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Tiktok Social Media Analysis of Content for Your Page with AHP (Analytical Hierarchy Process) Method

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Abstract: *Presentation is an activity conducted to express opinions in public, aimed at decision-making or providing new insights on a particular matter. During presentations, audience engagement often suffers due to several disruptions faced by the speaker, such as having to pause to change slides, mismatched transition timing by the moderator when changing slides, and other issues. In order to avoid these distractions, Smart Presentation Feature is designed to provide an effective presentation experience. This feature runs on Windows operating system and is developed using MediaPipe, OpenCV, PyAutoGUI, win32gui module, PyInstaller, and a virtual environment using Miniconda. This feature works by reading the user's hand gesture to determine the control actions for the presentation. According to a user satisfaction questionnaire consisting of 11 questions, each with 5 criteria ranging from "Strongly Disagree" to "Strongly Agree", The final score was 89.26% in total, which translates to "Strongly Agree". This signifies that users are satisfied with the Smart Presentation Feature.*

Keywords: *Artificial Intelligence, Hand Gesture Recognition, Mediapipe, OpenCV, Presentation*

INTRODUCTION

Becoming a content creator offers an opportunity to express your ideas and creativity. In Indonesia, the job of content creator has seen significant growth. This can generate significantly more income than part-time work. It offers highly flexible hours and can be worked 24/7.

One of the jobs currently in high demand among many groups, including adults, young people, and children. However, to become a content creator, you must be 18 years of age or older to be able to perform profitable work. For content featuring children, parents must be present.

According to Gunawan, Fandi Halim, and Wilson in the journal Application of TOPSIS and AHP methods in decision support systems for accepting new members, October 2014, there are several methods that can be used to build a Decision Support System (DSS), namely the Analytical Hierarchy Process (AHP). This method is a form of decision support method based on the concept that the best alternative not only has the

shortest distance from the positive ideal solution, but also has the longest distance from the negative ideal solution, which in this case provides recommendations for accepting new members that are in accordance with expectations (Kosasi, S. 2002). This research uses the methodAnalytical Hierarchy Process (AHP).

In this study, researchers focused on three areas of research: daily life content, culinary content, and work content. On the social media app TikTok, the content frequently encountered is highly relevant. Relate with events experienced by many people. Because the content coverage is so extensive, researchers focused on the third point mentioned above.

RESEARCH METHOD

In general, this research involves five stages. The first stage is observation, conducted to identify and determine the types of social networks most frequently used by the content creators who are the research subjects. The next stage is the creation of a questionnaire and data collection by distributing it to consumers and content owners. The results of the data collection are then processed using the AHP (Analytical Hierarchy Process). These results will then be analyzed by comparing the two methods to provide comparisons for other content creators. The final result of this data processing will be the selection of one social media platform and the criteria that will be prioritized for TikTok's use.

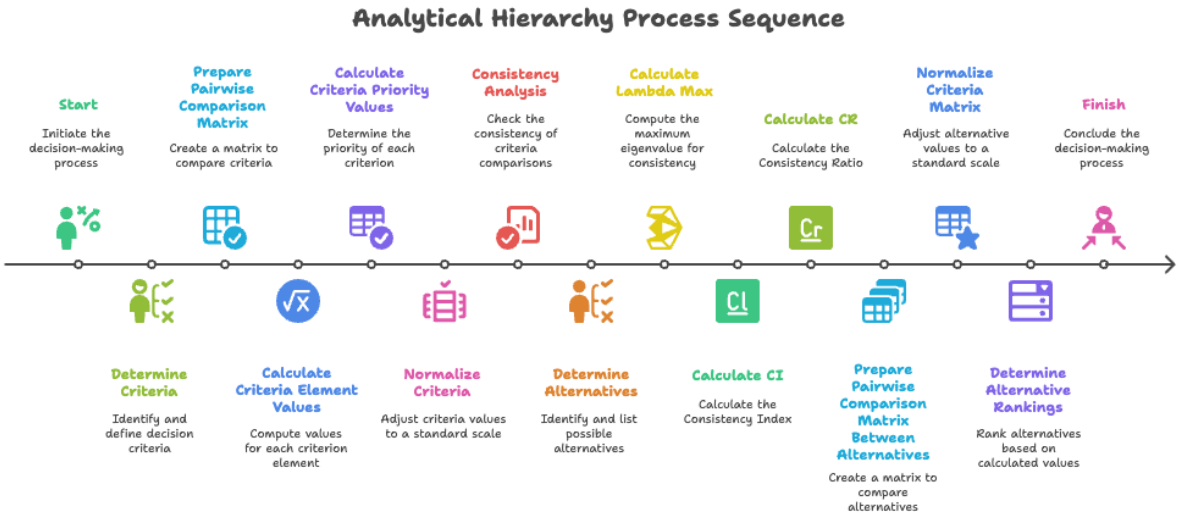

Figure 1. Proses AHP

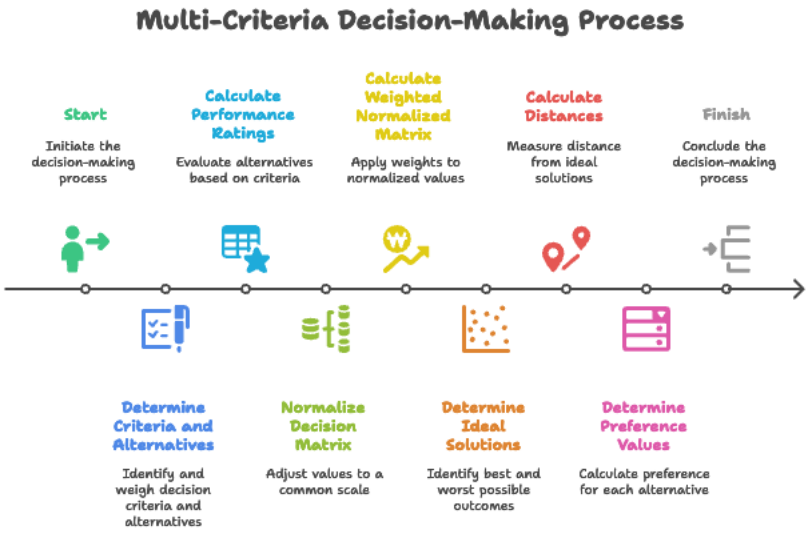

Figure 2. Flowchart of the Calculation Process

RESULT AND DISCUSSION

Results of Data Analysis Using the AHP Method

In the AHP method, steps are taken to determine the solution used, starting with defining the problem and objectives, compiling a hierarchy, determining...pair wise comparison, create a comparison matrix, determine the priority vector, calculateconsistency index and concistency ratioin choosing social networks.

Table 1. Comparison Matrix of Observation Result Pairs

Criteria	Feature	followers	Criticism	Save
Feature	Important	Between Important and Moderately Important	Moderate Important	Moderate Important
followers	Less Important	Important	Between Important and Moderately Important	Moderate Important
Criticism	Between Important and Moderately Important	Between Important and Moderately Important	Important	Between Important and Moderately Important
Save	Between Important and Moderate	Moderate Important	Less Important	Important

The comparison is then transformed into a pairwise comparison matrix for numerical analysis.

Table 2. Pairwise Comparison Matrix of Basic Scale Observation Results

Criteria	Feature	followers	Criticism	Save
Feature	1	2	0,50	0,50
followers	0,33	1	2	4
Criticism	0.50	0,33	1	0,50
Save	0,50	0,25	0,33	1

The above value is obtained from the intensity of interest.

Table 3. Results of Observation Result Matrix Addition

Criteria	Feature	followers	Criticism	Save
Feature	1	2	0,50	0,50
followers	0,33	1	2	4
Criticism	0,50	0,33	1	0,50
Save	0,50	0,25	0,33	1
Amount	**2,33**	**3,58**	**3,83**	**6**

The sum of each criteria column is divided by the sum, resulting in a value of 0.4286 + 0.1429 + 0.2143 + 0.2143 = 1, as seen in table 4.4.

Table 4. Results of Adding Each Criteria

Criteria	Feature	followers	Criticism	Save
Feature	0,4286	0,5581	0,1304	0,0833
followers	0,1429	0,2791	0,5217	0,6667
Criticism	0,2143	0,093	0,2609	0,0833
Save	0,2143	0,0698	0,0870	0,1667
Amount	1	1	1	1

Table 5. Eigenvalues of Vectors of Each Criteria

Criteria	Feature	followers	Criticism	Save	Own Vector
Feature	0,4286	0,5581	0,1304	0,0833	0,30012
followers	0,1429	0,2791	0,5217	0,6667	0,402583
Criticism	0,2143	0,093	0,2609	0,0833	0,162878
Save	0,2143	0,0698	0,0870	0,1667	0,134419

Table 6. Assessment Results

Criteria	Own Vector	Assessment Results
Feature	0,30012	Priority 2
followers	0,402583	Priority 1
Criticism	0,162878	Priority 3
Save	0,134419	Priority 4

Table 7. Weighting Values Based on Content Feature Criteria

Feature	Life Content Daily	Culinary Content	Job Content
Daily Life Content	1	3	7

Feature	Life Content Daily	Culinary Content	Job Content
Culinary Content	0,33	1	5
Job Content	0,14	0,20	1

Table 8. Weighting Values Based on the Number of Content Criteria

Feature	Daily Life Content	Culinary Content	Job Content
Daily Life Content	1	0,50	0,30
Culinary Content	2	1	0,50
Job Content	3	2	1

Table 9. Weighting Values Based on Content Follower Criteria

Feature	Daily Life Content	Culinary Content	Job Content
Daily Life Content	1	2	0,20
Culinary Content	0,50	1	0,14
Job Content	5	7	1

Table 10. Calas Weighting Values Based on Like Criteria

Feature	Daily Life Content	Culinary Content	Job Content
Daily Life Content	1	3	5
Culinary Content	0,33	1	2
Job Content	0,20	0,50	1

Table 11. Eigenvalues of Each Insight Vector

	Feature	followers	Criticism	Save
Daily Life Content	0.643	0.164	0.1676	0.648
Culinary Content	0.283	0.297	0.0944	0.230
Job Content	0.074	0.539	0.7380	0.122

Table 12. Results of Content Assessment created with AHP

Alternative	Priority	Ranking Results
Daily Life Content	0.4473	1
Culinary Content	0.2509	3
Job Content	0.376	2

Table 13. Consistency Index (CI) and Consistency Ratio (CR) Values Content Selection With AHP

Content Selection Criteria created by Creators	THERE	CR
Feature	0.0328	0.05659
followers	0.00461	0.00794
Criticism	0.0071	0.01224
Save	-0.33172	-0.57194

There are 3 social networks that will be alternatives, namely:
A1 = Daily Life Content
A2 = Culiner contents
A3 = Job Content

Table 14 Alternative Weights for Each Criteria

Alternative	Criteria			
	Feature	followers	Criticism	Save
A1	4	4	4	3
A2	4	4	4	4
A3	4	4	3	3

CONCLUSION

From the research results obtained, there is a methodAnalytical Hierarchy Process (AHP) for determining the creation of content presented in TikTok social media to be objective. The decision-making process is faster than before. Based on the results of research on determining useful content using the AHP method in selecting several criteria in this study, the results obtained that the highest criterion is Followers with a value of 0.4025, while the second criterion is features with a value of 0.3001, then continued with the criteria with the third position, namely likes with a value of 0.1344 and the lowest result is the save criterion with a value of 0.1628. from the results of the criteria values, it can be determined that Daily Life Content is the first choice that gets the highest insight.

After using the AHP analysis method, this is due to its simple concept and its ability to measure decision alternatives in simple mathematical form. Based on the calculation results by determining the preference value for each alternative, the value of A1 is obtained with a value of 0.5773, the value of A3 with a value of 1 and the value of A3 with a value of 0. So, it can be determined that Value A1 is the first choice with the largest value, namely Daily Life Content.

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