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# AI-Based Algorithms on Digital Platforms and Generation Z Purchasing Decisions: A Qualitative Study in Aceh

Rauzi Ramazalena<sup>1</sup>, M. Muslem<sup>2</sup>, N. Nazaruddin<sup>3</sup>, Ahmad Yani<sup>4</sup>, S. Syamsuddin<sup>5</sup>

<sup>1</sup> Department of Management, Faculty of Economics and Business, Universitas Malikussaleh, Lhokseumawe, Indonesia.  
Email: [rauzi@unimal.ac.id](mailto:rauzi@unimal.ac.id)<sup>1</sup>

<sup>2,3,4,5</sup> Department of Public Administration, Faculty of Social and Political Sciences, Universitas Malikussaleh, Lhokseumawe, Indonesia. Email: [muslem@unimal.ac.id](mailto:muslem@unimal.ac.id)<sup>2</sup>, [nazaruddin@unimal.ac.id](mailto:nazaruddin@unimal.ac.id)<sup>3</sup>, [ahmad.yani@unimal.ac.id](mailto:ahmad.yani@unimal.ac.id)<sup>4</sup>, [syamsuddin@unimal.ac.id](mailto:syamsuddin@unimal.ac.id)<sup>5</sup>

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## ABSTRACT

This study aims to explore the role of Artificial Intelligence (AI)-based algorithms on digital platforms in shaping the preferences and purchasing decisions of Generation Z in Aceh. The development of AI technology has changed the way consumers interact with information through content personalization systems tailored to user behavior. This study uses a qualitative approach with a phenomenological method through in-depth interviews with Generation Z who actively use social media. The results show that AI algorithms play a significant role in curating the displayed content, thus creating repeated exposure that can shape consumer preferences. These preferences then influence the purchasing decision-making process, which in many cases occurs spontaneously without in-depth information searches. Furthermore, digital platforms and user experience also strengthen the influence of algorithms in shaping consumer behavior. This study contributes to understanding the role of algorithms as actors in consumer behavior in the digital era and provides practical implications for business actors in optimizing AI-based marketing strategies.

**Keywords:** Artificial Intelligence, Algorithm, Digital Platform, Purchasing Decision, Generation Z.

## I. Introduction

The rapid development of digital technology in recent years has significantly transformed consumer behavior, particularly in interactions on digital platforms. One of the most influential innovations driving this transformation is the implementation of Artificial Intelligence (AI)-based algorithms that can analyze user data in real time and generate personalized content. This technology functions not only as a recommendation tool but also as a mechanism for creating more relevant and engaging digital experiences. According to Huang and Rust (2021), AI enables companies to deliver more effective personalized experiences to consumers. Furthermore, AI has become a fundamental component of modern data-driven marketing strategies and consumer behavior prediction systems. Krishnan et al. (2024) and Kumar et al. (2020) argue that AI has emerged as a transformative technology that enhances data analytics, customer personalization, and marketing automation. These technological advancements have substantially influenced various marketing activities, including the growing field of influencer marketing. Within social media environments, AI



algorithms operate by filtering and curating information based on users' preferences and behavioral patterns. As a result, users are repeatedly exposed to content that aligns with their interests, creating a highly personalized digital experience. This phenomenon is commonly referred to as algorithmic personalization. Previous studies indicate that AI-based recommendation systems can influence user choices through the selective presentation of information (Xiao & Benbasat, 2019). In addition, brand communication on social media is increasingly shaped by algorithms that determine content visibility and audience reach (Voorveld, 2019). Consequently, algorithms function not only as information providers but also as influential agents that shape users' information consumption patterns.

Generation Z is among the demographic groups most affected by these developments because they are digital natives and highly active users of social media platforms. They frequently rely on digital platforms as their primary source of information, including information related to purchasing decisions. Research has shown that interactions with digital technology significantly influence consumer decision-making processes (Kumar et al., 2020). Likewise, social media-based marketing strategies have been found to shape consumer perceptions and preferences (Li et al., 2021). In this context, consumer experiences are no longer linear but are instead constructed through complex digital interactions (Verhoef et al., 2021). AI algorithms not only provide information but also influence consumer preferences through repeated exposure to curated content. This phenomenon contributes to the formation of relatively homogeneous and segmented digital behavior patterns. As noted by Shin (2020), users' perceptions are increasingly shaped by algorithmic decisions and automated systems. This argument is supported by Mariani et al. (2022), who found that AI applications in marketing can influence consumer psychology, including perceptions, attitudes, and preferences. Therefore, consumer preferences are not solely formed through individual experiences but are also constructed through continuous interactions with digital systems. In Indonesia, online shopping has become increasingly popular due to the convenience and accessibility offered by various e-commerce platforms, particularly Shopee. The platform attracts consumers through promotional programs such as free shipping, discounts, and flexible payment options. Additionally, AI-powered features, including personalized product recommendations and chatbot services, enhance users' shopping experiences. Regular promotional campaigns such as Shopee 9.9, 10.10, and 12.12 further stimulate online purchasing activities. With increasing internet penetration and smartphone adoption, the growth of online shopping through Shopee and other e-commerce platforms is expected to continue in the coming years (Devi & Fadli, 2023).

Despite this growth, the expansion of online shopping in Indonesia has not occurred under entirely equitable conditions. Significant disparities in digital infrastructure remain across different regions, creating a gap between technological potential and users' actual capacity to utilize digital services effectively. Afriyanti et al. (2026) explain that the implementation of digital-based systems in many regions of Indonesia continues to face structural challenges, including inadequate information and communication technology infrastructure, unstable internet connectivity, unequal network distribution, and limited hardware availability. Beyond infrastructure issues, disparities in digital literacy further hinder the effective utilization of digital platforms. Many users have limited understanding of how digital systems operate, including the mechanisms through which algorithms generate personalized recommendations and content. Furthermore, insufficient public education regarding technology-based services leaves many users unaware of the available digital features and their implications for online shopping behavior. These conditions suggest that interactions with digital platforms in Indonesia are strongly influenced by local contextual factors that shape how users respond to, adopt, and engage with algorithm-driven systems. Therefore, understanding digital consumer behavior, particularly among Generation Z in regions such as Aceh, requires careful consideration of these contextual factors. The influence of AI algorithms on purchasing decisions is becoming increasingly complex because consumer decisions are no longer driven solely by rational considerations but are also shaped by automated recommendations and digital systems. Research demonstrates that AI can influence the entire customer journey, from information search to final purchase decisions (Dwivedi et al., 2021). Moreover, online reviews and recommendation systems reinforce this influence by affecting consumers' evaluations and choices (Zhang et al., 2022). This perspective aligns with the concept of machine agency, which suggests that

technology can act as an agent capable of influencing human behavior (Sundar, 2020). However, despite its advantages, the increasing use of AI also raises concerns regarding privacy, transparency, and personal data usage. Previous studies indicate that user perceptions of algorithmic systems are strongly influenced by trust and privacy concerns (Shin, 2020). These findings highlight the complex relationship between the benefits and risks associated with AI-driven technologies

Although numerous studies have examined the relationship between AI and consumer behavior, most have employed quantitative approaches that primarily focus on statistical relationships among variables (Dwivedi et al., 2021). Such approaches often fail to capture the subjective experiences of users interacting with algorithmic systems. Furthermore, existing studies generally position AI as a marketing support tool rather than as a mechanism that actively shapes consumer preferences through repeated exposure to curated content (Huang & Rust, 2021). Research focusing on local contexts such as Aceh also remains limited, despite the potential influence of social and cultural factors on individuals' responses to digital technologies. This perspective is further supported by Harun (2025), who examined the impact of digital transformation on governance and decision-making processes in the modern era. His study suggests that AI-based technologies have fundamentally changed how systems respond to user behavior. Decision-making processes that were previously linear and sequential have become increasingly dynamic and adaptive. AI systems continuously learn from user interactions and adjust their responses based on real-time data. This mechanism, commonly known as algorithmic feedback, enables systems to identify behavioral patterns, analyze them, and subsequently provide more relevant and personalized recommendations. Importantly, this process is not passive. AI algorithms do not merely respond to user needs; they actively contribute to shaping users' habits, preferences, and behavioral tendencies. Consequently, algorithms have evolved from technical tools into influential mechanisms capable of shaping human behavior. This phenomenon is particularly relevant for Generation Z, whose interactions with digital platforms are more intensive than those of previous generations.

Based on these research gaps, this study seeks to explore the role of AI-based algorithms in shaping Generation Z's preferences and purchasing decisions within the context of Aceh. Specifically, the study addresses the following research questions: (1) How do AI-based algorithms shape the content experienced by Generation Z users on digital platforms? (2) How does repeated algorithmic exposure influence the formation of consumer preferences among Generation Z in Aceh? (3) How do algorithmically formed preferences affect Generation Z's purchasing decisions? and (4) What role do digital platform features and user experiences play in amplifying algorithmic influence? Therefore, this study aims to examine how AI-based algorithms on digital platforms shape the preferences and purchasing decisions of Generation Z in Aceh. It focuses on the mechanisms through which algorithms present content, influence user preferences, and affect purchasing decision-making processes. Furthermore, this study seeks to provide a deeper understanding of Generation Z's subjective experiences in interacting with algorithmic systems within an increasingly digitalized environment. By adopting a qualitative approach, this research contributes to the existing literature by offering contextual insights into how AI-driven technologies influence consumer behavior in a local Indonesian setting.

## II. Literature Review and Hypothesis Development

### 2.1. Artificial Intelligence, Algorithms, and Personalization on Digital Platforms

The rapid development of digital technology has accelerated the adoption of Artificial Intelligence (AI) across various aspects of life, including marketing activities and consumer interactions on digital platforms. Artificial Intelligence refers to the capability of computer systems to simulate human intelligence in processing information, learning behavioral patterns, and making decisions automatically based on available data. In the context of digital marketing, AI is widely utilized to analyze user behavior in real time, enabling the creation of more personalized and relevant consumer experiences. Huang and Rust (2021) explain that AI allows organizations to deliver more effective services through data-driven automation and

personalization systems. Similarly, Dwivedi et al. (2021) argue that AI has become a critical component of digital transformation because it enhances marketing efficiency, improves the understanding of consumer needs, and enables more accurate predictions of purchasing behavior. In practice, the implementation of AI on digital platforms is closely associated with the use of algorithms that drive content personalization processes. Algorithms operate by collecting and analyzing user activity data, including search history, content engagement, viewing duration, and product browsing behavior (Bernardis et al., 2022; Boka et al., 2024; Ludewig & Jannach, 2018; Mu, 2025; Nasir & Ezeife, 2023; Shiwei, 2025; Zheng et al., 2024). The collected data are subsequently processed to determine which content is most relevant to individual users. According to Paschen et al. (2020), AI-based algorithms function not only as analytical tools but also as mechanisms capable of influencing consumer behavior through predictive recommendations. Consequently, algorithms play a central role in determining the information users encounter and consume most frequently on digital platforms. The use of AI-driven algorithms is particularly evident on social media and e-commerce platforms such as TikTok, Instagram, and Shopee. These platforms rely on automated recommendation systems to increase user engagement by delivering personalized content. Voorveld (2019) states that brand communication on social media is increasingly influenced by algorithms that determine content visibility and audience reach. As a result, users are repeatedly exposed to content that reflects their interests and previous online behavior. Xiao and Benbasat (2019) further explain that recommendation systems can influence user choices through the selective and repetitive presentation of information. Consequently, users are more likely to consume homogeneous content, which may contribute to the formation of specific digital consumption patterns.

This phenomenon is commonly referred to as algorithmic personalization. The primary objective of personalization is to enhance user experience and increase the likelihood of engagement with digital content. However, personalization may also create a condition known as a filter bubble, in which users are predominantly exposed to information that reinforces their existing preferences and beliefs (Pariser, 2011). Shin (2020) argues that algorithmic decisions shape users' perceptions through automated information selection processes. This indicates that algorithms function not only as information filters but also as mechanisms that influence how users perceive products, services, and emerging digital trends. It is important to distinguish algorithmic personalization from user-initiated filtering. While user-initiated filtering results from deliberate individual choices, algorithmic personalization is driven by system-generated inferences based on behavioral data. As a result, algorithmic personalization often operates more subtly and may exert a stronger influence on consumer behavior. The increasing sophistication of AI and algorithmic systems demonstrates that technology has evolved beyond being merely a functional tool. Instead, it has become an active component in shaping consumer behavior. Through continuously refined recommendation systems, digital platforms direct users' attention toward specific information, products, and services. Mariani et al. (2022) explain that AI applications in marketing can significantly influence consumer psychology, including perceptions, preferences, and attitudes toward products. Therefore, AI-driven systems play an increasingly important role in shaping the digital experiences and behavioral patterns of consumers.

Interestingly, similar patterns have been observed beyond the fields of marketing and consumer behavior, suggesting that the influence of AI algorithms extends across multiple domains. Harun (2025), in his study of digital governance systems, found that AI algorithms function not only as decision-support tools but also as mechanisms that continuously shape user behavior. Within digital governance systems, algorithms continuously collect user data, process behavioral information, and adjust system outputs based on learned patterns. This process occurs repeatedly and continuously, creating a dynamic feedback loop between users and the system. As users interact more frequently with the system, larger volumes of behavioral data are collected, enabling the algorithm to predict and influence future actions with greater accuracy. Harun (2025) conceptualizes this process as the cybernetic implementation model, which describes how AI-based systems regulate and shape behavior through adaptive and continuously evolving feedback mechanisms. This concept illustrates that algorithms no longer merely execute human instructions; rather, they actively guide and influence human actions. Within the context of digital platforms frequently used by Generation Z, this

perspective provides valuable insights into how consumer preferences and purchasing decisions may develop without users being fully aware of the underlying mechanisms. Therefore, AI-based algorithms have become a critical factor in shaping digital experiences, particularly among Generation Z, whose daily interactions with digital platforms are exceptionally intensive.

## 2.2. Consumer Behavior and Purchasing Preferences in the Digital Environment

The rapid development of digital technology has significantly transformed consumer behavior, particularly in the processes of information search, product evaluation, and purchasing decision-making. Consumers in the digital era no longer passively receive information; instead, they actively engage with various forms of content available on digital platforms. The emergence of social media, e-commerce platforms, and Artificial Intelligence (AI)-based recommendation systems has made information consumption faster, more personalized, and increasingly interactive. Kumar et al. (2020) explain that digital technology has fundamentally changed the way consumers interact with brands and has significantly influenced the purchasing decision-making process. Consequently, consumer behavior is no longer linear but is shaped by continuous and multidimensional digital interactions. Within the digital environment, consumer preferences are largely formed through users' experiences when interacting with content displayed on digital platforms. Consumer preferences can be defined as an individual's tendency to favor or select a particular product over alternative options based on perceptions, experiences, and acquired information. Li et al. (2021) argue that social media plays a crucial role in shaping consumer perceptions and preferences through interactive and personalized digital communication. Repeated exposure to content increases consumers' familiarity with products, thereby enhancing their interest in and trust toward those products. As a result, preferences are gradually developed through continuous engagement with digital content. It is important to recognize that preference formation through repeated exposure is not limited to a specific context. Rather, it represents a cross-contextual phenomenon that can be observed across various domains, including digital marketing, education, and organizational governance. This suggests that there is a universal mechanism underlying how individuals respond to repeated exposure to digital systems and content.

Evidence of this phenomenon can be found in the study conducted by Nababan et al. (2026), which examined the adoption and acceptance of digital platforms in educational settings. Their findings revealed that educators and administrative staff gradually developed positive attitudes and preferences toward digital platforms through repeated interactions over time. Notably, these preferences emerged naturally through direct experience rather than through structured training or formal instruction. In other words, the frequency and intensity of interaction with the digital system itself were sufficient to foster positive perceptions and acceptance without requiring extensive technical knowledge. The findings of Nababan et al. (2026) provide valuable insights into broader patterns of digital user behavior. If repeated exposure can shape preferences in educational contexts, a similar mechanism is likely to operate even more strongly within commercial environments such as social media and e-commerce platforms, where user interactions occur more frequently and content is intentionally optimized by algorithms to attract and retain attention. Therefore, repeated exposure to digital content can be viewed as a universal mechanism in the formation of user preferences across different contexts. In this process, digital platform algorithms play a critical role in determining which information users encounter most frequently and repeatedly. Furthermore, consumer behavior in digital environments is strongly influenced by the characteristics of the content presented. Engaging visual content, user-generated reviews, short-form videos, and influencer recommendations are among the factors that attract consumer attention and increase product interest. Verhoef et al. (2021) explain that consumer experiences in the digital era are shaped through multiple interconnected touchpoints involving users, digital platforms, and online content.

Consequently, purchasing decisions are influenced not only by rational evaluations of product attributes but also by emotional experiences and visual stimuli encountered during platform usage. This condition makes consumers more likely to develop interest in products that repeatedly appear within their

digital environments, particularly on social media feeds. In the purchasing decision-making process, digital consumers increasingly rely on online recommendations and the experiences of other users as primary sources of information. Zhang et al. (2022) found that online reviews and digital recommendation systems exert a significant influence on consumer purchasing decisions. Consumers often perceive user-generated and organic content as more trustworthy than traditional advertising. As a result, purchasing decisions may occur impulsively after repeated exposure to a particular product across digital platforms. This indicates that preferences and purchasing decisions within digital environments are heavily influenced by algorithmic systems that regulate the distribution and visibility of information. The transformation of consumer behavior in the digital era also demonstrates the growing ability of technology to shape consumption patterns indirectly. Consumers have become increasingly dependent on digital platforms for searching information, comparing products, and making purchasing decisions. According to Sheth (2020), digital technological advancements have comprehensively transformed consumer interaction patterns, including shopping behavior and marketing communication processes. Therefore, consumer behavior in contemporary digital environments cannot be separated from the influence of technology, algorithmic systems, and personalization mechanisms embedded within modern digital platforms.

### 2.3. Generation Z and Interaction with Digital Platforms

Generation Z refers to the cohort born during the era of rapid internet expansion and digital technological advancement and is often described as a generation of digital natives. Growing up in an environment characterized by widespread smartphone usage, social media engagement, and instant access to information, Generation Z has developed a high level of adaptability to technological innovation compared to previous generations. In their daily lives, digital platforms serve not only as communication tools but also as primary sources of entertainment, information, education, and consumption-related activities. Kumar et al. (2020) explain that younger generations exhibit a strong attachment to digital technology, which significantly influences how they communicate, seek information, and make purchasing decisions. The use of digital platforms among Generation Z is primarily centered on social media applications such as TikTok, Instagram, and YouTube, as well as various e-commerce platforms. These platforms have become an integral part of their everyday lives because they provide fast, interactive, and personalized content tailored to users' interests and behaviors. Li et al. (2021) argue that social media has the capacity to shape consumer perceptions and engagement through personalized and repetitive digital communication. Consequently, Generation Z is particularly attracted to visual content, short-form videos, and algorithmically generated recommendations that appear automatically on their feeds and homepages. This indicates that their digital experiences are strongly influenced by the algorithmic systems embedded within contemporary digital platforms. Furthermore, Generation Z tends to place greater trust in information obtained through social media than in conventional information sources. Before making purchasing decisions, they frequently seek product-related information through user reviews, influencer-generated content, and algorithmic recommendations. Verhoef et al. (2021) explain that consumer experiences in the digital era are shaped through multiple interconnected digital interactions that occur simultaneously across various platforms. As a result, Generation Z's decision-making processes are often accelerated and influenced by repeated exposure to content that continuously appears within their digital environments. In certain situations, purchasing decisions may occur spontaneously after users repeatedly encounter appealing products or services online.

The highly active digital behavior of Generation Z makes them particularly susceptible to the influence of Artificial Intelligence (AI)-based algorithms. Through content personalization systems, digital platforms continuously deliver information that aligns with users' behavioral patterns and preferences. Shin (2020) argues that algorithmic decisions have the capacity to shape users' perceptions of the information they receive. Therefore, algorithms influence not only the type of content consumed by Generation Z but also the formation of their preferences, interests, and broader behavioral patterns within digital environments. Moreover, the extensive use of digital platforms enables Generation Z to remain closely connected to

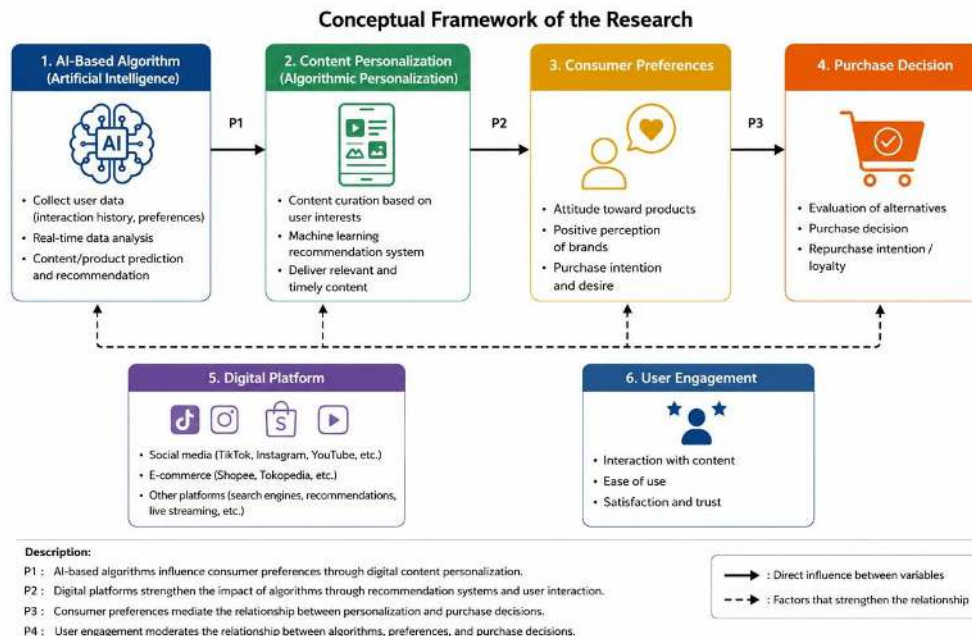
emerging consumption trends and digital culture. They are more likely to engage with products, brands, or services that gain popularity on social media due to curiosity, social influence, and the desire to remain aligned with prevailing trends. This phenomenon suggests that Generation Z's interactions with digital platforms are influenced not only by personal needs and preferences but also by social constructions generated through algorithmic systems and digital interactions. Consequently, Generation Z represents a particularly relevant demographic group for understanding how AI-based algorithms shape consumer preferences and purchasing decisions in the contemporary digital era.

#### 2.4. Theoretical Framework

This study is grounded in four key theoretical concepts:

- a. Artificial Intelligence in Marketing, which explains how AI systems analyze, predict, and influence consumer behavior.
- b. Algorithmic Personalization, which explains how personalized content delivery contributes to preference formation.
- c. Consumer Behavior Theory, which provides a framework for understanding consumer decision-making processes.
- d. Machine Agency Theory (Sundar, 2020), which explains the role of technology as an active agent capable of influencing human behavior and decision-making.

These four concepts collectively provide the theoretical foundation for understanding how AI-based algorithms interact with users and influence consumer preferences and purchasing decisions within digital environments.



**Figure 1. Conceptual Framework**

As this study adopts a qualitative approach, the following research propositions are proposed:

- P1: AI-based algorithms contribute to the formation of consumer preferences through the curation and personalization of digital content.*
- P2: Digital platforms amplify the influence of algorithms through personalization mechanisms and continuous user interactions.*
- P3: Preferences formed through repeated exposure to algorithmically curated content influence Generation Z's purchasing decisions.*
- P4: Users' subjective experiences mediate the relationship between algorithmic influence and purchasing decisions.*

### III. Research Method

#### 3.1. Research Design, Research Setting, and Participants

This study employed a qualitative approach with a phenomenological research design. This approach was selected because the study aims to gain a deeper understanding of Generation Z's subjective experiences in interacting with AI-based algorithms on digital platforms. The phenomenological approach, as proposed by Moustakas (1994), enables researchers to explore the essence and meaning of individual experiences related to how algorithms influence preferences and purchasing decisions. Rather than focusing solely on the measurement of variables, this approach seeks to capture the lived experiences of digital consumers within their everyday contexts. The study was conducted in Lhokseumawe City, Aceh, between January and March 2026. The research setting included both online and offline contexts, as participants were invited to reflect on their experiences with digital platforms during and prior to the interview process. Generation Z was selected as the target population because this cohort represents one of the most active groups of digital platform users in Indonesia, particularly in terms of social media engagement and e-commerce usage. A total of twelve informants participated in this study. The number of participants was determined based on the principle of data saturation, which was achieved when no new themes or meaningful insights emerged from subsequent interviews. The inclusion criteria for informants were as follows: (1) aged between 17 and 25 years; (2) actively using social media platforms such as Instagram, TikTok, YouTube, or similar applications for at least three hours per day; (3) having made at least one purchase through a digital platform within the three months preceding the interview; and (4) being willing to participate voluntarily and provide informed consent. Participants were recruited through purposive sampling at Malikussaleh University and surrounding communities in Lhokseumawe. A summary of the informant profiles is presented in Table 1.

**Table 1. Summary of Informant Profiles**

No.	Code	Age	Gender	Platforms Used	Daily Usage
1	INF-01	19	Female	TikTok, Instagram, Shopee	> 5 hours
2	INF-02	20	Male	TikTok, YouTube	> 3 hours
3	INF-03	22	Female	Instagram, Shopee, TikTok	> 4 hours
4	INF-04	18	Female	TikTok, Shopee	> 6 hours
5	INF-05	21	Male	YouTube, Instagram	> 3 hours
6	INF-06	23	Female	TikTok, Tokopedia	> 4 hours
7	INF-07	17	Female	TikTok, Instagram	> 5 hours
8	INF-08	24	Male	Instagram, Shopee	3–4 hours
9	INF-09	20	Female	TikTok, Shopee	> 4 hours
10	INF-10	25	Male	Instagram, Tokopedia	3–4 hours
11	INF-11	19	Female	TikTok, Shopee	> 5 hours
12	INF-12	22	Male	YouTube, TikTok, Shopee	3–4 hours

### 3.2. Data Collection Techniques

Data were collected using two primary techniques. First, in-depth semi-structured interviews were conducted individually with each informant. Each interview lasted approximately 45–60 minutes and was carried out in locations that were comfortable and convenient for participants, including university facilities and participants' residences. With participants' written consent, all interviews were audio-recorded using a digital recording device and subsequently transcribed verbatim for analysis. The interview protocol consisted of four thematic areas: (1) general patterns of digital platform usage; (2) perceptions of content appearing on social media feeds; (3) the influence of digital content on product preferences and interests; and (4) experiences related to purchasing decisions made through digital platforms. Prior to the main data collection phase, the interview protocol was refined through two pilot interviews to ensure clarity and relevance. Second, digital artifact documentation was employed as a supplementary data collection method. Participants were invited to share screenshots of their social media feeds and recently purchased product pages to provide contextual evidence and support data triangulation. All research procedures adhered to established ethical standards. Informed consent was obtained from all participants, and personal information was anonymized through the use of participant codes (INF-01 to INF-12) to ensure confidentiality and privacy protection.

### 3.3. Data Analysis

The collected data were analyzed using thematic analysis following the six-phase framework proposed by Braun and Clarke (2006). The analysis began with data familiarization through repeated reading of interview transcripts to gain a comprehensive understanding of the dataset. The second phase involved generating initial codes by systematically identifying and labeling meaningful units of information across the data. In the third phase, related codes were grouped into potential themes to identify broader patterns of meaning. The fourth phase consisted of reviewing and refining the themes to ensure their coherence, consistency, and distinctiveness in relation to the dataset. In the fifth phase, each theme was clearly defined and named to establish its conceptual boundaries and analytical significance. Finally, the sixth phase involved producing the research report by integrating thematic findings with relevant theoretical perspectives and existing literature, thereby providing a comprehensive interpretation of the participants' experiences and perceptions.

## IV. Result and Discussion

### 4.1. Overview of Informants

This study involved twelve Generation Z informants from Aceh who actively use digital platforms such as Instagram, TikTok, YouTube, and e-commerce applications. The informants were selected based on predetermined criteria and participated in in-depth interviews designed to explore their experiences with AI-driven algorithms on digital platforms. In general, the informants reported high levels of social media engagement, with an average daily usage duration exceeding three hours. Most participants also acknowledged having purchased products after being exposed to content displayed on digital platforms, indicating the significant role of digital media in shaping their consumption behavior.

### 4.2. The Role of AI Algorithms in Content Personalization

The findings reveal that Artificial Intelligence-based algorithms play a dominant role in determining the content displayed to users on digital platforms. Most informants reported that the content appearing on

their social media feeds closely reflected their interests, browsing history, and previous interactions. One informant explained:

*"If I frequently watch skincare-related content, my TikTok feed eventually becomes filled with skincare products."*(INF-04)

This finding suggests that algorithms continuously utilize behavioral data to deliver content that aligns with users' demonstrated interests. Through a dynamic feedback process, the system learns from user interactions and refines future content recommendations accordingly. This phenomenon is consistent with the concept of algorithmic personalization, whereby digital systems tailor information based on users' preferences and behavioral patterns (Xiao & Benbasat, 2019). Interestingly, most informants perceived this personalization process as beneficial rather than intrusive. They viewed personalized content as convenient and relevant to their needs. This finding reflects what Shin (2020) describes as algorithmic trust, whereby users accept algorithmic decisions because they perceive them as accurate and useful. However, despite this trust, participants demonstrated limited awareness of how algorithms collect, process, and utilize personal data. This finding raises important concerns regarding algorithmic transparency and digital literacy, which warrant further investigation.

#### 4.3. Formation of Consumer Preferences Through Algorithmic Exposure

The study found that repeated exposure to digital content plays a significant role in shaping consumer preferences. Several informants reported becoming interested in products only after repeatedly encountering related content on social media platforms. One participant stated:

*"At first, I was not particularly interested, but because the content kept appearing, I became curious and eventually liked it. Later, I started searching for the product myself."*(INF-07)

This finding is consistent with the mere exposure effect proposed by Zajonc (1968), which suggests that repeated exposure to a stimulus increases individuals' positive attitudes toward it. Within digital environments, this psychological mechanism is amplified through algorithmic systems that repeatedly present similar content based on users' initial engagement signals. Even minor interactions, such as pausing while scrolling or watching a video for a few additional seconds, may trigger the algorithm to deliver more content of a similar nature. As a result, users become increasingly exposed to a narrower range of content categories that reinforce existing interests and preferences. This pattern reflects the filter bubble phenomenon, whereby users predominantly encounter information consistent with their previous behaviors and preferences (Shin, 2020). An important finding of this study is that informants generally perceived these preferences as self-generated and authentic, despite the substantial influence of algorithmic curation. This observation has important implications for understanding consumer agency in digital environments, where personal preferences may be partially shaped by invisible algorithmic processes.

#### 4.4. Influence on Purchasing Decision-Making

The findings indicate that preferences formed through algorithmic exposure contribute directly to purchasing decisions. Many informants admitted that they frequently purchased products not because they actively searched for them, but because repeated exposure to digital content generated interest and trust. One informant explained:

*"I bought it because I kept seeing reviews on TikTok, so I trusted them. I did not even compare prices beforehand."*(INF-09)

Another participant stated:

*"Sometimes I do not plan to buy anything, but after watching several videos, I suddenly add products to my cart."* (INF-03)

These findings suggest that algorithms influence not only the awareness stage of the consumer journey but also the final stages of decision-making. This finding supports Proposition P3, which proposes that preferences formed through algorithmic exposure influence Generation Z's purchasing decisions. Unlike traditional consumer decision-making models, which assume a rational and deliberate evaluation process (Ajzen, 1991), the purchasing decisions observed in this study were often impulsive and mediated by algorithmic recommendations. This finding is consistent with Dwivedi et al. (2021), who argue that AI-powered recommendation systems compress multiple stages of the consumer journey by integrating awareness, preference formation, and decision-making into a seamless digital experience. Furthermore, the findings support Zhang et al. (2022), who emphasize the importance of digital content credibility, particularly peer reviews and influencer endorsements, in stimulating purchasing behavior.

#### 4.5. The Role of Digital Platforms and User Experience

Digital platforms such as TikTok and Instagram serve as important mechanisms that amplify the influence of algorithms. Features such as the For You Page and Explore Page facilitate the widespread distribution of personalized content, increasing users' exposure to algorithmically curated information. Informants also emphasized the importance of content quality and user experience in shaping their engagement with digital content. Interactive and visually appealing content was consistently reported as more effective in attracting attention and stimulating interest. One participant stated:

*"If a video is interesting, I am more likely to watch it until the end, and sometimes I buy the product immediately. High-quality videos make me trust the product more."* (INF-11)

This finding supports Proposition P2, which suggests that digital platforms strengthen the influence of algorithms through personalization mechanisms and user interactions. The result is consistent with Verhoef et al. (2021), who conceptualize digital customer experience as a journey shaped by multiple interconnected touchpoints involving users, content, and platform architecture. The findings further demonstrate that visual quality and interactivity play particularly important roles for Generation Z consumers, who tend to respond more positively to engaging short-form video content than to static images or text-based information. From a managerial perspective, this suggests that investments in content quality contribute not only to aesthetic appeal but also to greater algorithmic visibility, as digital platforms often prioritize highly engaging content in their recommendation systems.

#### 4.6. Discussion

The findings of this study demonstrate that Artificial Intelligence-based algorithms play a significant role in shaping Generation Z's preferences and purchasing decisions. Consistent with Huang and Rust (2021), the results indicate that AI influences consumer behavior through personalized content delivery that aligns with users' interests and behavioral patterns. The findings also support Machine Agency Theory (Sundar, 2020), which argues that technology functions not merely as a passive tool but as an active agent capable of influencing human behavior and decision-making processes. The study further confirms previous findings by Xiao and Benbasat (2019), who suggest that recommendation systems influence user choices through the selective presentation of information. However, the present study extends the existing literature by demonstrating that the influence of AI algorithms operates not only at the cognitive level but also at the level

of users' subjective experiences. Informants consistently described a gradual process through which repeated exposure to digital content transformed initial curiosity into preference formation and ultimately into purchasing behavior. Another important contribution of this study lies in its contextual perspective. Although the behavioral patterns observed among Generation Z in Aceh are broadly consistent with global trends in digital consumer behavior, the findings suggest that local social and cultural contexts continue to shape how users interpret, trust, and respond to algorithmically curated content. Therefore, understanding the influence of AI-based algorithms requires consideration not only of technological factors but also of the social and cultural environments within which digital interactions occur. Overall, the findings demonstrate that AI-driven algorithms have become influential actors in contemporary digital environments, shaping not only what users see but also how they think, develop preferences, and make purchasing decisions. These results reinforce the growing importance of understanding algorithmic influence in the study of consumer behavior and digital marketing.

## V. Conclusion

This study aimed to explore the role of Artificial Intelligence (AI)-based algorithms on digital platforms in shaping the preferences and purchasing decisions of Generation Z in Aceh. The findings reveal that AI-driven algorithms play a significant role in curating the content presented to users through behavioral data-based personalization systems. Repeated exposure to algorithmically curated content was found to gradually shape consumer preferences, as interest in products emerged not only from existing needs but also from continuous interactions with digital content. These preferences subsequently influenced purchasing decisions, which, in many cases, occurred spontaneously without extensive information searching or deliberate evaluation. Furthermore, the findings indicate that digital platforms and user experiences amplify the influence of algorithms on consumer behavior. Features such as personalized content recommendations, visually engaging content, and interactive platform designs contribute to strengthening users' preferences and purchase intentions. These findings suggest that Generation Z's purchasing decisions are no longer driven solely by rational considerations but are also influenced by digital environments constructed through algorithmic systems. Therefore, this study confirms that AI-based algorithms function not only as technical tools but also as influential actors that shape consumer preferences and purchasing decisions in the contemporary digital era. From a theoretical perspective, this study contributes to the growing body of literature on Artificial Intelligence and consumer behavior by demonstrating that AI serves not only as an analytical tool but also as a mechanism that actively shapes consumer preferences through content personalization. In addition, the findings provide empirical support for Machine Agency Theory by illustrating how algorithms can function as agents that influence users' perceptions, preferences, and decision-making processes. This study also enriches the literature through its qualitative approach, which offers deeper insights into consumers' subjective experiences when interacting with algorithm-driven digital platforms.

From a practical perspective, the findings offer important implications for businesses and digital marketers. Organizations should optimize the use of AI technologies to create relevant, engaging, and consumer-oriented content. Furthermore, marketers should pay close attention to user experience factors, including content quality, visual appeal, and interactivity, as these elements enhance both algorithmic visibility and consumer engagement. A deeper understanding of algorithmic influence can assist organizations in developing more effective digital marketing strategies that strengthen customer engagement and stimulate purchasing behavior. Despite its contributions, this study has several limitations. First, the research focused exclusively on Generation Z consumers in Aceh; therefore, the findings may not be fully generalizable to other populations or geographical contexts. Second, the qualitative nature of the study relies on participants' subjective perceptions and experiences, which may introduce interpretive bias. Future research is encouraged to employ quantitative or mixed-methods approaches to examine the relationships among variables more comprehensively and to enhance the generalizability of findings. Further studies may also investigate different regions, demographic groups, or cultural settings to provide comparative insights.

Additionally, future research could incorporate variables such as trust, engagement, perceived usefulness, privacy concerns, or perceived risk to develop a more comprehensive understanding of how AI-based algorithms influence consumer behavior in digital environments.

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