Twitter Social Media".

2. Method

The object of this research was carried out through social media Twitter which focused on tweets. This study uses a quantitative approach, where this study takes data using a variable measured by numbers and analyzed with applicable statistical procedures. Quantitative research methods are based on the philosophy of positivism, which is a method used to examine a particular population or sample (Park *et al.,* 2020). The samples taken are usually carried out randomly and the data collected using research instruments, data analysis is quantitative/statistical with the aim of testing the hypotheses that have been set (Sugiyono, 2017).

The source of this research data was obtained from tweets through Twitter social media that had the keywords "Kopi Kenangan" and "Kopi Janji Jiwa" for 2 months using the Python programming application.

The steps used to achieve the objectives of this study are as follows:

1. Data Collection
    - Crawling data through Twitter social media is based on the concept of User Generated Content (UGC) taken from tweets that have the keywords "Kopi Kenangan" and "Kopi Janji Jiwa" for 2 months using the Python programming application.

- The data obtained from crawling in CSV form is then carried out a text preprocessing process with the aim of preparing the text so that it can be used as the next stage of management using Python programming applications.

2. Data Analysis
   - Visualization of top word graphics, wordcloud, top actor charts, top mentioned charts for Kenangan coffee shop brands and Janji Jiwa coffee shop using Python programming applications.
   - Graph modeling was carried out for the Kenangan coffee shop brand and Janji Jiwa coffee shop using the Social Network Analysis (SNA) method using the Gephi application.
   - Analysis of network property values for Kenangan coffee shop and Janji Jiwa coffee shop brands was carried out using the Social Network Analysis (SNA) method using the Gephi application.
   - Brand comparison analysis was carried out based on the results of network property value analysis with the Social Network Analysis (SNA) method using the Gephi application.
   - Presented conclusions from the results of the analysis obtained, in addition to determining the rank of activeness and level of brand presence through tweets on the Twitter social network and so that it can be useful for further research.

3. Results and discussions

3.1. Crawling Data

Based on crawling data from Twitter social media with the keywords Kenangan coffee shop and Janji Jiwa coffee shop carried out for 2 months from November 1, 2023 – December 30, 2023 using Python programming applications. The results of tweets that were successfully crawled are as follows.

Table 1 Data crawling count results

Coffee Shop	Tweet Crawling Results
Kenangan	1605
Janji Jiwa	1653

It can be seen in Table 1, that tweets that have been crawled against user interactions on Twitter social media about the Kenangan coffee shop as many as 1605 tweets, while the Janji Jiwa coffee shop as many as 1653 tweets during the data collection period. Based on the results of crawling tweets, text preprocessing is carried out using Python with the aim of preparing text so that it can be used as the next stage of management.

3.2. Top Word Charts

Graphic modeling of coffee shop top word Kenangan coffee shop and Janji Jiwa coffee shop formed from words that often appear with the Social Network Analysis (SNA) method using Python.

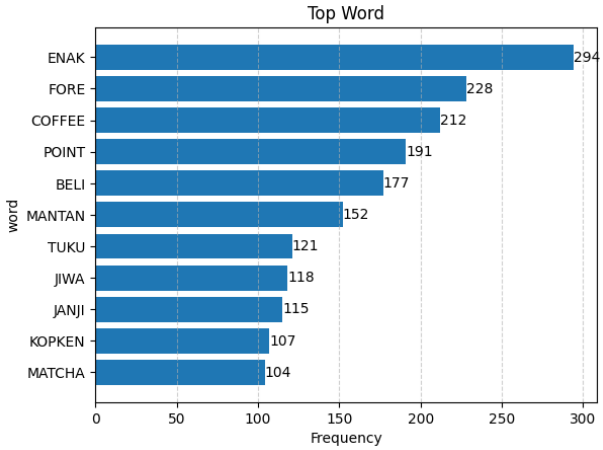

Figure 1 Top word charts of Kenangan coffee shop

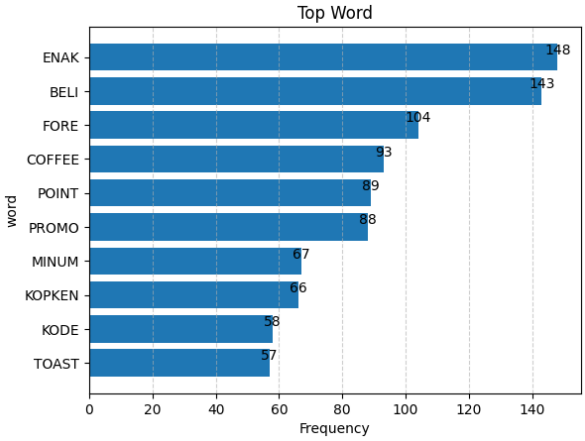

Figure 2 Top word chart of Janji Jiwa coffee shop

Based on Figure 1, it can be seen that the Kenangan coffee brand gets many positive comments such as (delicious) and solicitation words such as (buy, tuku). In addition, many words related to Kenangan coffee products appear, such as (former, kopken). Interestingly, Kenangan coffee is often mentioned along with other coffee brands such as Point coffee, Fore coffee, and also Janji Jiwa coffee. The word that appears most often is enak with the number 294. Then there is the word Fore with the number 228. Then the word coffee with the number 212. There is a Point word with a total of 191. Buy words as many as 177. Then on the word mantan get 152. Then said tuku with the number 121. There is a word Jiwa with the number 118. Next said Janji with the number 115. Then there is the word Kopken with the number 107. And the last one is the word matcha with the number 104.

Based on Figure 2, it can be seen that the Janji Jiwa coffee brand gets a lot of positive comments such as (enak, promo) and solicitation words such as (buy). Interestingly, Janji Jiwa coffee is often mentioned along with other coffee brands such as Point coffee, Fore coffee, and also Kenangan coffee. The word that appears most often is enak with the number 148. Then there is the word beli with the amount 143. Then Fore said with the number 104. There is a word coffee with the number 93. Point said as many as 89. Then on the word promo get 88. Then the word minum with the number 67. There is the word Kopken with the number 66. Next the kode word with the number 58. And the last one said Toast with the number 57.

3.3. Wordcloud of the Top Word

Wordcloud modeling top word Kenangan coffee shop and Janji Jiwa coffee shop formed from words that often appear with the Social Network Analysis (SNA) method using Python programming applications.

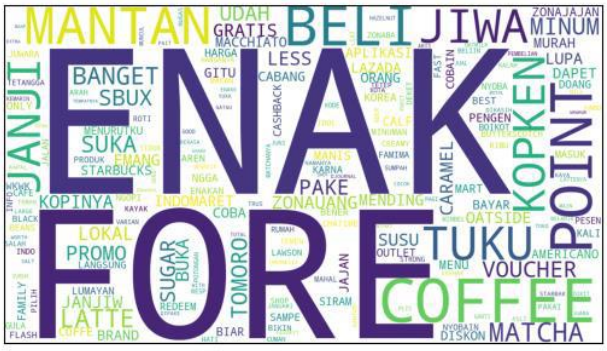

Figure 3 Wordcloud top word Kenangan coffee shop

Figure 4 Wordcloud top word Janji Jiwa coffee shop

The Wordcloud visualization shown in Figure 3 gives a clearer picture of the topic and positive words that twitter users often use towards the Kenangan coffee shop. The larger the word size on wordcloud describes the higher the frequency of the word, meaning that more often Twitter users use the word as a topic of conversation or positive assessment in tweets. Some topics that are often discussed in Kenangan coffee shops include delicious, fore, coffee, former, kopken, beli, and so on.

The Wordcloud visualization shown in Figure 4 gives a clearer picture of the topic and positive words that twitter users often use towards Janji Jiwa coffee shop in tweets. The larger the word size on wordcloud describes the higher the frequency of the word, meaning that more often Twitter users use the word as a topic of conversation or positive assessment in tweets. Some topics that are often discussed about Janji Jiwa coffee shops include enak, beli, fore, toast, promo, and so on.

3.4. Top Actor of Poster Graphic

Graphic modeling of top actor Kenangan coffee shop and Janj Jiwa coffee shop posters formed from the highest number of posts on the topic using the Social Network Analysis (SNA) method using Python programming applications.

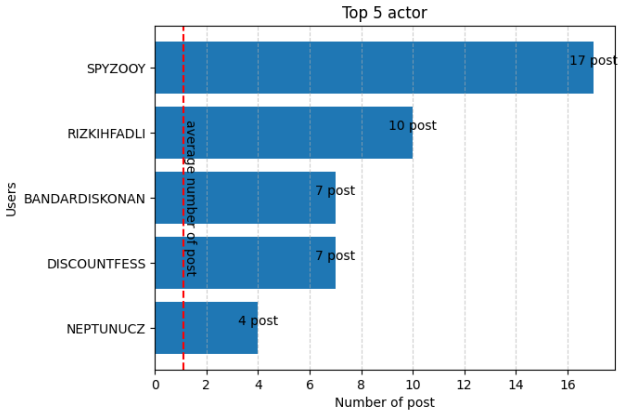

Figure 5 Top actor poster graphic Kenangan coffee shop

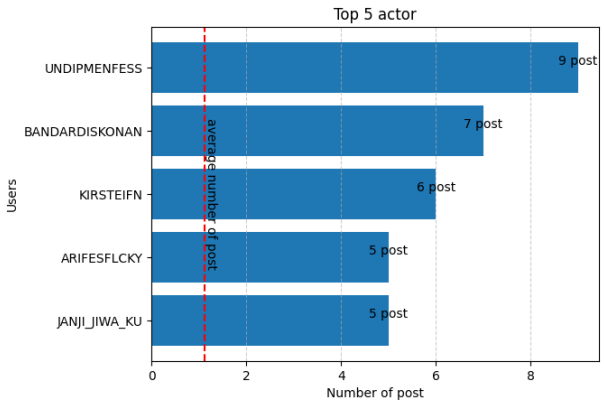

Figure 6 Top actor poster graphic coffee shop Janji Jiwa

Based on Figure 5, it can be seen that @spyzooy is the user with the highest number of posts related to the Kenangan coffee brand during November - December 2023, with 17 posts. @spyzooy Twitter account is an account managed by an influencer named Zooy. Zooy is a content creator who actively creates content about lifestyle, fashion, and beauty. In addition, this account also receives "endorsements". This can be seen in several posts from @spyzooy accounts that share promotions of the Kenangan coffee brand with the audience. Then some other top actors are @rizkihfadli with a total of 10

posts. Next @bandardiskonan with a total of 7 posts. Then @discountfess with a total of 7 posts. Finally, @neptunucz with a total of 4 posts.

Based on Figure 6, it can be seen that @undipmenfess is the user with the highest number of posts related to the janji jiwa brand during November - December 2023, which is 9 posts. @undipmenfess Twitter account is an anonymous account used to share stories, experiences, and vents from Diponegoro University students. This account already has more than 100 thousand followers. In the post, there are many posts about brands related to students. One of the posts related to the Janji Jiwa brand. Then some other top actors are @bandardiskonan with a total of 7 posts. Next @bkirsteifn with a total of 6 posts. Then @arifesflcky with the number of 5 posts. Finally, @janji_jiwa_ku with a total of 5 posts.

3.5. Chart of Top Mentioned Accounts of Coffee Shop

Graph modeling of top mentioned accounts of Kenangan coffee shop and Janji Jiwa coffee shops formed from frequent mentions on the topic with the Social Network Analysis (SNA) method using Python programming applications.

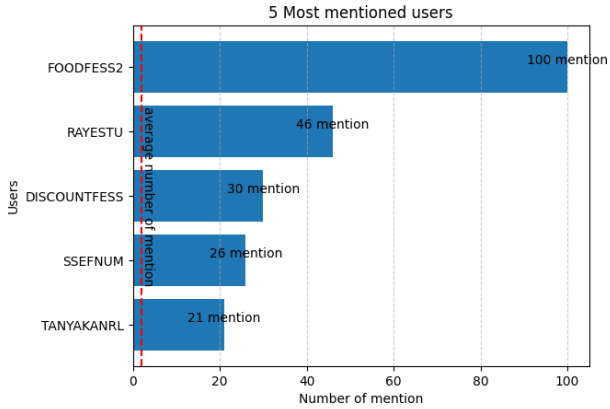

Figure 7 Chart of top mentioned accounts of Kenangan coffee shop

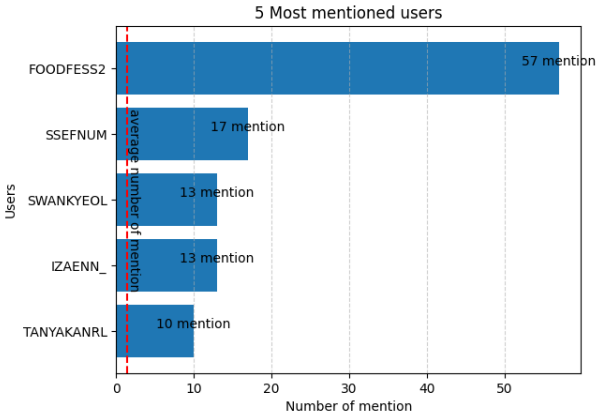

Figure 8. Chart of top mentioned accounts of Janji Jiwa coffee shop

Based on Figure 7, it can be seen that the account that is often mentioned by other users related to the Kenangan coffee brand during November - December 2023 is @foodfess2 there are 100 mentions. @foodfess2 Twitter account is an anonymous account used to share stories, experiences, and vents about food. The account was created in 2022 and already has over 1 million followers. This considerable number of mentions comes from 1 post from @foodfess2 about a survey to the audience about the best coffee recommendations. Then some other accounts that are often mentioned by other users are @rayestu with a total of 46 mentions. Then @discountfess with a total of 30 mentions. Next @ssefnum with 26 mentions. Last @tanyakanrl with 21 mentions.

Based on Figure 8, it can be seen that sccounts that are often mentioned by other users related to the Janji Jiwa brand during November - December 2023 are @foodfess2 there are 57 mention mentions. @foodfess2 Twitter account is an anonymous account used to share stories, experiences, and vents about food. The account was created in 2022 and already has over 1 million followers. This considerable number of mentions comes from 1 post from @foodfess2 about a survey to the audience about the best coffee recommendations. Then some other accounts that are often mentioned by other users are @ssefnum with a total of 17 mentions. Then @swankyeol with a total of 13 mentions. Next @izaenn_ with 13 mentions. Last @tanyakanrl with 10 mentions.

3.6. Graph Modeling

After crawling the data, the identification of the Kenangan coffee shop and Janji Jiwa coffee shop network pattern was carried out based on interactions between actors with the Social Network Analysis (SNA) method using the Gephi application.

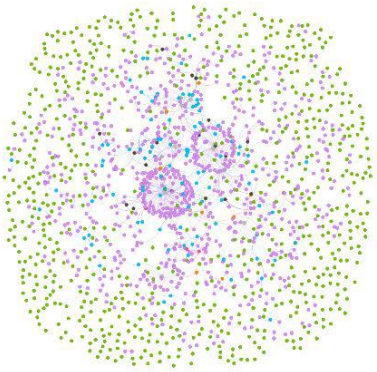

Figure 9 Graph modeling of Kenangan coffee shop

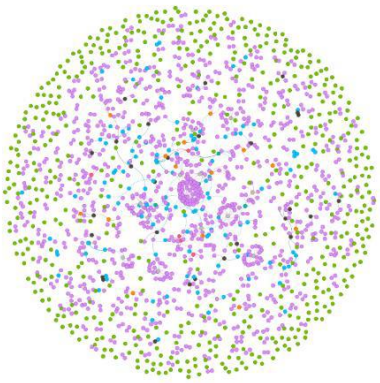

Figure 10 Graph modeling of Janji Jiwa coffee shop

This network pattern creation is done with the Gephi application using the Yifan Hu Proportional layout. The type of graph used is a directed graph where this graph considers the direction of the relationship between nodes (accounts). In this graph, the out degree (origin node) is connected by an edge (line) that can only run in one direction towards the indegree (the destination node), not vice versa. From the network pattern on Figure 9, it can be seen that there are many users who make posts related to the Kenangan brand but interact less with other users. There are posts from several users who have high enough engagement, this can be seen from several small groups formed. This means that in one post it relates to several users. There are 2 posts with quite high engagement. From the network pattern on Figure 10 it can be seen that there are many users who make posts related to the Janji Jiwa brand but interact less with other users. There are posts from several users who have high enough engagement, this can be seen from several small groups formed. This means that in one post it relates to several users.

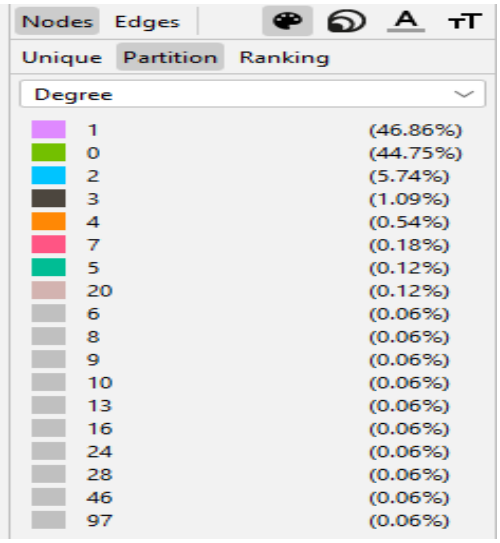

Figure 11 Nodes and degrees of Kenangan coffee shop

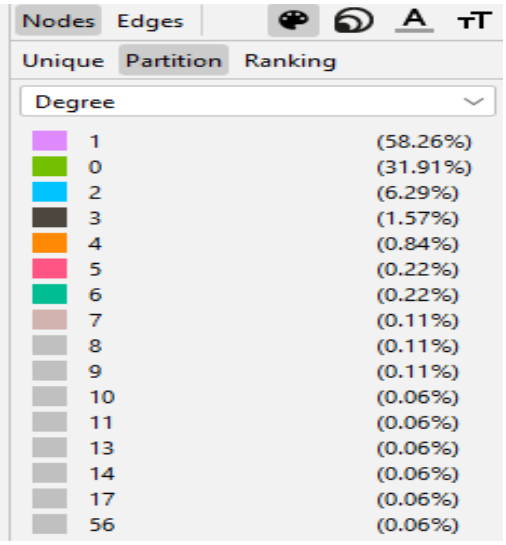

Figure 12 Nodes and degrees of Janji Jiwa coffee shop

Based on Figure 11, there are many nodes, as well as several degrees generated in graph modeling of the Kenangan coffee shop. First shows 46.86% of nodes with a degree owned is 1, so it can be concluded that the average interaction on 1 account. Then it shows 44.75% of nodes with a degree owned is 0, then the average interaction is on 0 accounts. Then 5.74% of nodes with degrees owned are 2, so the average interaction is on 2 accounts. There are 1.09% nodes with 3 degrees, so the average interaction is on 3 accounts. Furthermore, it shows that 0.54% of nodes with degrees owned are 4, so the average interaction is on 4 accounts. Then 0.18% of nodes with degrees owned are 7, so the average interaction is on 7 accounts. There are 0.12% nodes with 5 degrees, so the average interaction is on 5 accounts. Then 0.12% of nodes with degrees owned are 20, so the average interaction is on 20 accounts. Then it shows 0.06% of nodes with a degree owned is 6, then the average interaction is on 6 accounts. Then 0.06% of nodes with degrees owned are 8, so the average interaction is on 8 accounts. There are 0.06% nodes with 9 degrees, so the average interaction is on 9 accounts. Furthermore, it shows that 0.06% of nodes with degrees owned are 10, so the average interaction is on 10 accounts. . Then 0.06% of nodes with degrees owned are 13, so the average interaction is on 13 accounts. There are 0.06% nodes with 16 degrees, so the average interaction is on 16 accounts. Then 0.06% of nodes with degrees owned are 24, so the average interaction is on 24 accounts. Furthermore, 0.06% of nodes with degrees owned are 28, so the average interaction is on 28 accounts. Then there are 0.06% nodes with 46 degrees, so the average interaction is 46 accounts. Then the last one is 0.06% of nodes with a degree owned is 97, so the average interaction is on 97 accounts.

Based on Figure 12, there are many nodes, as well as several degrees produced in the graph modeling of the Janji Jiwa coffee shop. First shows 58.26% of nodes with a degree owned is 1, it can be concluded that the average interaction on 1 account. Then it shows 31.91% of nodes with a degree owned is 0, so the average interaction is on 0 accounts. Then 6.29% of nodes with their degree are 2, so the average interaction is on 2 accounts. There are 1.57% nodes with 3 degrees, so the average interaction is on 3 accounts. Furthermore, it shows that 0.84% of nodes with degrees owned are 4, so the average interaction is on 4 accounts. Then 0.22% of nodes with degrees owned are 5, then the average interaction is on 5 accounts. There are 0.22% nodes with 6 degrees, so the average interaction is on 6 accounts. Then 0.11% of nodes with degrees owned are 7, then the average interaction is on 7 accounts. Then it shows 0.11% of nodes with a degree owned is 8, then the average interaction on 8 accounts. Then 0.11% of nodes with degrees owned are 9, so the average interaction is on 9 accounts. There are 0.06% nodes with 10 degrees, so the average interaction is on 10 accounts. Furthermore, it shows that 0.06% of nodes with degrees owned are 11, so the average interaction is on 11 accounts. . Then 0.06% of nodes with degrees owned are 13, so the average interaction is on 13 accounts. There are 0.06% nodes with 14 degrees, so the average interaction is on 14 accounts. Then 0.06% of nodes with degrees owned are 17, so the average interaction is on 17 accounts. And the last is 0.06% of nodes with degrees owned are 56, so the average interaction on 56 accounts.

3.7. Property Value Results of Coffee Shop Chain

The results of graph modeling that illustrates the social network formed from user interactions about the Kenangan coffee shop and Janji Jiwa coffee shop, there are nodes (dots) that symbolize actors and edges (lines) that symbolize relationships between actor. After modeling the social network, an analysis of the value of the network's properties is carried out to determine the value of the social network.

Table 2 Result of Kenangan network property values

Network Properties	Value
Size	Nodes: 1656 Edges: 692
Network density	0
Avg. path length	1.017
Diameter	2
Avg. degree	0.418
Modularity	0.947

Table 3 Result of Janji Jiwa network property values

Network Properties	Value
Size	Nodes: 1780 Edges: 809
Network density	0
Avg. path length	1.039
Diameter	2
Avg. degree	0.454
Modularity	0.987

Based on the Table 2 can be done a property assessment of the network regarding the Kenangan coffee shop. The number of nodes shows that Kenangan coffee shop has 1,656 actors. The high number of nodes indicates that the Kenangan copy social media network is very extensive and includes many users. This can be an opportunity for kopi Kenangan to reach more audiences and increase brand awareness. The number of edges (interactions) has 692 relationships between actors, with a high number of edges indicating that users of the Kenangan copy are actively interacting with each other. This can be an indicator that Kenangan coffee users have a strong attachment to the brand. The number of k network density has a value of 0, with k low network density indicating that the social media network copy Kenangan is not very centralized. This can be an advantage for Kenangan coffee because it allows information to spread more quickly and evenly across the network. Then There is an avg. path length or node number that an account must pass through to reached a specific account. Average path length has a value of 1.017, p low average path length indicates that users of Kenangan copies can easily connect with each other. This can increase the likelihood of users interacting with each other and sharing information about the Kenangan coffee.Network diameter (is the closest distance between the 2 farthest nodes. The value of the diameter of the coffee shop network. Kenangan is 2.d low network diameter indicating that users of Kenangan copy can easily connect with each other, even if they don't know each other. Avg. degree indicates the average degree of the number of links connecting one node to another. The degree on the Kenangan coffee shop social media network is 0.418. A high average degree indicates that users of the Kenangan copy tend to interact with many other users. This can be an indicator that Kenangan coffee users have a strong attachment to the brand and are interested in learning more about Kenangan coffee. Modularity shows how actors can form different groups bed a in a network. The modularity value on the Kenangan coffee shop social media network is 0.947. High modularity indicates that the social media network kkopi Kenangan is well segmented. This can be an advantage for Kenangan coffee because it allows Kenangan coffee to target specific audiences more effectively

Based on the Table 3 can be done a property assessment of the network regarding the Kenangan coffee shop. The number of nodes shows that Janji Jiwa coffee shop has 1,780 actors. The high number of nodes indicates that the Janji Jiwa coffee social media network is very broad and includes many users. This can be an opportunity for Janji Jiwa coffee to reach more audiences and increase brand awareness. The number of edges (interactions) has 809 relationship between actors. A high number of edges indicates that Janji Jiwa coffee users are actively interacting with each other. This can be an indicator that Janji Jiwa coffee users have a strong attachment to the brand. Sum Network density has a value of 0, with low network density indicating that the Janji Jiwa coffee social media network is not too centralized. This can be an advantage for Janji Jiwa coffee because it allows information to spread more quickly and evenly across the network. Then there is the number of avg. path lengths or nodes that an account must pass through to reach a particular account. Average path length has a value of 1.039, the low average track length indicates that Janji Jiwa coffee users can easily connect with each other. This can increase the likelihood of users to interact with each other and share information about Janji Jiwa coffee. Network diameter (is the closest distance between the 2 farthest nodes. The value of the diameter of the Janji Jiwa coffee shop network is 2, the low diameter of the network indicates that Janji Jiwa coffee users can easily connect with each other, even if they don't know each other. This can increase the likelihood of users to interact with each other and share information about Janji Jiwa coffee. Avg. degree indicates the average degree of the number of links connecting one node to another. Average value The degree on the social media network of Janji Jiwa coffee shop is 0.454, a high average degree indicating that Janji Jiwa coffee users tend to interact with many other users. This can be an indicator that Janji Jiwa coffee users have a strong attachment to the brand and are interested in learning more about Janji Jiwa coffee. Modularity shows how actors can form different groups in a network. The modularity value on the Janji Jiwa coffee shop social media network is 0.987, the high modularity shows that the Janji Jiwa coffee social media network is well segmented. This can be an advantage for Janji Jiwa coffee because it allows Janji Jiwa coffee to target specific audiences more effectively.

3.8. Comparison of Network Property Values

After calculating the value of network properties from both coffee shops, namely Kenangan coffee shop and Janji Jiwa coffee shop using the Gephi application, a comparison of the brands of each coffee shop was carried out based on the results of analysis with Social Network Analysis (SNA).

Table 4 Comparison of network property values

Network Properties	Kenangan	Janji Jiwa	Rank
Size	Nodes: 1.656 Edges: 692	Nodes: 1.780 Edges: 809	1. Janji Jiwa 2. Kenangan
Network density	0	0	-
Avg. Path length	1.017	1.039	1. Kenangan 2. Janji Jiwa
Diameter	2	2	-
Avg. Degree	0.418	0.454	1. Janji Jiwa 2. Kenangan
Modularity	0.947	0.987	1. Janji Jiwa 2. Kenangan

Table 4 shows the comparison of the property values of the two coffee shop brands, namely Kenangan coffee and Janji Jiwa coffee. The first network property is size, said to be active if there are many nodes (users) in the a network so that many nodes interact. The first place in size was achieved by Janji Jiwa coffee shop with 1.780 nodes (users) and 809 edge (interactions) in the network. While the second place was won by the Kenangan coffee shop with 1,656 nodes (users) and 692 edges (interactions) in the network.

The second network property is network density where the denser the network will produce a value. The greater the density, the better because there are more actors in the network Connected. Kenangan coffee shop and Janji Jiwa coffee shop have the same density value of 0. The low network density indicates that the social media networks of both coffee shops are not very centralized.

Furthermore, the third network property is the average path length, if the fewer accounts passed, the better because the network has a strong relationship. So the first rank was achieved by the Kenangan coffee shop with a value of 1,017 while the Janji Jiwa coffee shop in the second rank had a value of 1,039.

Fourth, there is the property of tissue diameter. The smaller the diameter on a network, the easier it will be for nodes to communicate with each other, so that the faster information will circulate in the social network. Kenangan coffee shop and Janji Jiwa coffee shop have the same diameter value of 2, which means they have the same speed in disseminating information.

Then is the average degree, where the more links (edges) that connect between nodes, the faster and easier the dissemination of information will be. So the one with the highest average degree value and ranked first is the Janji Jiwa coffee shop with a value of 0.454 while the Kenangan coffee shop is ranked second with a value of 0.418.

The last is the modularity network property, that is, if the greater the value, the clearer the group formed. Each group that is formed can be assumed to be a different community, so more specifications are needed for products in each community. The first place was achieved by the Janji Jiwa coffee shop with a value of 0.987 while the second place was achieved by the Kenangan coffee shop with a value of 0.947.

4. Conclusion

In the Kenangan coffee shop words that often appear are delicious with a total of 194. While in the Janji Jiwa coffee shop, the word that often appears the same is delicious with a total of 148. Then the top actor poster chart formed from the number of posts on the topic, on the Kenangan coffee shop Twitter account @spyzooy is the user with the highest number of posts related to the Kenangan coffee shop which has 17 posts. While at the Janji Jiwa coffee shop, @undipmenfess Twitter account is the user with the highest number of posts related to the Janji Jiwa coffee shop which has 9 posts. Then the last one is the top mentioned account graph formed from frequent mentions on the topic, in the Kenangan coffee shop the account that is often mentioned by other users related to the Kenangan coffee shop brand is @foodfess2 there are 100 mentions. While at the Janji Jiwa coffee shop, the account that is often mentioned by other users related to the Janji Jiwa coffee shop brand is @foodfess2, which is 57 mentions.

From the pattern of the Kenangan coffee shop chain, there are many users who make posts related to the brand but interact less with other users. There are posts from several users who have high enough engagement, this can be seen from several small groups formed which means in one post related to several users. There are 2 posts with quite high engagement. While the pattern of the Janji Jiwa coffee shop network there are many users who make posts related to the brand but interact less with other users. There are posts from several users who have high enough engagement, this can be seen from several small groups formed which means in one post related to several users.

A comparison between coffee shop brands is carried out the value of network properties consisting of size, density, Avg. path length, diameter, Avg. degree, and modularity using Social Network Analysis (SNA) methods. The ranking results show that Janji Jiwa coffee shop superior in 3 network property values such as size, avg. degree, and modularity. While the Kenangan coffee shop is only superior to 1 network property value, namely avg. path length.

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