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Social media communication patterns of Artificial Intelligence (AI) in five leading AI tools

Lutfi Adji Ardiansyah*, Muhammad Farizan Saputera, Edison Bonartua Hutapea

Master of Communication Science Program, Universitas Paramadina, Jl. Raya Mabes Hankam No. Kav 9, RT 9 RW 3, Setu, Kec. Cipayung, Kota Jakarta Timur, Daerah Khusus Ibukota Jakarta 13880, Indonesia
*email: lutfi.adji@students.paramadina.ac.id

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ABSTRACT

This research is motivated by the development of digital technology, which drives significant changes in the way organizations and products, specifically Artificial Intelligence (AI) tools, communicate with their public. Social media has become a strategic space to build relationships, image, and public trust. The scope of this research is limited to five AI tools (ChatGPT/OpenAI, Gemini/Google, Perplexity, Meta AI, and Microsoft Copilot) and five social media platforms (X/Twitter, Instagram, TikTok, Facebook, and YouTube). The objectives of this research are to determine the distribution of platforms used, the level of activity and content intensity, the digital communication patterns formed, and the position of each AI tool in the communication strategy matrix. The research approach employs a quantitative-descriptive content analysis (Krippendorff, 2018) combined with systematic digital observation over a 14-day period, with two independent coders and Cohen's $\varkappa = 0.782$ (substantial agreement). The results show that X/Twitter is the platform with the highest frequency of use. Based on the communication strategy matrix, ChatGPT and Microsoft Copilot are in the quadrant of using many platforms with high content intensity, while Gemini dominates in terms of total content. Another finding shows that a high number of followers is not always directly proportional to the engagement rate, where content quality such as celebrity endorsement (as in Perplexity) is able to generate organic interactions that far exceed its competitors.

Keywords: artificial intelligence, digital communication, engagement rate, media matrix, social media.

1. INTRODUCTION

The development of digital technology in the past decade has driven significant transformations in society's communication patterns, particularly through social media. Social media no longer functions merely as a medium for social interaction but has evolved into a strategic platform for building communication, distributing information, and shaping public opinion. In this context, the emergence of Artificial Intelligence (AI) technology has further strengthened the dynamics of digital communication by introducing various tools, such as ChatGPT, Gemini, and Copilot, capable of automating content production and improving communication efficiency (Nair & Gupta, 2021; Razack et al., 2021).

The use of AI in social media has brought changes to how individuals and organizations manage digital communication. AI is not only used as a technical assistance tool but also as a strategic communication tool capable of analyzing audience behavior, personalizing content, and enhancing user interaction (Binlibdah, 2024; Taha & Abdallah, 2025). Research indicates that the implementation of AI in social media can significantly increase engagement rates through content and distribution time optimization (Manoharan, 2024).

However, a high number of followers on a social media account is not always directly proportional to the audience's engagement level. This phenomenon indicates that the effectiveness of digital communication is determined not only by the quantity of the audience but also by the quality of the interactions and communication strategies employed (Bag et al., 2022). In this context, the use of AI tools becomes interesting to study as they provide a data-driven approach to increasing engagement.

Furthermore, the development of AI has also led to changes in social media user behavior. Users are no longer merely information consumers but also act as content producers supported by AI technology. This creates a more complex communication ecosystem, where human-AI interaction becomes a crucial part of shaping engagement.

Based on these phenomena, it is important to analyze how social media communication patterns utilizing AI tools can affect the engagement rate. This research is relevant because it not only examines the use of technology but also connects it with digital communication strategies and audience behavior within the modern social media ecosystem.

2. LITERATURE REVIEW

2.1. Uses and Gratifications (U&G) Theory

The Uses and Gratifications (U&G) theory explains that audiences are not passive parties; rather, they are individuals who actively select and use media to fulfill specific needs, such as the need for information, entertainment, personal identity, and social interaction. From this perspective, users play a central role in the communication process because they consciously determine which media to use and the purpose of its use. Consequently, the communication process is no longer one-way but is interactive and user-need-oriented (Katz et al., 1973; Ruggiero, 2000).

In the context of digital media development in Indonesia, the U&G theory has undergone significant expansion. Social media and digital platforms provide not only content but also interactive, participatory, and personalized experiences. Studies have shown that digital media users in Indonesia obtain additional gratification such as ease of access, navigational flexibility, and the ability to interact directly with content and other users (Sundar & Limperos, 2013).

Furthermore, in the era of AI, the forms of gratification obtained by users have become more complex. The use of technologies such as chatbots, generative AI, and recommendation systems allows users to be not only information consumers but also content producers. Recent studies have indicated that AI can be utilized to improve content production efficiency, accelerate information retrieval, and generate creative ideas relevant to audience needs (Cheng et al., 2025; Manoharan, 2024).

Additionally, the use of AI-based social media reveals that the gratifications sought by users are not only functional but also emotional and social. For instance, users leverage media to build personal

identities, gain social recognition, and strengthen their connections within digital communities (Dolan et al., 2016; Sundar & Limperos, 2013).

2.2. Social Media Engagement Theory

Engagement in social media refers to the level of audience involvement with the presented content, which can be observed through various forms of interaction such as likes, comments, shares, and other responses. In the context of digital communication, engagement is an essential indicator of message effectiveness (Dolan et al., 2016; Tuten & Solomon, 2018). However, engagement is not limited to the quantitative aspect of interaction counts. A high level of engagement is often associated with emotional attachment, trust, and loyalty to a brand or message. Hollebeek, (2014) conceptualize Consumer Brand Engagement (CBE) as a multidimensional construct comprising cognitive processing, affection, and activation, reflecting that engagement is not merely a quantitative interaction count but a layered psychological involvement with the brand. Research has demonstrated that relevant and authentic content tailored to audience needs tends to generate higher and more sustainable engagement (Bag et al., 2022). In its development, AI technology has begun to play a strategic role in enhancing engagement. AI enables deeper user data analysis, including preferences, behaviors, and audience interaction patterns (Huang & Rust, 2021; Binlibdah, 2024). Furthermore, AI drives a shift in engagement patterns from being reactive to active (Huang & Rust, 2021).

2.3 Artificial Intelligence in Digital Communication

AI in digital communication refers to the use of smart technology to support the communication process through automation, data analysis, and message delivery. The presence of AI has shifted the communication paradigm from a linear to a dynamic, interactive, and algorithm-based model (Dwivedi et al., 2021). One of the primary roles of AI is its ability to analyze massive amounts of data to understand audience behavior. Through this analysis, organizations can identify user preferences, interaction patterns, and the most effective times to deliver messages (Dwivedi et al., 2021; Huang & Rust, 2021). Moreover, AI creates new forms of interaction between humans and technology, where communication occurs not only between humans but also between humans and intelligent systems (Sundar & Limperos, 2013).

2.4. AI-Based Digital Communication Strategy

Recent scholarship suggests that AI brands face a strategic paradox: their products promise universal utility, yet their audiences are heterogeneous and demand differentiated communication (Huang & Rust, 2021). Successful AI brand communication therefore requires alignment between content strategy and the specific gratifications sought by target audience segments. Enterprise-oriented audiences, for instance, gravitate toward utilitarian gratifications concrete demonstrations of productivity gains while consumer audiences may respond more strongly to hedonic and social-identity gratifications. This study builds on these foundations by empirically examining how five leading AI brands distribute content across four typologies, what patterns of engagement emerge, and how the resulting picture aligns or diverges from the gratifications their respective audiences are likely to seek.

3. METHOD

3.1. Research Design and Sample

This study employs a quantitative descriptive content analysis approach (Krippendorff, 2018) to map the social media communication patterns of the five leading AI tools. Content analysis was selected because it allows systematic and replicable examination of media messages based on predefined categories. The study is exploratory-descriptive: it does not test causal hypotheses but rather documents content typology, communication style, and audience response in a structured manner.

The study population consists of all official posts from the social media accounts of six AI brand entities ChatGPT/OpenAI, Gemini/Google, Microsoft Copilot, Microsoft, Perplexity, and Meta AI across five platforms (X, Facebook, Instagram, TikTok, and YouTube) during the 14-day observation

period from 26 November to 9 December 2025. Data were collected through systematic digital observation of public content on the official brand accounts. For each post, the researchers documented date, brand, platform, URL, content type, communication style, and publicly visible engagement metrics. A total of 134 posts were collected during the observation period.

The observation scope included content in both Indonesian and English, reflecting the bilingual practice of these global brand accounts which alternate languages depending on target audience. No language filter was applied. Follower counts for each brand on the five platforms were retrieved on 9 December 2025 (the final day of the observation period) from the publicly accessible profile pages of each account.

3.2. Coding Scheme - Four Content Categories

Each post was classified into one of four predefined content categories adapted from content typology frameworks for brand communication on social media (Dolan et al., 2016; Tuten & Solomon, 2018). First, product posts whose primary focus is to introduce, promote, or showcase the AI tool's own features or products. Indicators include phrases such as "introducing," "launching," "new feature," or "now available," UI demonstrations, and version updates. Examples include the announcements of GPT-5.1, the Shopping Research feature, and the BrowseSafe security tool. Second, event posts that revolve around an event, either an in-house event (conferences, launches, livestreams) or participation in external campaigns. Indicators included words such as "event," "campaign," "conference," "live," "join us," or the inclusion of event dates and locations. Examples include the Year in Search 2025 campaign, Build Hour, and OpenAI Podcast events. Third, education posts whose primary intent is to educate the audience through tutorials, tips, conceptual explanations, or short instructional content. Indicators include phrases such as "how to," "tips," "tutorial," "did you know," "3 ways to," and educational threads. Examples include prompt engineering tips, deepfake education, and productivity guidance. Fourth, general posts that do not fit into the three preceding categories, including brand storytelling, community interaction, memes, holiday greetings, participation in general trends, and creative collaborations without a specific product focus. Examples include Thanksgiving memes, holiday sweater posts, and general partnership announcements.

When a post met the criteria for more than one category, the researchers applied tie-breaker rules: (a) the primary intent of the post takes precedence over supporting elements a post announcing a new feature at an event is classified as Product because the feature is the core message and the event merely the context; (b) when ambiguity persists, the priority order is Product > Event > Education > General; (c) if a definitive decision remains impossible, both coders annotate the post and discuss it after independent coding is complet, to preserve independence during the coding phase itself.

3.3. Coding Procedure and Inter-Coder Reliability

Coding was conducted by two independent coders using the same codebook. Before coding commenced, both coders underwent calibration training using a pilot sample of 20 posts drawn from outside the main sample. The pilot results were discussed to ensure consistent understanding of category definitions, and the codebook was refined based on this discussion.

Once the codebook was finalized, both coders independently classified all 134 posts, without discussion during the coding process. To ensure full independence, each rater's coding decisions were entered into a separate purpose-built web application that prevented cross-access between the two coders throughout the process.

Inter-rater reliability was measured using Cohen's Kappa (Cohen, 1960), which provides a chance-corrected measure of agreement that is stricter than a simple percent agreement. The computation yielded an observed agreement of Po = 0.843, expected agreement Pe = 0.281, and Cohen's κ = 0.782 with a 95% confidence interval of [0.696, 0.868], indicating substantial agreement according to the scale proposed by Landis and Koch (1977). For the 21 posts (15.7% of the total) on which the coders disagreed, disagreements were resolved through consensus discussion between the two coders after the independent coding was complete; these consensus codes form the final dataset used in all distribution tables below.

Observed disagreements clustered along two boundaries: Product/Education (posts that simultaneously introduce a feature and teach its use, seven cases) and Event/General (campaign content that also functioned as brand storytelling, six cases). This pattern reflects the inherent ambiguity of brand content on social media, a known challenge in content analysis of promotional communication (Dolan et al., 2016).

3.4. Operationalization of Engagement

Engagement is defined here as the total measurable public interaction with a given post, computed as the aggregate of likes (or favorites or reactions), comments (or replies), shares (or retweets or reposts), and saves (for platforms that publicly display this metric, such as Instagram and TikTok). It must be acknowledged that each platform defines engagement differently in technical terms. X (Twitter) uses Likes, Replies, Reposts, and Quotes; Facebook uses six types of Reactions (*Like*, *Love*, *Haha*, *Wow*, *Sad*, and *Angry*), Comments, and Shares; Instagram displays Likes, Comments, and (for Reels) Plays; TikTok displays Likes, Comments, Shares, and Saves; and YouTube displays Likes, Comments, and Views, where Views are not equivalent to active engagement. Because of these differences, cross-platform comparisons especially of absolute numbers should be interpreted as rough indicators rather than apples-to-apples comparisons. The engagement rate, computed as (total engagement / total followers) × 100%, normalizes against follower count and provides a more comparable basis, though it remains imperfect. Engagement data were collected on 9 December 2025 (the final day of the observation period). No filtering for bots or fake accounts was performed, as platforms do not provide public APIs for such identification. The reported engagement figures therefore represent observed public engagement, which may include non-organic interactions. This limitation is discussed further in the Limitations section

4. RESULTS AND DISCUSSION

4.1. Social Media Strategy Matrix

To facilitate the analysis of digital communication patterns, the observation results of the AI tools' social media activities were mapped into a Strategy Matrix in the form of a scatter plot. This matrix is used to view the strategic position of each AI tool based on the content quantity intensity (X-Axis) and the distribution of the number of social media platforms used (Y-Axis). The quadrants of this matrix are divided into: Quadrant A (Top Left) indicating many platforms but low content; Quadrant B (Top Right) indicating a dominant strategy with many platforms and high content; Quadrant C (Bottom Left) representing few platforms and low content (minimalist); and Quadrant D (Bottom Right) focusing on few platforms but with high content (niche).

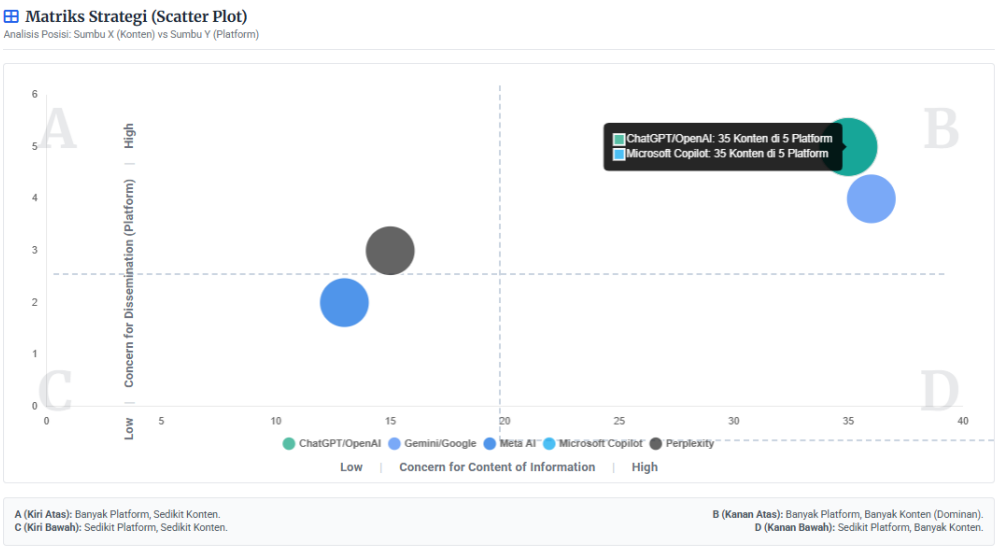

Figure 1. AI-Powered Social Media Communication Matrix

Based on the data mapping in Figure 1, it can be seen that each AI tool occupies a different position reflecting variations in their communication approaches. ChatGPT/OpenAI (35 contents) and Microsoft Copilot (35 contents) are situated precisely in Quadrant B. Both entities dominate various platform lines with a balanced and aggressive message distribution intensity. Gemini/Google also demonstrates a similar level of aggressiveness by producing a total of 36 contents. In contrast, Meta AI and Perplexity tend to position themselves closer to the minimalist or niche quadrant (Quadrant C), limiting their movements to platforms that are algorithmically and ecosystem-wise more relevant.

4.2. Disseminated Content Type Analysis

The data processing results based on the types of content disseminated over 14 days (see Table 1) indicate the message focus or framing of each AI brand.

Table 1. Types of Content Disseminated by AI Tools (14-Day Period)

No	Brand	Product	Event	Education	General	Total
1	ChatGPT / OpenAI	17	1	0	17	35
2	Gemini / Google	8	25	0	3	36
3	Perplexity	5	1	0	9	15
4	Meta AI	0	6	0	7	13
5	Microsoft Copilot	14	1	1	19	35

Source: Processed from primary data (2025)

Based on Table 1, Gemini/Google has the highest total number of contents (36 posts), with a massive dominance in Event-based content (25 uploads). Gemini's communication strategy during this observation period is heavily focused on feature launch activities, global events, or year-end trend campaigns. Meanwhile, ChatGPT/OpenAI and Microsoft Copilot display a balanced communication pattern between technical Product promotions and General issues.

4.3. Digital Media Platform Usage Analysis

To understand the daily communication rhythm of each AI tool, tracking was conducted over 14 consecutive days. The daily activity distribution matrices (see Table 2, Table 3, and Table 4) map out exactly when and on which platforms the contents were published by the brands.

Table 2. Activity Distribution Matrix (Days 1–4: Nov 26 – Nov 29)

No	Brand	26-Nov	27-Nov	28-Nov	29-Nov
1	ChatGPT / OpenAI	X, IG, FB, YT	IG, TikTok	X, FB	IG, TikTok
2	Gemini / Google	X, YT	IG, TikTok, YT	-	-
3	Meta AI	-	IG, FB	FB	FB
4	Microsoft Copilot	X, IG, YT	IG, FB, YT	FB, TikTok	-
5	Perplexity	IG	X, FB	-	-

Source: Processed from primary observation data (2025)

Table 3. Activity Distribution Matrix (Days 5–8: Nov 30 – Dec 3)

No	Brand	30-Nov	1-Dec	2-Dec	3-Dec
1	ChatGPT / OpenAI	X, FB	X	TikTok	X, FB, YT
2	Gemini / Google	-	-	X	X
3	Meta AI	FB	-	FB	FB

4	Microsoft Copilot	-	FB, YT	X, TikTok, YT	TikTok, YT
5	Perplexity	-	-	-	X

Source: Processed from primary observation data (2025)

Table 4. Activity Distribution Matrix (Days 9–14: Dec 4 – Dec 9)

No	Brand	4-Dec	5-Dec	6-Dec	7-Dec	8-Dec	9-Dec
1	ChatGPT / OpenAI	X, FB	YT	-	YT	YT	-
2	Gemini / Google	X	X, IG, YT	X, IG, TikTok	X	X	IG, TikTok
3	Meta AI	IG	-	IG	-	-	-
4	Microsoft Copilot	X, FB, YT	FB, TikTok	X	-	-	TikTok
5	Perplexity	-	X, IG	-	-	-	-

Source: Processed from primary observation data (2025)

The daily matrices above reveal the specific platform strategies of each tool; for instance, ChatGPT and Microsoft Copilot exhibit a dynamic cross-platform schedule, while Meta AI maintains a steady rhythm focused heavily on its own ecosystem (Facebook and Instagram). The accumulation of this daily activity is summarized in the frequency distribution of platform usage (see Table 5).

Table 5. Frequency of Digital Media Platform Usage (Total Posts)

No	Brand	X	Instagram	TikTok	YouTube	Facebook	Total Post
1	ChatGPT / OpenAI	13	5	4	8	5	35
2	Gemini / Google	24	4	4	4	0	36
3	Perplexity	12	2	0	0	1	15
4	Meta AI	0	3	0	0	10	13
5	Microsoft Copilot	11	2	5	7	10	35
Total		**60**	**16**	**13**	**19**	**26**	**134**

Source: Processed from primary data (2025)

Observation results show that X (Twitter) is the primary communication instrument collectively, with a total of 60 uploads. The real-time, text-based nature of X (Twitter) is highly relevant for the AI technology industry to announce system and feature updates rapidly. Interestingly, Meta AI is entirely absent from X/Twitter and TikTok, centralizing 100% of its communication power exclusively within its own ecosystem, namely Facebook and Instagram.

4.4. Public Response (Engagement) Analysis

In digital communication research, the success metric is not only seen from the magnitude of information distribution but also from how high the generated public interaction is (see Table 6).

Table 6. Comparison of Total Followers vs. Total Public Engagement (14 Days)

Brand	Total Followers (Est. 5 Platforms)	Total Engagement (Likes, Comments, etc. – 14 Days)	Platform with Highest Engagement Contribution
ChatGPT/OpenAI	~12.04 Juta	145.954	Instagram (55.495)
Gemini/Google	~99.40 Juta	185.380	YouTube (143.685)
Perplexity	~1.55 Juta	961.115	Instagram (824.206)
Meta AI	~122.71 Juta	154.937	Instagram (116.623)
Microsoft Copilot	~33.31 Juta	10.840	X/Twitter (7.631)

Source: Processed from primary data (2025)

From the data above, a significant empirical anomaly is revealed. A high number of organic followers (such as Meta AI and Gemini with tens to hundreds of millions of followers) is not always directly proportional to a high number of engagements. Conversely, an entity with a smaller number of followers (Perplexity) was able to create an explosion of interaction through the right content approach.

4.5. Qualitative Content Analysis and Empirical Observation Evidence

To provide analytical depth regarding why engagement metrics on certain platforms can skyrocket, researchers dissected several key upload samples (evidence). First, the feature dissemination and product update strategy conducted by ChatGPT/OpenAI. They packaged technical information into easily consumable visual content, such as using animated characters for the holiday momentum on X, as well as a casual interactive vertical format on TikTok. Second, the engagement anomaly successfully created by Perplexity. Based on the data, Perplexity, which has the smallest number of followers (~1.55 million), surprisingly won the highest public engagement matrix with nearly 1 million interactions. This was driven by the use of a General/Partnership communication tactic, specifically an investment collaboration (celebrity endorsement) with global footballer Cristiano Ronaldo on Instagram. Evidently, the content gained extraordinarily high engagement with over 783,000 likes and 40,000 comments. Third, seasonal and leadership engagement approaches also proved effective. Meta AI used collaborative video content with a holiday season theme featuring a "Gingerbread Elf" character on Facebook. Meanwhile, Microsoft Copilot published the "Satya Nadella Excel Championship" campaign on X featuring their CEO to highlight corporate culture values.

4.6. Sensitivity Analysis: The Impact of Celebrity Endorsement Posts

To examine the robustness of Perplexity's engagement findings, a sensitivity analysis was conducted by excluding two Cristiano Ronaldo endorsement posts from the calculation. The first post on Instagram (5 December 2025) generated 783,435 likes and 40,400 comments, for a total engagement of 823,835. The second post on X/Twitter (5 December 2025) was a repost that generated 117,000 likes, 4,000 comments, and 11,000 shares, for a total engagement of 132,000.

The sensitivity analysis reveals a highly informative pattern. The combined contribution of these two Ronaldo posts is 955,835 out of Perplexity's total 961,115 engagement that is, 99.5% of the brand's entire engagement during the observation period. Perplexity's engagement rate including both Ronaldo posts is 62.01%. Excluding only the Instagram Ronaldo post, the engagement rate falls to 8.86% still the highest among the five brands. Excluding both Ronaldo posts, the engagement rate collapses to 0.34%, placing Perplexity below ChatGPT/OpenAI (1.21%).

This finding underscores the sensitivity of aggregate engagement-rate metrics to one or two singular events. Perplexity's apparent engagement supremacy during the observation period is overwhelmingly attributable to celebrity endorsement strategy rather than to the brand's routine communication. Theoretically, this phenomenon can be understood through the U&G framework (Katz et al., 1973). Celebrity endorsement posts simultaneously satisfy at least three types of gratification: social-fication, parasocial, and novelty (Ruggiero, 2000). Sundar and Limperos (2013) further suggest that digital media afford four distinctive gratifications: modality, agency, interactivity, and navigability. The Ronaldo–Perplexity posts satisfy modality (visual presentation of an iconic figure) and agency (the sense that audiences are part of a narrative in which important figures use this AI), helping to explain the unusually high active engagement evidenced by 44,400 comments across the two posts. This pattern is consistent with celebrity endorsement research on social media, which demonstrates that parasocial interactions mediate the relationship between social media engagement and celebrity attachment, with downstream effects on brand-related outcomes (Aw & Labrecque, 2020). More specifically, Chung and Cho (2017) demonstrated that social media interactions cultivate parasocial relationships through self-disclosure, which in turn enhances source trustworthiness and brand credibility. This helps explain why the Instagram Ronaldo post, a platform format that emphasizes personal, lifestyle-oriented visual cues, generated

substantially higher engagement (823,835 interactions) than the X repost (132,000), even though both featured the same endorser.

Conversely, Microsoft Copilot's low engagement rate (≈0.03%) despite the largest follower base (33.31 million) reveals a mismatch between content strategy and audience-sought gratifications. Microsoft Copilot's audience largely composed of enterprise users within the Microsoft ecosystem likely seeks utilitarian gratifications (Cheng et al., 2025): information directly applicable to workplace productivity. Content that is more brand-storytelling or corporate-humor in nature does not satisfy this gratification, hence the low interaction despite the large audience. The practical implication is significant: AI brands cannot rely on a one-size-fits-all engagement strategy. What works for Perplexity (celebrity-driven emotional resonance) is not necessarily effective for Microsoft Copilot's enterprise audience.

5. CONCLUSION AND SUGGESTIONS

Based on the observations conducted on the five main AI tool brands, several primary conclusions can be drawn. First, X/Twitter is the most dominant digital communication platform used in the AI industry to distribute fast and technical information. Second, viewed from the communication strategy matrix, ChatGPT/OpenAI, Gemini/Google, and Microsoft Copilot are entities applying a multi-platform strategy with aggressive intensity. Conversely, Meta AI and Perplexity utilize a focused pattern that selects platforms exclusively. Third, the most crucial finding is that a massive number of followers from a parent corporation does not guarantee the acquisition of massive engagement. The success of AI tools' digital communication is highly determined by the relevance of the message context, utilization of momentum (events), storytelling creativity, and the strength of strategic partnerships (celebrity endorsement).

The practical implications of this research suggest that tech companies and corporate communication practitioners should continuously tailor content formats to the algorithm and demographics of each platform, rather than uniformly cross-posting. The use of cross-disciplinary collaborative tactics has proven to be an effective brand awareness instrument. On the other hand, the limitation of this study is the brief observation period (14 days). For future research, it is highly recommended to extend the observation time period and integrate qualitative discourse analysis on audience comment replies.

This study has several additional limitations that should be considered. First, the definition of engagement differs across platforms in technical terms (X uses Likes, Replies, Reposts, and Quotes; Facebook uses six types of Reactions; YouTube displays Views, which are not equivalent to active engagement), so absolute cross-platform comparisons must be interpreted as rough indicators. Second, the study did not filter for bots or fake accounts, as platforms do not provide public APIs for such identification. Third, one large campaign (Year in Search 2025 from Gemini/Google) and two celebrity endorsement posts from Perplexity may have biased the observed patterns the sensitivity analysis in Section 4.6 demonstrates that Perplexity's position in the engagement rate ranking changes significantly when the two Ronaldo posts are excluded, falling from 62.01% to 0.34%. Fourth, although inter-rater reliability met the substantial-agreement standard ($\varkappa = 0.782$), this study involved only two coders; further research with three or more coders may strengthen reliability claims, particularly for categories with lower agreement such as the Event/General and Product/Education boundaries.

Ethical Approval

This study utilized observational methods on secondary data available in the public domain (open social media); thus, it did not require formal ethical approval from an institutional ethics committee.

Informed Consent Statement

This research did not directly involve human subjects. All analyzed data originated from the official uploads of corporate accounts on public platforms, which do not require informed consent.

Authors' Contributions

LAA contributed to the conceptualization, methodology, formal analysis, and writing of the original draft. MFS contributed to conceptualization, formal analysis, resources, and writing—review and editing. All authors have read and agreed to the published version of the manuscript.

Disclosure statement

No potential conflict of interest was reported by the authors.

Data Availability Statement

The data presented in this study are available on request from the corresponding author.

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Notes on Contributors

Lutfi Adji Ardiansyah
https://orcid.org/0009-0005-4351-1366
Lutfi Adji Ardiansyah is a graduate student in the Master of Communication Science program at Universitas Paramadina, Indonesia. His research interests focus on digital communication strategies, corporate communication, and the impact of artificial intelligence on media ecosystems.

Muhammad Farizan Saputera
Muhammad Farizan Saputra is a graduate student in the Master of Communication Science program at Universitas Paramadina, Indonesia. His academic work revolves around public relations, social media analytics, and the intersection of technology and human communication.

Edison Bonartua Hutapea
https://orcid.org/0009-0001-4789-0325
Edison Bonartua Hutapea is affiliated with Master of Communication Science Program, Universitas Paramadina, Jakarta.

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