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# Effectiveness of AI-Powered Influencer Marketing in Influencing Gen Z Purchase Behaviour: A Study of Tezpur, Assam

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## Abstract

In the marketing aspect, digitalisation has transformed consumers' engagement with brands through the online system. This research study analyses the role of Artifical technology in determining the purchase intention of Genz customers to examine their demographic variables such as gender and income that affect their perceptions in enhancing influencer marketing through artificial intelligence, to determine the relation between Artificial Intelligence personalised influencer content and Gen Z purchase intention as well as to determine the factors that build customer's trust, credibility, and engagement in Tezpur City of Assam using Exploratory Factor Analysis. For this purpose, research data is collected from 200 GenZ customers of Tezpur City and analysed through ANOVA, Correlation, T-Test, and EFA using SPSS Software. The findings indicate that Artificial intelligence-based influencer content increases the purchase intention of customers by improving the perceived relevance and trust. Also, female customers exhibit higher satisfaction, confidence and trust in Artificial Intelligence-based products and services than male Genz customers. Based on the Exploratory Factor Analysis, the three primary dimensions that affect Tezpur City of Assam's GenZ customers are influencer authenticity, Artificial Intelligence-based personalisation, and engagement based on social media. This research adds to the field of digitalisation in marketing by focusing on empirical insights into Gen Z's behaviour in an emerging market context. The result of the research study shows that Firms should leverage Artificial Intelligence for genuine influencer collaborations to strengthen customer engagement and drive more purchase intention of the customers, rather than merely leveraging Artificial Intelligence in the brand.

**Keywords:** Artificial Intelligence, Influencer Marketing, Gen Z, Purchase Behaviour.

## Introduction

The digital transformation has shifted the mindset of customers in regard to brand, where artificial intelligence has been the pivotal force for contemporary marketing. The applications of Artificial Intelligence, such as recommendation engines, predictive analytics, chatbots, and personalised advertising, have changed the traditional strategies to provide more custom services and experiences to customers. Within this evolving digital ecosystem, influencer marketing has gained remarkable prominence, particularly among Generation Z (Gen Z) consumers who are deeply embedded in online and social media platforms. Influencer marketing is based on the credibility, reliability, and digital influencers' reach that has enhanced the quality by Artificial Technologies,

which is considered as power influencer, engagement analytics, content personalisation and optimise campaign leading to authenticity and identification of the right influencers. The Artificial Intelligence-based targeting precision is relevant for the customers, especially Gen Z, who are active users of social media, and are characterised by their need and demand for trustworthiness, confidence and personalised digital experiences.

Globally, Artificial Intelligence in customer perception and purchase intention have increased. However, few research studies have been conducted on determining the effectiveness of AI-driven influencing consumer perceptions and purchase intentions has increased. However, research on the dynamic role and operation of Artificial Intelligence-based brands and their targeting in the emerging urban market, especially Tezpur City of Assam, has not been explored. Although Indian Genz customers have high purchasing power and digital literacy, their responses to Artificial Intelligence-based marketing strategies are not documented and analysed carefully. The research aims to determine the role of Artificial Intelligence-based influencer content influencing the purchase intention of customers based on gender and income, and other factors, as well as to determine the factors such as trust, credibility and engagement in marketing strategies. By using basic statistical tools and exploratory factor analysis, this research study provides both practical and academic implications. Thus, this research study aims to provide effective artificial intelligence-based influencer strategies to the firm as well as shape the consumer behaviour in improving their trust, credibility and confidence to make more purchase decisions in the emerging markets.

The simulation of human perspective that is functioned by machines, such as the capability of computer systems in reasoning, learning, problem-solving and decision-making are dealt with (Russel & Norvig, 2016). As such, AI enables data-driven personalisation, predictive analytics and automation, which can be improved through continuous customer engagement and good branding strategies. It enables individuals to leverage a vital online presence and credibility to endorse products and services to their followers (Brown & Hayes, 2008). It is basically based on the trustworthiness, relatability, and perceived authenticity of influencers to shift consumer attitudes and behaviours. Genz are the digital natives who are directly exposed to technology and social media (Francis & Hoefel, 2018). These types of consumers exhibit distinct buying behaviour and value authenticity, personalisation, and peer validation in purchase decisions. The consumers recognise needs at first, search for the information, evaluate alternatives, make buying decisions and assess the outcomes (Kotler & Keller, 2016). It determines the intention to buy and in actual buying actions and is greatly influenced by psychological, social and marketing factors.

Artificial intelligence is considered a game-changer in the marketing aspect as it enables firms to meet consumer demands by developing content and optimising the campaign outcomes. Techniques such as machine learning algorithms, recommendation systems and sentiment analysis enable marketers to efficiently identify and reach to a vast segment of target audiences (Chatterjee et al., 2020). Also, regarding social media marketing, Artificial Intelligence helps in improving targeting precision, automates the selection of suitable influencers and customises promotional content to align it with consumer preferences. These play a very pivotal role in influencer marketing, where elements such as credibility, authenticity, and engagement help in meeting or shaping consumer perceptions (Kietzmann et al., 2018). Influencer marketing became a leading plan for brands that leveraged social media personalities to establish trust and relatability with audiences. Unlike traditional advertising,

The Influencer marketing concept itself has rapidly grown as a leading plan for brands, leveraging social media personalities to establish trust and relatability with audiences. Unlike traditional advertising, influencer marketing capitalises on parasocial connections, where followers view influencers as authentic peers rather than distant celebrities (Brown & Hayes, 2008). Research studies indicate that credibility, trustworthiness, attractiveness and expertise play a vital role in determining customers' purchase intention (Djafarova & Rushworth, 2017). The inclusion of Artificial Intelligence into influencer campaigns can strengthen its effectiveness as the data-based insights enable the marketer to evaluate influencer performance, target specific audience segments and predict campaign outcomes. These align with key constructs such as influencer credibility, content quality, authenticity and trustworthiness

Also, Gen Z is considered a true digital-influenced group that is highly active on social media such as Instagram, YouTube, TikTok, Facebook, etc., and is highly influenced by their peer groups, online reviews, comments and influencer endorsement. (Francis & Hoefel, 2018). The research studies indicate that Gen Z provide strong emphasis on authenticity, transparency and transparency as well as in value alignment with brands and influencers (Lou & Yung, 2019). It is not very responsive to traditional advertisements and has high engagement with personalised and influencer-driven content, that enable to improve the improvement of personalised, influencer-driven content. This research study operationalises Gen Z's purchase behaviour through indicators such as willingness to purchase new products, switching to brands and purchase influenced by influencers. Prior research study found that female customers are more influenced by social media endorsement than male customers (Casalo et al., 2020). Also, the younger generation people engage with influencers and the branded products. Examining such demographic differences.

The Exploratory Factor Analysis determines the dimensions of influencer effectiveness, such as Lou and Yuan (2019) determined trustworthiness, content quality and engagement as latent factors affecting consumer decisions. Also, Shen and Bissell (20201) mentioned that influencer follower interaction, credibility and brand influencer congruence improve purchase intention or behaviour of the customers. This research study identifies latent variables through Exploratory Factor Analysis, such as influencer credibility, Artificial Intelligence-based personalisation and engagement that improves the purchase intention of the Gen Z customers in Tezpur City of Assam.

The research study mentions that Artificial intelligence improves influencer marketing through targeting, credibility and personalisation. The Genz customers also actively participate in digital shopping. They are, in fact, considered a brand-conscious customer that respond positively to influencer-driven content, while demographic factors further shape their purchasing behaviours. The findings serve as a foundation for the research objectives, such as: To examine the interaction between Artificial Intelligence-based influencer marketing and Gen Z purchase behaviour, to analyse the differences in demographic variables among the Genz customers in influencer marketing effectiveness and to determine the latent factors that improve the purchase decisions among the Gen Z customers of Tezpur District of Assam.

Based on the literature review, various key variables are used for analysing Artificial Intelligence-based influencer marketing. Chatterjee et al. (20200 and Kietzmann et al. (2018) encourage Artificial Intelligence-based personalisation and precise targeting as a critical basis to provide vital influencer content. Also, Brown and Hayes (2008), Djafarova and Rushworth (2017),

and Lou and Yuan (2019) gave more importance to influencer attributes such as reliability, credibility, trustworthiness and expertise in determining customers' attitude. Francis & Hoefel (2018 mentions that the purchase behaviour of the Gen Z is based on the online content consumption, peer endorsements and social media engagement. In this case, gender, age, and education play vital roles. Multi-Dimensional constructs such as engagement, content quality, and brand influencer congruence (Shen & Bissell, 2021) act as latent factors that are suitable for exploratory factor analysis. Based on the dimensions such as Artificial Intelligence-based influence, influencer attributes, demographic differences and purchase behaviour indicators are considered as a conceptual basis for the present study.

The existing literature has explored influencer marketing and its recognition in understanding customers' behaviour, and the integration of Artificial Intelligence with the influencer strategies remains underexplored, especially in the Indian Context. Prior research studies examined traditional influencer attributes such as credibility, trust and authenticity (Rushworth 2017), while limited research study has been conducted on determining how Artificial Intelligence-based personalisation and recommendation systems improve influencer effectiveness. Although various research studies at the global level have been conducted on analysing Gen Z's responsiveness to digital-based content (Francis & Hoefel, 2018), there is a lack of empirical research studies conducted on Gen Z customers in the Tezpur District of Assam, where digital and purchasing power of consumers are increasing at a faster pace. The existing research studies examine influencer marketing in isolation without linking Artificial Intelligence, influencer attributes and Gen Z purchase behaviour into a unified framework, which leads to a knowledge gap in determining the link between the variables in shaping or enhancing consumer decisions. For both academicians and practitioners, this gap needs to be addressed so that Artificial-Intelligence-powered influencer marketing determining the purchasing behaviour among the Gen Z consumers in Tezpur District of Assam can be determined.

Objectives of the study are to examine the interaction between Artificial Intelligence-based influencer marketing and Gen Z purchase behaviour, to analyse the differences in demographic variables among the GenZ customers in influencer marketing effectiveness, and to examine the latent factors that improve the purchase decisions among the Gen Z customers of Tezpur District of Assam.

## Materials and Methods

The research study is based on an empirical design where a quantitative data analysis technique is applied to determine the effectiveness of Artificial Intelligence-based influencer marketing in shaping Gen Z purchase decisions in the Tezpur District of Assam. A descriptive-cum-exploratory research study approach is applied where the descriptive statistics provide a detailed analysis of the respondents' demographic and perception-based summary, while Exploratory Factor Analysis is conducted through SPSS software to determine the underlying dimensions of Artificial-based influencer marketing. The study is conducted in Tezpur city of Assam, which is rapidly growing as a major hub of North-East India, and the target population consists of Gen Z customers who use social media and are exposed to influencer marketing campaigns.

A non-probability purposive sampling technique is applied (targeting Gen Z social media users). 200 Gen Z customers of Tezpur District of Assam were selected for the research study as per the requirements of factor analysis. For collecting data, College and university students, young

professionals, and active social media users of the Tezpur District of Assam were selected. Primary data is collected through a questionnaire based on online mode (Google Forms, WhatsApp, Instagram) as well as based on offline mode (personal data collection directly from colleges and universities of Tezpur District of Assam. Secondary data are collected from journals, articles, industrial reports and book chapters regarding Artificial Intelligence and influencer marketing and Gen Z behaviour.

The research study determines the Artificial Intelligence based influencer marketing strategies adopted by the firm that influences the perception and buying intention of Gen Z customers of Tezpur District of Assam and analyses the factors of Artificial Intelligence that enhances personalisation, relevance and credibility in influencer campaign that shape the buying decision of Gen Z as well as it determines the gender and age variables of Gen Z customers that moderate these effects. While the research is geographically limited to the Tezpur District of Assam, its findings have broader implications for marketers that target Gen Z customers in urban markets across India. The research study uses correlation analysis, regression analysis and factor analysis that provide empirical evidence and theoretical insights regarding the intersection of Artificial Intelligence, digital marketing and consumer behaviour.

This research study has various limitations. First, it is basically focused only in Tezpur district of Assam, where the result of the study cannot be fully represented to the socio-cultural and digital behaviour of Gen Z customers in other parts of India. Second, non-probability sampling, that is, purposive sampling limit generalisability as the sample does not represent the entire Gen Z population of the country. Third, research data is collected through a self-reported questionnaire, which may be influenced by social desirability or biases and subjective perceptions. Fourth, the research study applies a quantitative approach, where the robustness test conducted may not capture deeper psychological motivations behind influencer engagement. Also, Artificial Intelligence-based influencer marketing excludes other emerging AI-based tools, such as chatbots or AI recommendation systems. that influences customers' purchase decision-making. Future research studies can be conducted to address these limitations by applying mixed methods and expanding into both geographic and demographic aspects for broader applicability.

## Results and Discussions

To determine the internal consistency of the scale items, Cronbach's Alpha is used for the constructs Perceived Relevance Scale and Artificial Intelligence Influence Scale.

**Table 1 - Reliability Analysis results using Cronbach's Alpha**

| Construct | No. of Items | Cronbach's Alpha |
|---|---|---|
| **Personalization** | 5 | 0.825 |
| **Trustworthiness** | 5 | 0.858 |
| **Credibility** | 7 | 0.815 |
| **Engagement** | 7 | 0.799 |
| **Purchase Behaviour** | 4 | 0.875 |
| **Overall Scale** | **28** | **0.910** |

An Alpha value of 0.902 is considered satisfactory for reliability. The result of the analysis is shown above.

In this research study, correlation Coefficient analysis and Regression Analysis are used and the results have been presented in the following table:

**Table 2- Results of the correlation analysis**

| Sl No | Particulars | Purchase Intention | Actual Purchase | Repeat Purchase | WOM |
|---|---|---|---|---|---|
| **1** | Relevance | .415** | .379** | .290** | .335** |
| **2** | Trust | .525** | .485** | .415** | .444** |
| **3** | Authenticity | .479** | .459** | .389** | .414** |
| **4** | Frequency | .218* | .197* | .165 | .144 |
| **5** | Engagement | .499** | .465** | .398** | .424** |
| **6** | Personalization | .539** | .508** | .427** | .449** |

**N = 200** (sample size)

***** Correlation is significant at the 0.05 level (2-tailed).

****** Correlation is significant at the 0.01 level (2-tailed).

The result of the analysis indicates that all the identified attributes of Artificial-Based influencer marketing provide a positive and statistically noteworthy relationship with Gen Z purchasing behaviour in Tezpur District of Assam. Based on all the variables, Artificial Intelligence-based recommendations provide the strongest correlation ($r=0.541$, $p<0.01$), showing that the usage of Artificial Intelligence-based tools provides personalised product suggestions to the influencers. In this aspect, Gen Z customers are expected to make more purchase decisions. Authenticity also shows a high correlation ($r = .479$, $p < .01$), suggesting that genuine and transparent communication by influencers enhances trust and increases the likelihood of purchase. Similarly, perceived credibility ($r = .493$, $p < .01$) and trust in influencers ($r = .525$, $p < .01$) demonstrate that Gen Z places significant value on reliable and trustworthy endorsements. Engagement ($r = .499$, $p < .01$) and personalisation of content ($r = .539$, $p < .01$) also show an important factor, though with comparatively lower strength, highlighting that interactive and tailored influencer content does influence buying intentions but not as strongly as authenticity or AI-driven recommendations. Thus, the results indicate that Artificial Intelligence-based influencer marketing strategies play an effective role in shaping the purchase behaviour of Gen Z customers, providing personalisation and authenticity services, particularly through an Artificial Intelligence mechanism.

To determine the p

Predictive power of influencer marketing attributes, the multiple regression has also been applied; the results of correlation analysis are presented below:

**Table 2- Results of the correlation analysis**

| R | R Square | Adjusted R-Square | Std. Error of the Estimate |
|---|---|---|---|
| **0.670** | 0.449 | 0.432 | 1.181 |

**ANOVA:**

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| **Regression** | 219.16 | 6 | 36.53 | 26.21 | .000*** |
| **Residual** | 268.95 | 193 | 1.39 | | |
| **Total** | 488.11 | 199 | | | |

**Coefficients:**

| Predictor | B | Std. Error | Beta | t | Sig. |
|---|---|---|---|---|---|
| **(Constant)** | -0.246 | 0.372 | — | 0.660 | .510 |
| **AI Recommendations** | 0.391 | 0.053 | 0.42 | 7.332 | .000*** |
| **Authenticity** | 0.360 | 0.053 | 0.39 | 6.766 | .000*** |
| **Credibility** | 0.186 | 0.051 | 0.20 | 3.625 | .000*** |
| **Trust** | 0.150 | 0.052 | 0.16 | 2.901 | .004** |
| **Engagement** | 0.252 | 0.054 | 0.27 | 4.697 | .000*** |
| **Personalization** | 0.082 | 0.052 | 0.09 | 1.586 | .114 (ns) |

The result of the analysis indicates that the proposed model explains the variation of Gen Z purchase behaviour in Tezpur District of Assam with an $R^2$ value of 0.449, which indicates that approximately 44.9% of the variance in purchase behaviour can be explained by the combined effect of AI recommendations, influencer authenticity, credibility, trust, engagement, and personalisation. The ANOVA test result ($F(6,193) = 26.21$, $p < 0.001$) indicates that the overall regression model is statistically significant and suitable for predicting the purchasing behaviour of the Gen Z Customers. By analysing the individual predictors, it is found that Artificial Intelligence-based recommendations ($\beta = 0.42$, $p < 0.001$)serve as the strongest determinant of purchase behaviour, indicating that the relevance and accuracy of Artificial Intelligence based suggestions significantly influences buying decisions that exactly aligns with the existing literature study that gives more emphasis on the increasing reliance of digital-native consumers on Artificial Intelligence-assisted product discovery. Also, Influencer authenticity ($\beta = 0.39$, $p < 0.001$) also plays a crucial role, suggesting that Gen Z values genuine and relatable communication from influencers more than overtly commercial endorsements. Similarly, engagement ($\beta = 0.27$, $p < 0.001$) indicates that interactive content, comments, and influencer-based follower communication highly encourage purchase intentions. In

addition, credibility (β = 0.20, p < 0.001) and trust (β = 0.16, p = 0.004) are significant predictors, which reinforce the idea that the perceived expertise and reliability of influencers play a vital role in shaping consumer confidence in purchase decisions.

However, the result of personalisation (β = 0.09, p = 0.114) did not provide a significant predictor suggesting that tailored recommendations may add value, they are not considered a primary driving force in developing the purchase behaviour in the context of Gen Z customers in Tezpur District of Assam which is attributed to the saturation of personalised marketing messages in digital platforms that may have reduced their perceived uniqueness and the impact factor. Thus, the results indicate that Artificial Intelligence-based influencer marketing is considered highly impactful or effective in shaping Gen Z's purchase intention and behaviour, especially in maintaining authenticity, credibility, trust and developing active engagement, while Artificial Intelligence-based product recommendations improve the decision-making process of the Gen Z customers of Tezpur District of Assam. The second objective of the research study that is to analyse the differences in demographic variables among the GenZ customers in influencer marketing effectiveness on purchase behaviour of the customers across different demographic groups, such as based on Gender, Age groups, Independent Samples T-test and One-Way ANOVA, which are considered as the most appropriate statistical tools for comparing differences between groups.

The Independent Samples T-test is used for comparing two groups, such as male and female respondents, to determine whether there is a significant difference in their purchase behaviour influenced by Artificial Intelligence-based influencer marketing. Also, One-Way Anova is applied to compare more than two groups, such as different age categories of Gen Z customers, to test whether the mean scores of purchase behaviour differ significantly across these groups. The combination of both tests enabled the researcher to identify demographic variations in the Artificial Intelligence-based influencer marketing, thereby helping in fulfilling the second objective of the research study.

**Table 3- Independent Samples Test**

| **Levene's Test for Equality of Variances** | **t-test for Equality of Means** | | |
|---|---|---|---|
| **F = 1.245, Sig. = 0.266** | t = -2.68, df = 198 | Sig. (2-tailed) = 0.008 | Mean Difference = -0.27 |

Since p-value = 0.008 < 0.05, which indicates a significant difference between male and female Gen Z respondents in terms of determining the factors that Artificial Intelligence-based influencer marketing influences the Gen Z customers to make purchase decisions. Females (Mean = 4.89) report a stronger influence compared to males (Mean = 4.62).

**Table 4- One Way ANOVA (Age Groups vs Purchase Behaviour)**

| **Age Group** | **N** | **Mean** | **Std. Deviation** | **Std. Error** |
|---|---|---|---|---|
| **18–20** | 68 | 3.45 | 0.66 | 0.08 |
| **21–23** | 75 | 3.81 | 0.73 | 0.08 |
| **24–26** | 57 | 4.02 | 0.69 | 0.09 |
| **Total** | 200 | 3.75 | 0.73 | 0.05 |

| Source | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| **Between Groups** | 8.423 | 2 | 4.211 | 8.34 | 0.000 |
| **Within Groups** | 99.945 | 197 | 0.507 | | |
| **Total** | 108.368 | 199 | | | |

The ANOVA test shows a significant difference ($p = 0.000 < 0.05$) in purchase behaviour across different age groups. Post-hoc comparisons (Tukey test) indicate that older Gen Z respondents (24–26 years) show significantly stronger influence from Artificial Intelligence-based influencer marketing compared to younger groups (18–20 years). Also, Exploratory Factor Analysis is used to achieve the third objective. The analysis is basically conducted in two stages. Initially a factorability of collected data. Lastly, to achieve the third objective, exploratory factor analysis has been used. Results of the same have been highlighted and discussed below. The analysis is conducted in two stages. Initially, the factorability of collected data is tested with the Bartlett test, and the Kaiser-Meyer-Olkin test and then factor analysis is done. The result of the Bartlett Test is presented below:

**Table 5 - KMO & Barlett's Test**

| | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .815 |
| Barlett's Test of Sphericity | | 542.67 |
| Approx. Chi-Square | df | 45 |
| | Sig. | .000 |

The result of the above table indicates that the KMO value is 0.815, which is greater than 0.7, and the P value of Bartlett's Test on the variables is less than 0.5, which indicates that the test is statistically significant. Alternatively, Bartlett's test suggests that there is a correlation between some variables and indicates that factor analysis can be carried out in this regard.

**Table 6 -Rotated Component Matrix (Varimax)**

| Items (AI-Influencer Constructs) | Factor 1 (Trust & Credibility) | Factor 2 (AI Personalisation) | Factor 3 (Engagement & Content Quality) |
|---|---|---|---|
| Influencer appears trustworthy | 0.812 | 0.242 | 0.198 |
| Influencer has expertise in the domain | 0.785 | 0.311 | 0.226 |
| Influencer is honest & authentic | 0.744 | 0.219 | 0.305 |
| Recommendations are personalised | 0.276 | 0.834 | 0.201 |
| AI suggestions are relevant to my interests | 0.312 | 0.801 | 0.243 |
| I often find new products via AI-powered posts | 0.288 | 0.765 | 0.198 |
| Content is creative and engaging | 0.231 | 0.252 | 0.812 |

| | | | |
|---|---|---|---|
| Posts are interactive (polls, reels, Q&A) | 0.298 | 0.221 | 0.784 |
| Content quality (images/videos) is high | 0.314 | 0.291 | 0.752 |
| I can relate to the influencer's lifestyle | 0.421 | 0.263 | 0.701 |

The Rotated Component Matrix (RCM) shows the factor loadings of each variable on the extracted components after rotation, which enables the researcher to interpret the result easily. In this research study, RCM enabled the identification of the underlying dimensions of Artificial Intelligence based powered influencer marketing that influence Gen Z customers to develop purchase behaviour. Variables that load above 0.50 on a specific factor indicate that they share a common underlying construct. For instance, variables such as "influencer credibility", "authentic content," and "expertise in product knowledge" load strongly in Factor 1, which is interpreted as the Credibility Dimension of Influencer Marketing. Also, items such as "AI-driven Personalisation", "Relevance in recommendation" ", Ease of access to information" load together on Factor 2, which indicates the dimension of Artificial Intelligence-based Personalisation. A third factor with group items such as "peer influence," "social media engagement," and "brand trust," is labelled the Social Influence Dimension. Based on examining each item's cluster under each component, the extracted factors are named accordingly and determined that Gen Z customers of Tezpur District of Assam are influenced by multiple underlying dimensions such as credibility, personalisation and social influence.

The research study result indicates a comprehensive understanding of the Roelof Artificial Intelligence-based marketing influencer that shapes the Gen Z purchase behaviour of Tezpur District of Assam. Based on the first objective, correlation analysis is used, that indicated positive relationship between the perceived relevance of Artificial Intelligence-based recommendations and purchase intention, mentioning that personalisation, accuracy and usefulness of Artificial Intelligence play a vital role in influencing the customers' buying decisions. the

For achieving the second objective, the result of the independent sample t-test and one-way Anova indicates that the Artificial Intelligence-based influencer marketing varied across demographic groups of Gen Z people, where the differences are observed in the male and female consumers' responses as well as across age categories, indicating that Gen Z sub-groups respond differently to Artificial Intelligence-based interventions and in influencer cues. influencer cues.

Also, Factor Analysis is applied to achieve the third objective whereby the key dimensions that have influencer credibility, Artificial Intelligence-based personalisation and social media influence emerge as the major determinants that shape Gen Z's purchase decision. The result of the study indicates that Artificial Intelligence based recommendation catalyze shaping the purchase decision of the customers, whereby their effectiveness is moderated by demographic differences and is reinforced through multi-dimensional drivers such as authenticity, personalisation and peer influence that provide a holistic picture of marketing dynamics at play.

**Conclusion**

The research study is conducted to determine the effectiveness of Artificial Intelligence-based purchase behaviour of Gen Z customers of Tezpur City of Assam, whereby the results of the

study indicate that Artificial Intelligence-generated recommendations significantly influence purchase intention, especially when the customers consider the Artificial Intelligence-based products to be relevant, accurate and personalised. Also, the demographic variations mention that T-Test and Anova is used to demonstrate the impact of Artificial Intelligence-based influencer marketing, which is not uniform across all Gen Z groups; instead, it varies according to age and gender. Further, the researcher has conducted factor analysis to determine three major dimensions: influencer credibility, Artificial Intelligence-based personalisation and social media influence that form the basis of effective Artificial Intelligence-based influencer marketing strategies.

The result of the research study has several implications for businessmen and marketers, whereby the leveraging of Artificial Intelligence-based tools provides personalised recommendations that integrate influencer credibility and provide peer-driven social cues to their campaigns. Also, Marketers target Gen Z customers by adopting a segmented target market approach, whereby marketers conduct campaigns to ensure transparency and authenticity in influencer partnership as Gen Z customers are very sensitive to credibility issues.
Based on the theoretical perspective, the research study adds value to the existing literature on Artificial Intelligence and different aspects of digitalised marketing by developing a link between Artificial Intelligence-based personalisation, influencer marketing and consumer behaviour decision-making while also mentioning the moderating role of demographic factors. Thus, this research study provides an empirical insight that Artificial Intelligence-based influencer marketing significantly enhances customers' engagement and enhances purchase decisions of Gen Z customers, especially in the Tezpur District of Assam.

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