

Team H: Social Media Monitoring Targeting Small Businesses Using AI Software

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### **1. Introduction**

Internet, mobile applications, social media, and related digital applications have so far been critical members of daily life for millions across the globe. Based on the latest findings from Aral, Dellarocas & Godes (2013), nearly 5 billion persons are actively using the internet, which in this regard represents about 60% of the population of the world. The use of social media has emerged as a vital component of various lives across the globe. For instance, by 2019, Batrinca & Treleaven (2015) identified that about 3 billion persons were actively present on social media across the globe. This trend is projected to rise to 5 billion by 2030.

As cited by Dwivedi et al. (2021), social media enables businesses to meet their objectives in marketing by using the least cost. For instance, Facebook so far enjoys at least 50 million accounts of business entities, and more than 80% of firms use Twitter for marketing objectives. Social media applications, including their technologies, have been significantly used in enhancing awareness regarding public utilities and spurring promotions of political engagements. People have tended to spend most of their time on online platforms seeking information about services and commodities where they engage with the consumers regarding their experiences and that of the firms engaged in the business activities. In this regard, Ghouri, Mani, ul Haq & Kamble (2022) noted that firms have on their part, heeded this behavior from the consumer by ensuring that social and digital media are crucial in their strategic marketing plans.

Currently, characterized by the digital era, businesses should consider focusing on social media in their efforts toward their marketing goals. For instance, Kim (2021) stated that small

firms may consider connecting with bigger audiences, saving them costs after using social media platforms. On the other hand, social media has expanded, culminating in the data that results from the clients' interaction with the organizations (Lipschultz, 2019). Consequently, it has not been easy for smaller organizations to undertake the monitoring and analysis of their bigger data volumes with the intent of learning about the opinions and tastes of the consumers. In this regard, it calls for reasonable and effective priced solutions for social media monitoring for small and medium enterprises (SMEs) to tackle the issue. For example, Balakrishnan & Dwivedi (2021) identified that SMEs might seek assistance to justify. As a result, these organizations have no choice but to consider learning about the requirements and wants of their clients. Even though they need this information, Aral, Dellarocas & Godes (2013) noted that these SMEs are not in a position to make informed choices that would boost their revenue, marketing, and retention of their clients.

Not forgetting, certain drawbacks are linked to social media tracking, like the effort and time needed to analyze several data volumes like videos, texts, and photographs. According to Batrinca & Treleaven (2015), SMEs sometimes require many personnel and tools for handling complicated procedures. On the same note, SMEs may suffer because of the failure to respond to vital client engagements, complaints, and comments. Thus, our proposed business has suggested solving these issues by offering the SMEs access to the real-time social media act of monitoring equipment that is supported by artificial intelligence (AI), which is capable of analyzing many volumes of data, thereby leading to essential insights regarding the preferences, behaviors, and sentiments of the consumers.

## **2. Literature Review**

### **2.1. Environment**

Social media's invention and technological advancement have greatly affected the environment in which these organizations undertake their operations. According to Dwivedi et al. (2021), the focus in this aspect has been much on the behavior of consumers and their interactions through social media platforms. For instance, the behaviors of consumers have immensely experienced changes due to the innovation in technology and the unique usage of mobile devices, which directly impact how people interact and utilize social media in arriving at decisions, plus shopping online. As Ghouri, Mani, ul Haq & Kamble (2022) pointed out, the rise in social media usage has positively influenced consumers' attitudes toward online shopping with the increment in the share regarding eCommerce-centric firms. The rising statistics concerning online shopping channels are affected by the behavior of consumers, thereby leading to many diffused shopping experiences among consumers. At the same time, Kim (2021) added that mobile-based channels had ended up being the norm and presently have become integrated into the daily experiences among consumers following the use of social media appliances, location-oriented services, and mobile wallets, which all affect the experiences among consumers.

Like in the case of the traditional form of marketing, Lipschultz (2019) stressed the desire to know about the needs of each user together with their perspectives and perceptions towards many aspects of messaging and aspects of communication. Often firms are after identifying online communities' needs, creating exceptional cases of offerings that factor their needs, and effective communication with the members to enhance the satisfaction levels among these online-based communities. In a study conducted by Balakrishnan & Dwivedi (2021), the scholars analyzed the

aspects of social fulfillment regarding social media marketing. They concluded that these features are vital in enhancing the satisfaction of consumer-based motivations. Further, the study assessed the motivations based on belief and psychological factors associated with community engagement, justifying.

Consumers' attitudes towards social media may, at last, affect their implied attitudes towards the commodity. For instance, based on the findings from Aral, Dellarocas & Godes (2013), about the experiences of consumers who use Instagram for marketing, they concluded that attitudes impacted the perceptions of consumers towards the value of the content, its credibility and appealing effect plus the missing irritation that the advert from Instagram never had. Meanwhile, the rising trend concerning the targeted personal form of marketing has culminated in consumer privacy issues. In this regard, Batrinca & Treleaven (2015) identified that the elements of innovativeness from the consumers, the intended value, invasiveness, and privacy management directly influence the behavior among the consumer's desire towards matters about privacy. As a result, there is a need for organizations to be concerned about the aspect of privacy and consumer concerns since they are responsible for the development of the strategies, they use in advertising plus the building of longer durational satisfaction of the customers.

As much as various studies in literature depend on consumers from countries that are already developed, the findings from Batrinca & Treleaven (2015) stressed the value of being conversant with the changing behaviors of consumers from a broader perspective. The scholars researched marketing through social media in Egypt, stressing the value of emotion, personality, experience, and cognition as the elements that may affect the decision-making process taken by the consumer and the faith bestowed on online-based vendors. In this regard, the scholars argued

that varied demographics, behavioral segments among the consumers, their culture, demography, and geography must be factored by the organizations engaged in social media monitoring.

The voices of consumers have emerged to be much more powerful following the social media advancement, leading to them being heard by several people. Researchers Dwivedi et al. (2021) have dwelt on consumer engagement, the existing characteristics, effects, and motivations of social media communications, in which aspects like brand engagement, brand image, and self-image have affected the behaviors of consumers. The physiological and personal traits of consumers expressed in their self-esteem, satisfaction in life, narcissism, and desire for belonging, according to Ghouri, Mani, ul Haq & Kamble (2022), appear to serve a vital role among the consumers towards sharing their desire on the social media-based platforms.

Electronic word of mouth (eWOM) mode of communication may significantly affect the adoption of information, the consumers' attitude, the intention regarding the purchase, loyalty towards the brand, and the aspect of trust (Kim, 2021). In a study conducted by Lipschultz (2019), the scholars managed to collect and analyze the survey information from 300 millennials. They found that peer-based suggestions significantly affect the intention toward brand loyalty and consumer trust. Likewise, Balakrishnan & Dwivedi (2021) also found that the expression of subjectivity that touches on online-based reviews may result in an increment in the intentions regarding purchases among consumers. eWOM mode of communication may result in major benefits for firms but, at the same time, may be associated with diverse challenges. For instance, the negative cases of eWOM communication may be implicated with severe consequences to the organizations, leading to a damaged image, negativity in the attitude among the consumers, and the eventual decline in sales. According to Aral, Dellarocas & Godes (2013), consumers are fond of showing positive responses to the efforts made by organizations towards giving prompt

responses to negative postings done on social media, whereby the replies are handled instead of the generic instances of postings. At last, consumers tend to have a positive response towards the efforts by firms in giving prompt responses to negative postings on social media in which the replies are individually tackled, unlike the generic postings, thus resulting in the preservation of the trust and reputation of the brand.

The literature about social media proposes that the opinions made by leaders on online platforms serve a critical role in promoting commodities and services and, as a result, stressing the vitality in the selection of the desired influencers (Aral, Dellarocas & Godes, 2013). Opinion shapers may include enthusiasts, experts, early adopters, micro-celebrities, market mavens, and micro-influencers. Based on the study conducted by Kim (2021), they proposed that opinion leaders need to be used by organizations in promoting the utilitarian and hedonic value associated with the commodities plus the services through varied online platforms. The study suggested a total of five essential steps in the process of using influencers during promotional activities. The first case is the definition of the objectives behind the campaign and the role served by the opinion leaders. The second consideration is recognizing the influencers and related online-based opinion leaders. At the same time, the third case is the alignment whereby the institution matches the online-based opinion leaders, including the online platforms where the commodities or services are advertised or promoted. The fourth aspect denotes the motivation whereby a firm identifies the reward destined for the online-based opinion leaders in a manner that aligns with their societal role. The fifth aspect entails negotiating, supporting, and monitoring opinion-based leaders.

## 2.2. Marketing strategies

Organizations use several platforms on social media for marketing, and some of these platforms are Twitter, Facebook, Snapchat, and many others. The choice regarding the platforms relies on the consumers being targeted and the marketing strategy. In this context, Lipschultz (2019) investigated the usage of Snapchat as a social media tool for marketing, where the scholars targeted the young generation of consumers. The findings from the study stressed that Snapchat is seen as a dynamic, intimate, and casual platform that offers users information, entertainment, and socialization. At the same time, the study established that young consumers appear to have a positive attitude towards engendered related feelings from Snapchat to the purchase intention and the brands marketed through the platform.

Dwivedi et al. (2021) analyzed the diverse strategies organizations use, like the transformational, whereby the experience and the identity regarding the focus brand show desirable psychological features. The features in this regard are informational based, which offers real commodities, and service information based, which entails well-defined terms and relational aspects whereby the social media mode of marketing spurs the prevailing interactions with the messages and customer strategies (Ghouri, Mani, ul Haq & Kamble, 2022).

The studies conducted by Batrinca & Treleaven (2015) established that organizations often respond to interactive postings about brands compared to the informative content of messaging. For instance, Twitter was established by scholars as being very much effective regarding its informative appeal. Further, the findings stressed that Facebook performed much better on interactive entertainment-oriented postings. Also, Instagram was much preferable for interactive content that combines informative and entertainment appeals. Interactive postings about the brand and a mixture of appeals gained many responses on Instagram and Facebook. In contrast, the self-



oriented contents of messages characterized by the informative appeal attracted minimal cases of appeals, according to Balakrishnan & Dwivedi (2021).

Content marketing serves a significant role in the success of communications involving marketing. Aspects linked to literature have had their arguments that using emotions during messages has significant effects on the behavior of consumers. In this regard, Aral, Dellarocas & Godes (2013) analyzed the marketing content of more than B2B nations. Thus, the scholars established that using emotions in the marketing of contents may result in a competitive form of advantage and an increment in brand equity. Similarly, some studies assessed how organizations should consider sharing their respective video content. For instance, Kim (2021) carried out a scenario-oriented experiment with 550 participants and utilized the social impact-based theory to conclude that the live streaming-based strategy is more authentic to the clients than the recorded video-based content, leading to consumers making searches and intentions regarding purchasing.

The characteristics of messages on social media are very vital to marketers. For instance, Lipschultz (2019) utilized the motivation theory that cut across the context of tourism in justifying that the relevance, timelessness, flexibility, and completeness associated with an argument and the trustworthiness and quality of the credibility of the source positively affect the satisfaction among the users. Eventually, this may impact the intention among the users whereby the consumers are after revisiting the website and purchasing the tourism commodity. According to Dwivedi et al. (2021), the structure of the message, which includes its immediacy, interactivity, and formality, to a greater extent affects the behavior of the consumers, like the intention of the purchase and the corporate form of trust.

Businesses are faced with various challenges when coming up with their respective marketing strategies on social media. Based on the literal review done by Ghouri, Mani, ul Haq &

Kamble (2022), the scholars suggested a framework to assist the managers in coming up with the applicable social media as a tool for marketing. The suggested framework entails four dimensions: messaging, promotion, monitoring, assessment, and response. On the same note, Batrinca & Treleaven (2015) analyzed messages from Facebook from 812 firms and established that including emotion and humor might result in more consumer engagement.

### **2.3. Company**

Organizations have implemented several approaches in social media marketing where the firms have depicted diverse attitudes toward their strategies on social media. For example, the study by Aral, Dellarocas & Godes (2013) assessed the factors impacting traveling firms and tour guides. Through the use of questionnaires that had been gathered from 165 agencies, the scholars established that there exist both external and internal aspects that affect the attitude. Internal based factors constitute the managerial aspects and the educational level.

Similarly, the external factors constitute the pressures, perceived ease, and usage benefits. On the same note, the research done by Kim (2021) investigated the perceptions of social media marketing based on small wine production firms. Thus, the study established that while many wine manufacturing firms' owners value the emotional, social, and economic benefits associated with social media, they are involved in the exploitation to its full potential.

### **3. Social media monitoring issue outcomes**

The social media marketing effects may lead to several negative and positive outcomes for institutions. According to Lipschultz (2019), social media marketing positively affects consumer

retention and intention to purchase based on the hospitality contexts, fashion sector, and college students. Marketing on social media may positively affect the organization's brand regarding brand meaning, equity, loyalty, and sustainability. Using the schema theory and the multidimensional-based approach toward brand equity, the impact of communication on social media towards brand equity was evaluated based on the survey data of 321 global tourists. The findings revealed a positive impact on the social media intensity towards the intention and brand awareness for AI communication engagement. At the same time, Dwivedi et al. (2021) established that social media may have significant influences on the loyalty of the brand, the effectiveness of the business, and its sustainability.

Previous studies have factored the aspect of engaging consumers as the outcome of social media marketing. For example, Ghouri, Mani, ul Haq & Kamble (2022) suggested that engagement should be prioritized as the psychologically based state of mind and independently considered from the cases involving the interactive form of behavior such as sharing and liking the content. As much as several studies view the impact of social media marketing on commercial organizations, on the other hand, other studies have dwelt on the outcomes linked with the non-profit making institutions. For example, Batrinca & Treleaven (2015) evaluated the application of Twitter and Facebook based on the perspectives of non-profit generating entities and the outcomes, including the effect on user engagement. The researchers' justification for their study was that users tend to show varied responses toward the activities taking place on social media platforms.

Elsewhere there exists negative cases of outcomes and their eventual effects on social media marketing that the institutions should factor in. For example, Balakrishnan & Dwivedi (2021) stressed that AIs might be implicated with adverse effects in cases managed by service providers who are not skilled. Thus, the scholars asserted that if there is no proper development

and management of marketing, it might not offer the intended benefits, thereby leading to the destruction of its value, increment in the cost of transactions, operational costs, and adverse effects on the prolonged benefits.

Many latest studies have assessed the hypothesized association between humaneness or humane-related evolution features plus the ascriptions about social perceptions and humanity. According to Aral, Dellarocas & Godes (2013), humaneness or the missing dehumanization is linked to possessing complicated cognitive and agentic capabilities plus experiential and emotional-based responsiveness. Humanness and humanity, though they appear intertwined, are never synonymous at all. For example, Kim (2021) did not just define humanity as the combination of human beings and represented the features of kindness, benevolence, enactment, sympathy, compassion, and generosity. During this era dominated by AIs, societies find it hard to manage the intersections such as the human-human (gender, race, ethnicity, sexuality, religion, and many others), human-computer, and human-machine, plus many others. From every intersection, humanity is challenged, especially concerning the vulnerability to AIs. Thus, there is a need to understand more about the relationship between social media monitoring and AIs.

#### **4.0 Analysis of the Effectiveness of social media monitoring and AI**

Social media monitoring entails the assessment of networks among people whereby each person represents a node. In this regard, the social structure of the ties and connections linking the nodes are characterized and investigated during the analysis of the social networks. Following the definition provided by Lipschultz (2019), AI is the capacity of a computer system to understand the real world by itself. In this case, it enables the computers to perform tasks that would need the effort of human beings and their intelligence altogether. In the field of marketing, Dwivedi et al.

(2021) noted that AI is indeed a mighty gadget such that in the future, there are expectations that tools used for marketing will be using its features. As a result of these features, marketing tools may be able to interpret and analyze the information concerning the customers. A related example of this might be the product they prefer or how these consumers spend their time online. As much as there exists a wide range of AIs in the field of marketing, Ghouri, Mani, ul Haq & Kamble (2022) still insist that each of these tools is after fulfilling a common goal.

By being acquainted with the customer, brands can determine the relevant messages for marketing, find the desired influencers, refine their marketing strategy, and gain valuable information about their clients. Thus, Batrinca & Treleaven (2015) noted that in-depth knowledge about the clients offers an improvised version of the efficiency of the strategy deployed for social media marketing among the brands. Hence, this marks the vital role served by AI in the sector of marketing. At the same time, AI serves a crucial role in tools used for social media monitoring by reinforcing the new features for more brilliant suggestions and intelligent reached decisions based on the data that has been analyzed or collected about the product or brand.

## **5. What is needed to turn social media monitoring and AI innovation into a reality**

On many occasions, practitioners and academicians have been after understanding the positive AI cut across the nodes associated nodes within social networks. On the other hand, there exists value in analyzing the harmful AI within social networks, as suggested by Balakrishnan & Dwivedi (2021). The scholars in this regard explained the terminology online firestorm as the aspect which entails the waves regarding the adverse incidences on the social media-based platforms which have immensely affected celebrities, brands, politicians, and organizations due to the release of lesser information which is desirable. In this case, future studies may consider

exploring how technical capacities are linked to social network sites, individuals' social identity, and the commitment by firms' effects on individuals' propensity to share harmful AI. On top of the same, it would draw a lot of interest in using social media network evaluation for investigating the extent to whereby out and group members can convey harmful AI plus the possible effects of the messages on the same nodes.

There is a need to develop a platform for social media monitoring for the SMEs that the AI aids. According to Aral, Dellarocas & Godes (2013), insights regarding the clients' behavior and emotions may be gleaned from the vast data volumes in real-time through the AI software. For this paper, the selected social media monitoring implementation will be directly linked to the AI that will enhance its simplicity to even the SMEs to maintain their reputations when online. The tool's adaptability means that it may be used to monitor various factors, such as the performance of a marketing campaign or the mention of a specific term or phrase.

Team H's intended business for this paper will use natural language processing (NLP) and machine learning methods to guarantee the precision and applicability of the results. With these tools, the program can analyze social media posts for common themes, determine users' emotional states, and derive useful information about their preferences and habits. In addition, the program will be able to learn and evolve, leading to more precise and relevant findings. Also, using my suggested solution, small companies will have access to a low-cost, high-yield resource for keeping tabs on their social media activity and learning more about their consumers' habits and preferences. My platform will provide small companies the data they need to improve their marketing, client retention, and bottom line.

### **Summary**

Social media monitoring and AI allows the consumer to circulate their newer ideas via the complicated gatekeeping processes that ensure the tracking of their popularity and quality. Creativity is never restricted to documented knowledge and, as a result, factors in the commodities and services that may be individually generated (Kim, 2021). Based on the transformational leadership mode, individuals can convert the cognitive form of diversity to team creativity. Thus, these creative-oriented processes and systems are present within the face-to-face ecosystems and social media and AIs, which offer added evaluation tools.

Daily, people spend about three hours on social media platforms reading articles, blogs, news, and research, including connections with friends and business transactions (Lipschultz, 2019). Based on the social media prevalence among many consumers' lifestyles, it is prudent that our business uses practical social media monitoring tools and AIs to reach possible markets. Regardless of the same, social media also has its challenges for organizations since the lack of verified scales, continuous changes in their platforms, and the usage of social network analysis are required to understand how the information is conveyed to the consumers.

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