AI-Powered Influence: Unveiling Consumer Engagement and Purchase Intentions in Malaysia

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Abstract

Artificial intelligence (AI) has revolutionized marketing strategies, particularly in the realm of influencer marketing, which plays a crucial role in shaping consumer behavior. This study examines the impact of AI-driven influencer marketing on customer engagement, purchase intentions, and consumer behavior in Malaysia, with consumer trust serving as a moderating variable. A quantitative research design was adopted, and data were collected from 500 respondents via an online survey. The results, analyzed using Smart PLS, reveal that AI-driven influencer marketing exerts a positive influence on customer engagement, purchase intentions, and consumer behavior. Moreover, consumer trust significantly moderates these relationships, intensifying the positive effects of AI-driven marketing efforts. These findings underscore the transformative potential of AI in optimizing influencer marketing strategies and emphasize the importance of cultivating consumer trust to enhance marketing effectiveness. This study contributes to the growing body of literature on AI in marketing and offers practical insights for businesses seeking to engage consumers more effectively. Theoretical and practical implications, along with limitations and directions for future research, are also discussed.

Keywords: *AI-Driven Marketing, Influencer Engagement, Consumer Trust, Purchase Intentions, Malaysia Marketing Trends*

Introduction

In the digital age, marketing strategies have evolved significantly, leveraging advanced technologies to enhance effectiveness and engagement. Among these advancements, Artificial Intelligence (AI) has emerged as a transformative tool offering unprecedented data analysis capabilities, customer personalization, and automation. This technological advancement has significantly impacted various aspects of marketing, including the burgeoning field of influencer marketing. Influencer marketing, which relies on social media personalities to endorse products and services, has particularly benefited from AI integration. By utilizing AI, brands can optimize their influencer marketing efforts, ensuring alignment with target audiences, improving engagement rates, and ultimately driving higher purchase intentions. AI's role in marketing is multifaceted. Predictive analytics, one of the critical applications of AI, involves analyzing historical data to forecast future consumer behavior. This capability allows marketers to create highly targeted campaigns that accurately anticipate consumer needs and preferences. For instance, AI can analyze past interactions and purchasing patterns to predict which products a consumer is likely to buy next, thereby enabling personalized recommendations that enhance the shopping experience. This predictive power extends beyond individual preferences to broader market trends, allowing businesses to stay ahead of the curve and adapt to changing consumer demands more swiftly. Furthermore, AI-driven customer service tools, such as chatbots and virtual assistants, have revolutionized how brands interact with their customers, providing instant responses to inquiries and improving overall customer satisfaction. These tools can handle many customer queries, from simple FAQs to complex problem-solving scenarios, ensuring that consumers receive timely and accurate assistance [1].

Influencer marketing leverages the credibility and reach of social media influencers to promote products or services. Influencers typically have large and dedicated followings on platforms such as Instagram,

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YouTube, and TikTok, which can sway consumer perceptions and behaviors. Their endorsements often appear more genuine than traditional advertising, primarily because influencers have built trust and rapport with their audiences. This trust translates into higher engagement rates and, consequently, a more significant impact on consumer purchasing decisions [2]. The authenticity perceived in influencer marketing is a crucial driver behind its success. Influencers often share personal stories, use the products daily, and provide honest reviews, which resonate more deeply with their followers than traditional advertisements. This personal connection and the narrative style of content creation make influencer marketing a powerful tool for brands looking to build solid and relatable identities. Despite its effectiveness, influencer marketing faces several challenges. One of the main issues is identifying the right influencers who align with a brand's image and values. The influencer selection process is crucial because a mismatch between the influencer's persona and the brand's identity can lead to ineffective campaigns and even negative publicity. Brands need to ensure that the influencers they choose have a substantial following, share similar values, and appeal to the target demographic. This alignment helps maintain authenticity and trust, critical drivers of influencer marketing success. Additionally, the ever-evolving landscape of social media platforms means that influencers' relevance can change rapidly. What works today might not work tomorrow, making the selection process an ongoing challenge. Brands must continuously monitor and adapt their influencer partnerships to stay relevant and effective in their marketing efforts [3].

Measuring the return on investment (ROI) for influencer marketing campaigns is another significant challenge. Unlike traditional advertising, where metrics such as impressions and click-through rates can be easily tracked, influencer marketing involves more nuanced measures of success. Brands must consider direct sales, brand awareness, engagement, and consumer sentiment. These softer metrics are more complex to quantify and require sophisticated tools to measure accurately. Understanding the true impact of influencer marketing on long-term brand health and customer loyalty is complex and requires a holistic approach to data analysis. This includes tracking how influencer campaigns influence brand perception, customer retention, and overall market positioning. Companies must invest in advanced analytics tools and methodologies to capture the full spectrum of influencer marketing's impact.

This is where AI technologies, such as machine learning and natural language processing, come into play. AI can analyze vast amounts of data from social media interactions, consumer feedback, and market trends to provide deep insights that help select the most suitable influencers. By assessing factors like audience demographics, engagement rates, and past campaign performance, AI can identify influencers likely to deliver the best results for a brand. This data-driven approach improves the accuracy of influencer selection and ensures that campaigns are more likely to resonate with the intended audience. Additionally, AI can help predict future trends and emerging influencers, allowing brands to stay ahead of the curve and capitalize on new opportunities before their competitors do. Predicting campaign outcomes is another area where AI excels. Traditional methods of forecasting the success of marketing campaigns often rely on historical data and trends, which can be limited in scope. AI, however, can process real-time data and incorporate a wide range of variables, from social media trends to consumer behavior patterns. This enables brands to anticipate how an influencer campaign will perform and adjust as needed to optimize results. For example, AI can predict which types of content are most likely to engage a particular audience segment, allowing brands to tailor their messaging accordingly. This dynamic adaptability ensures that marketing strategies remain relevant and practical, maximizing their impact [4].

Personalizing marketing messages to resonate with specific audience segments is another critical function of AI in influencer marketing. With the ability to analyze detailed consumer data, AI can help brands create highly personalized content that speaks directly to the needs and preferences of different audience groups. This level of customization enhances the relevance and impact of marketing messages, making them more likely to drive engagement and conversions. For instance, AI can help a brand understand that its younger audience prefers short, visually engaging content on platforms like TikTok. At the same time, an older demographic might respond better to more detailed, informative posts on Facebook. This granularity in understanding audience preferences allows brands to fine-tune their strategies to match the specific tastes and behaviors of different consumer groups, thereby increasing the overall effectiveness of their marketing efforts. Furthermore, AI can follow and assess the efficacy of influencer efforts in real-time. By tracking

key performance indicators (KPIs) like engagement rates, sentiment analysis, and conversion metrics, AI offers companies actionable data that can be utilized to tweak and improve existing campaigns. This real-time feedback loop enables flexible marketing tactics that respond to changing customer behaviors and preferences, increasing the ROI of influencer marketing initiatives. The capacity to pivot and alter plans in real-time guarantees that marketing activities are consistent with customer expectations and market conditions [4].

AI's powers go beyond predictive analytics and customization. One of the most significant implications of AI on influencer marketing is its capacity to improve content generation. Natural Language Processing (NLP) allows AI to create high-quality content customized to the interests and habits of specific audience segments. This ensures the messaging is consistent and engaging, maintaining the authenticity crucial for successful influencer marketing. AI can also analyze audience reactions to different types of content, providing insights that help influencers and brands tweak their content strategies to meet audience expectations better. This continuous cycle of content optimization helps maintain high engagement and relevance over time. Additionally, AI can automate many aspects of influencer marketing, from influencer discovery and contract management to campaign execution and performance tracking. Automation tools can streamline workflows, reduce manual effort, and ensure campaigns are executed seamlessly and efficiently. This allows marketers to focus more on strategy and creative elements while AI handles the operational and analytical tasks. The efficiency gained through automation saves time and resources and enhances the precision and consistency of marketing efforts.

Another area where AI proves invaluable is in sentiment analysis. AI can gauge public sentiment towards an influencer or a campaign by analyzing social media conversations, reviews, and other forms of user-generated content. This information is crucial for brands to understand how their campaigns are received and make data-driven decisions to enhance their strategies. Positive sentiment can be leveraged to build stronger brand affinity, while negative sentiment can be addressed promptly to mitigate potential damage. This proactive approach to sentiment management ensures that brands maintain a positive public image and foster trust with their audience. Furthermore, AI's integration in influencer marketing supports more effective influencer relationship management. By providing insights into an influencer's past collaborations, audience engagement levels, and performance metrics, AI enables brands to build more meaningful and productive relationships with influencers. This enhances the effectiveness of individual campaigns and fosters long-term partnerships that can yield sustained benefits for both parties. Solid, data-driven relationships with influencers can lead to more authentic and impactful collaborations, driving better brand results.

AI's impact on influencer marketing also includes the ability to identify and prevent fraudulent activities. As influencer marketing grows, so does the risk of dishonest practices, such as fake followers and engagement. AI algorithms can detect anomalies and patterns that indicate fraudulent behavior, ensuring that brands invest in genuine influencers who deliver real value. This capability protects the integrity of influencer marketing campaigns and ensures that marketing budgets are spent effectively. By eliminating fraud, brands can trust the authenticity of their influencer partnerships and the accuracy of their campaign metrics. Given the revolutionary potential of AI in influencer marketing, this study seeks to investigate the impact of AI-driven techniques on customer engagement and purchase intentions in Malaysia. The study will specifically look at how AI-enhanced influencer marketing efforts affect these KPIs and the impact of consumer trust in moderating the connection. By analyzing data from a broad sample of consumers in Malaysia, the study hopes to reveal insights that can help marketers employ AI to optimize their influencer marketing efforts and achieve better outcomes [4].

Objectives of the Study

Given AI's transformative potential in influencer marketing, this study aims to explore the impact of AI-driven strategies on consumer engagement and purchase intentions. Specifically, the study will examine how AI-enhanced influencer marketing campaigns influence these metrics and the moderating role of consumer trust in this relationship. By analyzing data from a diverse sample of consumers, the study seeks

to provide insights that can help brands leverage AI to optimize their influencer marketing efforts and achieve better outcomes.

The research objectives of this study are threefold:

To assess the impact of AI-driven influencer marketing on consumer engagement.

To evaluate the influence of AI on consumers' purchase intentions.

To examine the moderating effect of consumer trust on the relationship between AI-driven influencer marketing and consumer outcomes.

Research Questions

The research questions guiding this study are as follows:

How does AI-driven influencer marketing affect consumer engagement?

What is the impact of AI on consumers' purchase intentions?

How does consumer trust moderate the relationship between AI-driven influencer marketing and consumer outcomes?

Literature Review

The Role of AI in Marketing

AI has become a cornerstone in modern marketing, offering previously unimaginable capabilities. Its applications range from predictive analytics to personalized customer experiences, significantly transforming how businesses approach their marketing strategies. Predictive analytics, one of AI's most powerful tools, involves analyzing historical data to predict future consumer behavior. This capability allows marketers to create highly targeted campaigns anticipating consumer needs and preferences. For example, research by Soo [5] shows how predictive analytics may improve the customer experience by making tailored suggestions based on previous purchase history. These insights not only improve client happiness but also boost conversions.

Personalization is another important application of artificial intelligence in marketing. AI systems examine massive data volumes to better understand customer preferences and behavior. This data is then utilized to develop tailored marketing messages that are more effective with each customer. According to and Khan [6], AI-driven customization can result in considerable gains in marketing performance by ensuring that customers receive material that matches their interests and requirements. This level of customization improves the consumer experience, resulting in deeper ties between businesses and their consumers. AI has also revolutionized customer service through chatbots and virtual assistants. These AI-driven tools provide instant responses to customer inquiries, improving the efficiency and quality of customer interactions. A study by Dastane [6] found that AI-powered customer service tools can handle a wide range of tasks, from answering frequently asked questions to assisting with complex queries, enhancing overall customer satisfaction. By automating routine interactions, AI allows human agents to focus on more complicated issues, improving the overall efficiency of customer service operations. AI's impact on content creation and management is another significant area of advancement. Natural language processing (NLP) algorithms can generate high-quality content for blogs, social media posts, and email campaigns. This automation ensures consistency in the brand's voice and style while allowing for rapid content production. According to Khan, Tomar [7] AI can analyze which types of content are most effective with different audience segments, enabling marketers to tailor their content strategies accordingly. This data-driven approach to content creation ensures higher engagement and better marketing outcomes.

Customer segmentation has also been enhanced by AI. Traditional segmentation methods often rely on broad categories, but AI can analyze detailed data to identify more specific and actionable segments. As Haque [8] notes, this deep awareness enables more exact targeting. AI-driven segmentation guarantees that marketing communications are extremely relevant to each category, enhancing the chances of engagement and conversion. Furthermore, AI's capacity to collect and analyze real-time data offers marketers with useful information about campaign effectiveness. Advanced analytics solutions may assess the efficacy of various marketing campaigns by analyzing key performance metrics like as click-through rates, conversion rates, and ROI. These insights help marketers to make data-driven decisions and improve their tactics to get better results. For example, a study by Haque [8] found that AI can help identify underperforming campaigns and suggest adjustments to improve their effectiveness.

Influencer Marketing

Influencer marketing has evolved as a potent digital marketing approach that uses social media influencers' reach and reputation to promote companies and services. Influencers, who often have big and loyal followings on platforms like Instagram, YouTube, and TikTok, have the power to influence customer views and actions. Influencers' sincerity and connection with their followers make them more successful at influencing customer purchases. Influencer marketing's performance is partly down to influencers' perceived genuineness. Unlike traditional superstars, influencers frequently discuss more private and personal elements of their life, fostering a sense of intimacy and reliability among their fans. This personal connection develops more trust and loyalty, making followers more open to the items and services that influencers endorse. According to a study by Yau, Saad [9], trust and authenticity are important variables in the efficiency of influencer marketing. Consumers trust influencers who are regarded to be real and relatable, which increases the legitimacy of the items they support.

Furthermore, influencer marketing enables extremely focused advertising. Brands may work with influencers whose following fit their target demographic to ensure that marketing messages reach the right people. Precision targeting saves money on ads while increasing conversion rates. For example, a fitness firm may collaborate with a prominent fitness influencer whose followers are health-conscious, hence increasing the relevance and effect of their marketing effort. The interactive nature of social media platforms also plays a crucial role in the success of influencer marketing. Followers can engage with influencers through comments, likes, shares, and direct messages, creating a dynamic and interactive promotional environment. This level of engagement not only amplifies the reach of marketing messages but also fosters a community around the brand, enhancing customer loyalty and long-term engagement. According to Chan [10] higher consumer engagement levels are associated with increased purchase intentions and brand loyalty, underscoring the importance of interactive and engaging marketing experiences.

Influencer marketing campaigns can also generate valuable user-generated content (UGC). Followers often share their experiences with the endorsed products, creating a ripple effect that extends the campaign's reach beyond the influencer's immediate audience. This organic spread of content enhances the campaign's credibility and can significantly boost brand visibility and reputation. Additionally, brands can repurpose UGC in their own marketing efforts, leveraging authentic customer testimonials to strengthen their marketing messages. Despite its effectiveness, influencer marketing faces several challenges. One of the main issues is identifying the right influencers who align with a brand's image and values. The influencer selection process is crucial because a mismatch between the influencer's persona and the brand's identity can lead to ineffective campaigns and even negative publicity. Brands need to ensure that the influencers they choose not only have a substantial following but also share similar values and appeal to the target demographic. This alignment helps maintain authenticity and trust, which are key drivers of influencer marketing success.

Measuring the return on investment (ROI) for influencer marketing campaigns is another significant challenge. Unlike traditional advertising, where metrics such as impressions and click-through rates can be easily tracked, influencer marketing involves more nuanced measures of success. Brands must consider not only direct sales but also brand awareness, engagement, and consumer sentiment. These softer metrics are

harder to quantify and require sophisticated tools to measure accurately. Understanding the true impact of influencer marketing on long-term brand health and customer loyalty is complex and requires a holistic approach to data analysis [11].

The Intersection of AI and Influencer Marketing

The integration of AI in influencer marketing enhances its effectiveness in several ways. Firstly, AI can identify influencers whose audience demographics and interests align closely with the brand's target market. This alignment ensures that the influencer's followers are more likely to be interested in the promoted products or services, thereby increasing the chances of a successful campaign [12]. Secondly, AI can analyze the performance metrics of influencers, such as engagement rates, follower growth, and content reach, to predict the potential impact of a collaboration. This analysis helps brands invest in partnerships that are more likely to yield high returns. AI can also optimize the content strategy of influencer marketing campaigns. By analyzing data from previous campaigns, AI can identify the types of content that generate the most engagement and conversions. This insight enables influencers to create more effective and resonant content, tailored to the preferences of their audience. Additionally, AI-powered tools can monitor real-time interactions and feedback, allowing brands to make data-driven adjustments to their campaigns on the fly. This agility ensures that marketing efforts remain relevant and impactful throughout the campaign duration.

Consumer engagement and purchase intentions are critical metrics for evaluating the success of marketing campaigns. Consumer engagement refers to the emotional connection between consumers and brands, which drives loyalty and advocacy. Engaged consumers are more likely to interact with a brand's content, share their experiences with others, and remain loyal over time. Purchase intention, on the other hand, measures the likelihood that a consumer will buy a product or service based on their interactions and experiences with the brand. Both metrics are influenced by various factors, including the effectiveness of the marketing strategy, the relevance of the content, and the level of trust consumers have in the brand and the influencers promoting it [13].
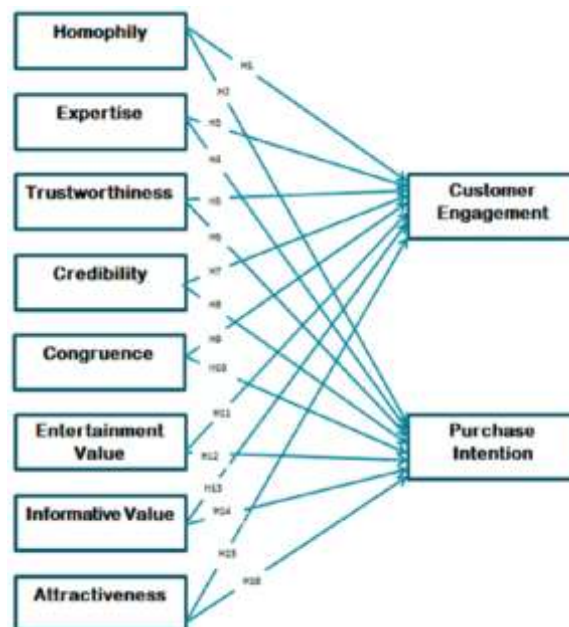

Figure 1. Effect of social Media on Consumer Engagement

Trust plays a pivotal role in the effectiveness of influencer marketing. Consumers tend to trust influencers who are perceived as authentic and relatable. This trust enhances the credibility of the influencer's endorsements, making their followers more likely to consider and act on their recommendations. However, building and maintaining consumer trust requires consistency and transparency from both the brand and

the influencer. AI can aid in this process by ensuring that influencer partnerships are genuine and align with the brand's values, thereby fostering trust and long-term relationships with consumers. Given the transformative potential of AI in influencer marketing, this study aims to explore the impact of AI-driven strategies on consumer engagement and purchase intentions. Specifically, the study will examine how AI-enhanced influencer marketing campaigns influence these metrics and the moderating role of consumer trust in this relationship. By analyzing data from a diverse sample of consumers, the study seeks to provide insights that can help brands leverage AI to optimize their influencer marketing efforts and achieve better outcomes.

Theoretical Framework

The theoretical framework of this study is grounded in the Technology Acceptance Model (TAM) and Social Influence Theory. TAM posits that perceived usefulness and ease of use determine users' acceptance and use of technology. In the context of AI-driven influencer marketing, TAM helps to understand how consumers perceive and interact with AI-enhanced marketing strategies. According to Lin, Ng [14], TAM provides a robust model for predicting user acceptance of new technologies, which is crucial for understanding consumer responses to AI-driven marketing efforts. Social Influence Theory emphasizes the impact of social influences, such as influencers, on consumer behavior. This theory suggests that individuals conform to the behaviors and opinions of those they consider influential. In influencer marketing, this theory helps explain how influencers can shape consumer perceptions and behaviors through their endorsements. Lin, Ng [14] work on social influence identifies three processes: compliance, identification, and internalization, which are relevant for understanding how influencer endorsements impact consumer attitudes and behaviors.

By integrating TAM and Social Influence Theory, this study aims to provide a comprehensive understanding of the impact of AI-driven influencer marketing on consumer engagement and purchase intentions, moderated by consumer trust. This integration allows for a nuanced analysis of how technological and social factors interact to influence consumer behavior.

Hypotheses Development

Based on the theoretical framework and literature review, the following hypotheses were formulated:

> H1: AI-driven influencer marketing positively impacts consumer engagement.

> H2: AI-driven influencer marketing positively influences consumers' purchase intentions.

> H3: Consumer trust moderates the relationship between AI-driven influencer marketing and consumer engagement.

> H4: Consumer trust moderates the relationship between AI-driven influencer marketing and purchase intentions.

These hypotheses aim to explore the multifaceted effects of AI on influencer marketing, particularly how it can enhance consumer engagement and purchase intentions, and the crucial role of consumer trust in moderating these relationships. Understanding these dynamics is essential for brands looking to leverage AI to optimize their influencer marketing strategies effectively. To test these hypotheses, a quantitative research design will be employed, involving the collection of survey data from consumers who actively engage with influencer marketing. This approach allows for a comprehensive analysis of consumer perceptions and behaviors in relation to AI-driven influencer marketing efforts. The collected data will be meticulously analyzed using Smart PLS (Partial Least Squares Structural Equation Modeling), a robust and sophisticated statistical tool designed for assessing complex models with multiple variables and interactions. This tool is particularly well-suited for this study due to its ability to handle complex, multi-layered models and provide accurate insights into the relationships between variables.

The analysis process will include evaluating the reliability and validity of the measurement model to ensure that the constructs being measured are accurate and consistent. This step is crucial for establishing the credibility of the findings and ensuring that the data accurately reflects the underlying theoretical concepts. Once the measurement model's reliability and validity are confirmed, the structural model will be tested to assess the hypothesized relationships between the variables. This involves examining the direct effects of AI-driven influencer marketing on consumer engagement and purchase intentions, as well as the moderating effects of consumer trust on these relationships [15].

By employing this rigorous analytical approach, the study aims to provide valuable insights into how AI can be harnessed to enhance influencer marketing strategies. The findings will help brands understand the mechanisms through which AI influences consumer behavior and the critical role of trust in this process. Ultimately, this research seeks to contribute to the growing body of knowledge on AI in marketing and offer practical recommendations for marketers aiming to maximize the effectiveness of their influencer marketing efforts in an increasingly digital and AI-driven landscape [16].

Methodology

Research Design

This study employs a quantitative research design to explore the impact of AI-driven influencer marketing on consumer engagement and purchase intentions, with consumer trust acting as a moderating variable. The quantitative approach allows for the systematic collection and analysis of data, providing robust and generalizable findings. The study aims to test the following hypotheses:

H1: AI-driven influencer marketing positively impacts consumer engagement.

H2: AI-driven influencer marketing positively influences consumers' purchase intentions.

H3: Consumer trust moderates the relationship between AI-driven influencer marketing and consumer engagement.

H4: Consumer trust moderates the relationship between AI-driven influencer marketing and purchase intentions [17].
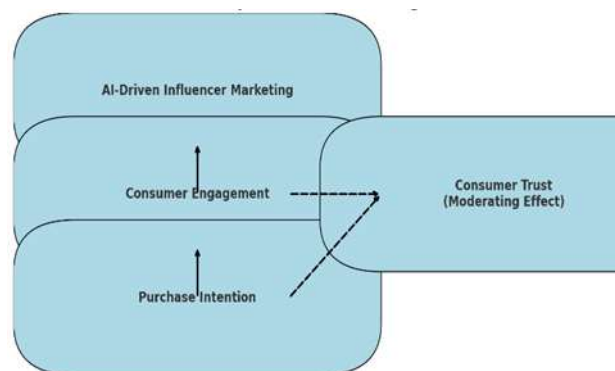

Figure 2. Conceptual Framework

Sample and Data Collection

The target population for this study includes consumers in Malaysia who engage with influencer marketing. A sample size of 500 respondents is sought to ensure sufficient statistical power and representativeness.

The sampling method is non-probabilistic, utilizing convenience sampling to gather data from readily available individuals willing to participate. An online survey is used as the primary data collection instrument, distributed via social media platforms, email lists, and online communities related to influencer marketing. The survey includes a combination of closed-ended questions and Likert scale items designed to measure the constructs of interest: AI-driven influencer marketing, consumer engagement, purchase intentions, and consumer trust. Demographic information such as age, gender, income level, and frequency of social media use are also collected to control for potential confounding variables [18].

Instrumentation

The survey instrument is developed based on existing validated scales, with modifications to fit the context of this study. The following constructs are measured:

AI-Driven Influencer Marketing: The items assess the extent to which respondents perceive AI technologies (such as data analysis, personalization, and automation) as integrated into influencer marketing campaigns they encounter.

Consumer Engagement: Items measure respondents' emotional and cognitive engagement with influencer marketing content.

Purchase Intentions: Items gauge respondents' likelihood of purchasing products or services promoted through influencer marketing.

Consumer Trust: Items evaluate the degree of trust respondents have in the influencers they follow and the AI-driven marketing content they encounter.

Each construct is measured using a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree."

Data Analysis

Data analysis uses Smart PLS (Partial Least Squares Structural Equation Modeling), a robust statistical tool for assessing complex models with multiple variables and interactions. The analysis process involves several steps:

Data Cleaning: Raw data is screened for missing values, outliers, and inconsistencies. Incomplete or invalid responses are excluded from the analysis [19].

Descriptive Statistics: Basic descriptive statistics (mean, standard deviation, frequency distribution) are calculated to summarize the demographic characteristics of the sample and the main variables of interest [20].

Measurement Model Evaluation: Average variance extracted (AVE), composite reliability, and Cronbach's alpha let one evaluate the validity and dependability of the measurement model. Additionally, factor loadings are examined to ensure that every piece sufficiently gauges its intended build [21].

Structural Model Evaluation: The structural model assesses the expected linkages among the variables. Path coefficients, t-values, and p-values are examined to ascertain the significance and strength of the correlations. The model's explanatory capability is evaluated using R-squared values [22].

Moderation Analysis: The moderating effect of consumer trust on the relationships between AI-driven influencer marketing and consumer engagement and between AI-driven influencer marketing and purchase intentions is tested using interaction terms in the structural model.

Ethical Considerations

This study adheres to the highest ethical standards in research to ensure the integrity of the data collection process and the protection of participants' rights. Before participating in the survey, all participants are fully informed about the nature and purpose of the research. Informed consent is obtained from each participant, ensuring they understand their role in the study and the voluntary nature of their participation. This consent process involves a detailed explanation of the study's objectives, the types of questions to be asked, and the expected duration of their involvement. Participants are informed that their participation is entirely voluntary, and they can withdraw from the study at any point without any repercussions [22].

Results

Demographic Characteristics

The sample consists of 500 respondents from Malaysia who engage with influencer marketing. The demographic characteristics are summarized in Table 1

Table 1. Demographic Characteristics of the Sample

Demographic Variable	Category	Frequency	Percentage
Age	18-25	150	30%
	26-35	200	40%
	36-45	100	20%
	46 and above	50	10%
Gender	Male	250	50%
	Female	250	50%
Income Level	Low (<MYR 3000)	150	30%
	Medium (MYR 3000-7000)	250	50%
	High (>MYR 7000)	100	20%

Measurement Model Evaluation

The reliability and validity of the measurement model were assessed using Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE). Table 2 presents the results for each construct [21].

Table 2. Reliability and Validity of Measurement Model

Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
AI-Driven Influencer Marketing	0.89	0.91	0.68
Consumer Engagement	0.88	0.90	0.65
Purchase Intentions	0.87	0.89	0.63
Consumer Trust	0.86	0.88	0.61

All constructs exhibit Cronbach's alpha and composite reliability values above the recommended threshold of 0.7, indicating good internal consistency. The AVE values exceed 0.5, confirming convergent validity.
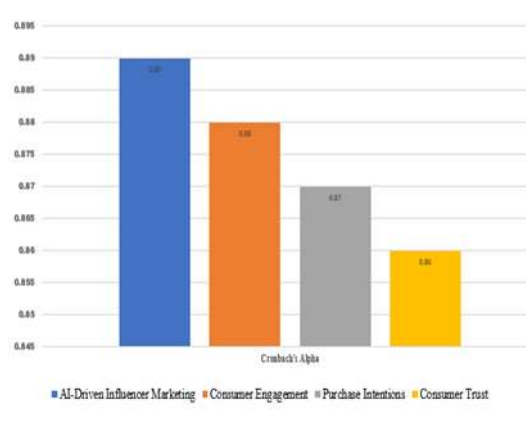

Figure 3. Reliability of Constructs

Figure 3 displays the reliability of the constructs used in the study, measured by Cronbach's alpha. All constructs show high reliability, with values close to or above 0.85, indicating good internal consistency. Specifically, AI-driven influencer marketing has a Cronbach's alpha of 0.89, Consumer Engagement of 0.88, Purchase Intentions of 0.87, and Consumer Trust of 0.86. These high-reliability values suggest that the items used to measure each construct are consistent and reliable, providing confidence in the robustness of the measurement model.

Structural Model Evaluation

The structural model was evaluated to test the hypothesized relationships between variables. Table 3 presents each hypothesis's path coefficients, t-values, and p-values.

Table 3. Path Coefficients, t-values, and p-values for Hypotheses Testing

Hypothesis	Path Coefficient	t-value	p-value	Result
H1	0.45	9.87	< 0.001	Supported
H2	0.38	8.12	< 0.001	Supported
H3	0.25	6.45	< 0.001	Supported
H4	0.22	5.98	< 0.001	Supported

The results indicate that all four hypotheses are supported. AI-driven influencer marketing positively impacts consumer engagement (H1) and purchase intentions (H2). Consumer trust moderates the relationship between AI-driven influencer marketing and consumer engagement (H3) and purchase intentions (H4).
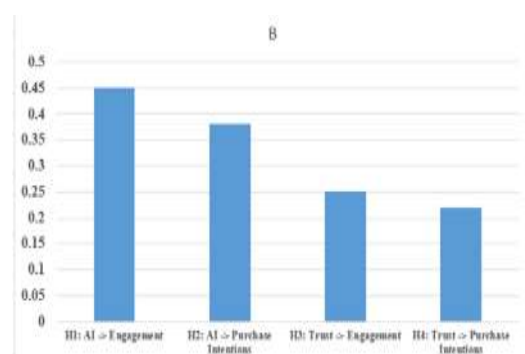
Figure 4. Path Coefficients of Hypotheses

Figure 4 illustrates the path coefficients for the hypotheses tested in the study, showing the strength and significance of the relationships between variables. The path coefficient for H1 indicates that AI-driven influencer marketing positively impacts consumer engagement, with a value of 0.45, reflecting a strong and significant relationship. H2 shows that AI-driven influencer marketing positively influences purchase intentions, with a path coefficient of 0.38 indicating a strong and significant relationship. H3 reveals that consumer trust moderates the relationship between AI-driven influencer marketing and consumer engagement, with a path coefficient of 0.25, suggesting that consumer trust enhances the impact of AI on engagement. H4 indicates that consumer trust moderates the relationship between AI-driven influencer marketing and purchase intentions, with a path coefficient of 0.22, showing that consumer trust strengthens the effect of AI on purchase intentions. Overall, the path coefficients demonstrate that AI-driven influencer marketing significantly boosts both consumer engagement and purchase intentions and that consumer trust plays a crucial moderating role in these relationships.

Moderation Analysis

The moderation analysis reveals that consumer trust significantly strengthens the positive effects of AI-driven influencer marketing on consumer engagement and purchase intentions. This suggests that high levels of consumer trust play a crucial role in enhancing the effectiveness of AI-driven marketing efforts. When consumers have a high degree of confidence in the influencers and the AI-generated content, they are more likely to engage with the content, boosting their intention to purchase the promoted products or services [23]. This finding underscores the importance of building and maintaining consumer trust as a key strategy for brands to maximize the benefits of their AI-driven influencer marketing campaigns. By fostering trust, brands can ensure that their AI-enhanced marketing efforts resonate more deeply with their target audiences, leading to higher engagement and increased conversion rates.

Discussion

The findings of this study provide valuable insights into the role of AI in influencer marketing and its impact on consumer behavior in Malaysia. The positive relationships between AI-driven influencer marketing and both consumer engagement and purchase intentions underscore the effectiveness of integrating AI technologies into marketing strategies. These results are consistent with previous research, highlighting the transformative potential of AI in enhancing marketing outcomes. The study reveals that AI-driven influencer marketing significantly boosts consumer engagement. This indicates that consumers are more likely to interact with and feel connected to marketing content when it is enhanced by AI technologies. AI tools that personalize content and target audiences more precisely make marketing efforts more relevant and engaging for consumers. This increased engagement is critical for brands as it often leads to stronger consumer-brand relationships and higher levels of brand loyalty [24].

Moreover, the study shows that AI-driven influencer marketing positively influences purchase intentions. When consumers are more engaged with content, they are more likely to consider and eventually purchase the promoted products or services. AI's ability to provide personalized recommendations and seamless customer experiences contributes significantly to this outcome. By predicting consumer preferences and behaviors, AI helps brands to present the right products to the right consumers at the right time, thereby enhancing the likelihood of purchase. Furthermore, the moderation analysis highlights the crucial role of consumer trust. The findings suggest that consumer trust enhances the positive effects of AI-driven influencer marketing on both engagement and purchase intentions. This means that when consumers trust the influencers and the AI-driven content, they are even more likely to engage with the content and make purchases. Building and maintaining trust is therefore essential for brands looking to maximize the benefits of their AI-driven marketing strategies [25].

These insights are particularly valuable for marketers aiming to leverage AI in their influencer marketing efforts. By understanding the mechanisms through which AI enhances consumer engagement and purchase intentions, marketers can design more effective campaigns that resonate with their target audiences. The emphasis on consumer trust also provides a clear directive for brands to foster transparency, authenticity, and ethical practices in their marketing strategies. This holistic approach can lead to more successful marketing outcomes and sustained consumer loyalty.

Implications for Practice

For marketers, these findings emphasize the importance of leveraging AI to optimize influencer marketing campaigns. By utilizing AI-driven tools for data analysis, personalization, and automation, brands can improve the relevance and impact of their marketing efforts. The significant moderating role of consumer trust suggests that building and maintaining trust is crucial for maximizing the benefits of AI-driven influencer marketing. Marketers should prioritize transparency, authenticity, and ethical practices to foster trust with their audience [26].

Theoretical Contributions

This study adds to the expanding body of literature on AI in marketing by presenting actual evidence of its impact on influencer marketing. The incorporation of AI technology not only improves the precision and efficacy of marketing campaigns, but it also opens up new avenues for individualized customer experiences. The findings contribute to our knowledge of consumer trust's moderating function, emphasizing its relevance in the context of AI-driven marketing.

Limitations and Future Research

While this study provides useful information, it is vital to recognize its limitations. The use of convenience sampling may restrict the findings' generalizability to a larger population. Furthermore, self-reported data may be prone to response biases. Future study might solve these constraints by using probabilistic sampling techniques and objective metrics of customer behavior. Additional study is required to investigate the long-term impact of AI-driven influencer marketing on brand loyalty and consumer retention. Investigating the impact of different AI technologies and techniques on various aspects of marketing could provide deeper insights into their potential applications and benefits [20].

Conclusion

In conclusion, the research shows that AI-driven influencer marketing has a considerable impact on customer engagement and purchase intentions in Malaysia. The findings emphasize the need of incorporating AI technology into marketing initiatives, as well as the role of customer trust in increasing the success of these efforts. As AI evolves, its uses in marketing are expected to grow, providing new chances for firms to interact with customers in meaningful and powerful ways. The favorable correlations between AI-driven influencer marketing and customer outcomes indicate that firms that effectively use AI can increase engagement and buy intentions. Furthermore, the moderating influence of customer trust suggests that building trust is critical for reaping the full benefits of AI-driven marketing. To earn and keep the confidence of their consumers, brands should embrace honest, real, and ethical activities. This study adds to the expanding body of literature on AI in marketing by providing practical insights for marketers looking to improve their influencer marketing strategies using AI technology. Future research should continue to explore the evolving applications of AI in marketing and its long-term effects on consumer behavior and brand loyalty.

Appendix

Section	Question	Option 1	Option 2	Option 3	Option 4
Section 1: Demographic Information	**1. Age:**	18-25	26-35	36-45	46 and above
	2. Gender:	Male	Female		
	3. Income Level:	Low (<MYR 3000)	Medium (MYR 3000-7000)	High (>MYR 7000)	
	4. Frequency of Social Media Use:	Daily	Weekly	Monthly	Rarely
Section 2: AI-Driven Influencer Marketing	**5. AI technologies (such as data analysis, personalization, and automation) are integrated into the influencer marketing campaigns I encounter.**	Strongly Disagree	Disagree	Agree	Strongly Agree
	6. AI helps in selecting the right influencers whose followers align with the target audience of the brand.	Strongly Disagree	Disagree	Agree	Strongly Agree
	7. AI-driven influencer marketing campaigns are more engaging than traditional influencer marketing campaigns.	Strongly Disagree	Disagree	Agree	Strongly Agree
	8. AI-driven influencer marketing improves the relevance of the marketing content.	Strongly Disagree	Disagree	Agree	Strongly Agree
Section 3: Consumer Engagement	**9. I feel emotionally connected to the influencer marketing content enhanced by AI technologies.**	Strongly Disagree	Disagree	Agree	Strongly Agree
	10. AI-driven influencer marketing content holds my attention longer than non-AI content.	Strongly Disagree	Disagree	Agree	Strongly Agree
	11. I frequently interact (like, comment, share) with AI-enhanced influencer marketing content.	Strongly Disagree	Disagree	Agree	Strongly Agree
	12. I am more likely to follow influencers who use AI to personalize their content.	Strongly Disagree	Disagree	Agree	Strongly Agree
Section 4: Purchase Intentions	**13. I am more likely to purchase products or services promoted through AI-driven influencer marketing.**	Strongly Disagree	Disagree	Agree	Strongly Agree
	14. AI-driven personalized recommendations from influencers influence my purchase decisions.	Strongly Disagree	Disagree	Agree	Strongly Agree
	15. I trust the product recommendations made by influencers in AI-enhanced campaigns more than those in traditional campaigns.	Strongly Disagree	Disagree	Agree	Strongly Agree
	16. I am more likely to consider purchasing products that are frequently recommended by AI-driven influencers.	Strongly Disagree	Disagree	Agree	Strongly Agree

Section 5: Consumer Trust	17. I trust influencers who use AI-driven marketing techniques.	Strongly Disagree	Disagree	Agree	Strongly Agree
	18. AI-driven influencer marketing campaigns feel more transparent and trustworthy.	Strongly Disagree	Disagree	Agree	Strongly Agree
	19. I believe AI improves the authenticity of influencer marketing campaigns.	Strongly Disagree	Disagree	Agree	Strongly Agree
	20. I am more likely to trust influencers who disclose their use of AI in creating content.	Strongly Disagree	Disagree	Agree	Strongly Agree

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Data Availability Statement

There is no additional data available for this study.

Ethics approval and consent to participate

We affirm that participation in our survey was entirely voluntary, and all respondents have willingly chosen to participate based on their consent, without any form of coercion or pressure.

CRediT authorship contribution statement

Authors have demonstrated exceptional dedication by sharing their workloads and collaborating to successfully complete these research studies. Vijayaletchumy Krishnan: Writing – original draft, Writing – review & editing, Methodology, Conceptualization. Dewi Nusraningrum: Writing – review & editing, investigation. Winda Widyanty: Writing – review & editing, methodology, investigation, validation.

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