



THE IMPACT OF EXTENDED REALITY (XR) SHOPPING ENVIRONMENT ON CUSTOMER ENGAGEMENT AND PURCHASE INTENTION IN FASHION RETAIL

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ABSTRACT

This study explores how fashion retail customer engagement and purchase intent are affected by AR and VR two types of Extended Reality (XR). Finding out whether and how features like virtual try-ons interactive retail spaces and immersive experiences can help fashion businesses and products is the main objective of the study. The study uses primary data collected from 200 respondents using a structured questionnaire along with corroborating evidence from the literature. Statisticians used techniques such as regression mediation analysis correlation reliability analysis and descriptive statistics to find relationships between variables. Customer engagement appears to be impacted by system quality information quality and trialability but not compatibility.

KEYWORDS: Extended Reality (XR), Consumer Engagement, Purchase Intention, Fashion Retail, Augmented Reality (AR), Virtual Reality (VR)

INTRODUCTION

A significant transition from traditional shopping practices to greater revolutionary and tech-driven experiences is taking place in the fashion retail zone in state-of-the-art unexpectedly evolving globe. In the past, consumers relied heavily on brick-and-mortar institutions, wherein they could have a look at merchandise up nearby. The ease and time financial savings offered by using internet shopping contributed to its eventual rise in recognition. However state-of-the-art consumers want more than a simple shopping experience; they want something this is dynamic, personal, and attractive. Due to this transformation in expectations, fashion companies are embracing new technologies which could enhance the client experience. An instance of a significant innovation is the rise of prolonged reality (XR), which is revolutionising the fashion industry by using bringing collectively on-line and offline experiences in a clean and interesting manner (Plume et al., 2025). Normally abbreviated as XR, the acronym stands for "prolonged reality," which encompasses AR, VR, and MR. The purpose of those technological improvements is to regulate or increase the consumer's experience of reality, especially in retail settings. Augmented reality enables customers to peer virtual additives within the bodily environment, permitting them to surely attempt on garments the usage of their smartphones or clever mirrors. Conversely, virtual reality (VR) generates a wholly virtual setting wherein consumers can also immerse themselves in a brand's wares, browse an virtual keep, and interact with them. No matter MR's ability, it has received little academic attention while applied to the fashion retail industry. outlets are capable of bridge the virtual and bodily shopping experiences with the resource of those technologies, which enhance product visualisation and provide interactive features (Agnihotri et al., 2024). Augmented reality (AR) has been the most talked about and used XR era in the fashion retail industry. To enhance the shopping experience, some companies are already the usage of augmented reality elements like virtual attempt-ons, interactive filters, and virtual shows in-shop. These features allow customers to see how a product will look on them without physically trying it, which increases their confidence in preference of purchase. Augmented fact also brings a feel of pleasure and excitement, elevating the shopping for revel in. Customers are more satisfied and more likely to buy from a corporation when augmented fact (AR) gives both useful information and enjoyable experiences, in accordance to analyze. Augmented fact is a powerfull tool for modern merchants because of its sensible and emotional blessings (Chen et al., 2025; Ashok & Qureshi, 2025). some other sizable part of XR is VR, which targets to offer a wholly immersive retail placing. digital fact allows clients to revel in a retail placing as close to the actual aspect as feasible, whole with digital aisles, digital items, and even brand factors that they can have interaction with. because of the significance of narrative, surroundings, and brand image in persuading clients, this type of revel in is specifically useful for high-give up style groups. thru using digital fact's practical pics, sounds, and interactions, clients are able to get a deeper understanding of items and expand a stronger emotional connection to the brand. in accordance to analyze (Xue et al., 2022; Chen et al., 2025), clients are more likely to have interaction and make a purchase after having a memorable and attractive shopping revel in. superior customer involvement is a key end result of implementing XR into the style retail enterprise. the level of emotional and energetic involvement a customer has with a brand when purchasing is referred to as customer engagement. studies made feasible with the aid of XR technology are extra engaging due to the fact they may be interactive, practical, and socially wealthy. digital fact (VR) settings allow users to research and engage with things extensive, even as augmented fact (AR) filters encourage users to actively test things. clients spend extra time on the platform and become extra unswerving to the corporation due to those studies, which also enhance their emotional connection to the enterprise. moreover, functions that permit clients to sense related to others in digital surroundings, referred to as social presence, are vital in increasing engagement ranges (Girsang & Teng, 2025; Plume et al., 2025).



The idea of purchase intention, or the opportunity that a customer might make a purchase after an XR experience, is every other essential one. through improving factors like perceived software and perceived simplicity of use, XR technologies had been shown to favourably have an effect on purchase intent. clients have extra faith in services or products and are more inclined to buy it if they see it as beneficial and easy to use. moreover, XR stories are attractive and immersive, which facilitates customers feel more at ease approximately their selections and minimises ambiguity. higher ranges of customer involvement are related to an improved probability of making a purchase, as studies demonstrates that customer engagement mediates the relationship among XR stories and purchase intention. whilst customers have confidence in their personal talents and a robust social presence, they are more likely to use these technologies without difficulty and satisfaction (Agnihotri et al., 2024; Plume et al., 2025). even though XR has several blessings and correct consequences in the style retail industry, there are nevertheless a few unanswered questions that want more investigation. quite a few studies ignore the opportunity of an XR environment that integrates numerous technologies in favour of analyzing individual ones, like AR or VR. due to this, we can't completely hold close how various XR additives have interaction to impact customer movements. Plus, maximum studies most effective encompass a tiny subset of the populace, such college students or younger users, who may not be representative of the style industry as an entire. moreover, there's a lack of studies that examines mixed truth in depth, and lots less that mixes studies of perceived software, usability, social presence, and self-efficacy into a coherent paradigm. The mixed consequences of XR technologies on customer engagement and desire to buy in style retail contexts have now not yet been very well studied (Agnihotri et al., 2024; Chen et al., 2025; Girsang & Teng, 2025). To deal with these expertise gaps, this study examines the consequences of a style retail industry's incorporated XR shopping environment on customer engagement and purchase intention. Perceived software, perceived ease of use, social presence, and self-efficacy are a number of the essential variables which might be emphasised on this context. If style agencies and entrepreneurs are critical approximately the usage of XR era to enhance income and customer satisfaction, they might do nicely to discover these links in depth; the consequences might be priceless. better methods for implementing XR which might be practical and beneficial for enterprises and customers alike can be evolved with the aid of this examine's consequences.

REVIEW OF LITERATURE

Overview of Extended Reality (XR) in Fashion Retail

The effect of extended fact (XR) at the clothing retail sector has attracted loads of interest from lecturers inside the last few years. manufacturers are collaborating with XR technology like AR, VR, and MR to construct greater dynamic and tasty retail spaces. Jawale et al. (2024) asserts that XR technology are revolutionising client interactions with agencies and items, going past just enhancing on-line shopping for. The use of these technologies, purchasers may also have greater significant and tasty buying reviews that encompass visible, emotional, and social components. further, Singh (2025) mentioned how XR allows agencies to transcend traditional income techniques by using narrative reviews, which useful resource in forging profound emotional bonds with clients. One of the maximum beneficial equipment for modern-day e-commerce, XR influences purchasers on several levels (cognitive, emotional, and behavioural), as pointed out through Chen et al. (2024). There has continually been a distinction among on-line and bodily shopping for, in line with previous research as well. The loss of human touch and bodily contact become a chief drawback of conventional net shopping for. virtual fact (VR) would possibly fill this want through providing a greater practical and sensory-rich shopping revel in, as Toma (2017) mentioned. The speculation becomes later reinforced through Toma's (2020) observe, which highlighted the methods wherein virtual fact and other immersive technology may also make on-line shopping greater exciting and much like purchasing in a bodily save. The literature as an entire demonstrates that XR is unexpectedly becoming an innovation engine inside the style retail industry, in particular inside the areas of customer involvement and revel in enhancement. consumer Engagement and buy aim: The function of Augmented reality (AR) one of the maximum researched technologies inside the style retail industry is augmented reality (AR). a variety of studies have looked at how augmented reality increases customer engagement and preference to shop for. in accordance to research through Zambiasi and Pozzebon (2025), augmented reality (AR) makes purchasing extra a laugh and much less frightening, which increases the chance that customers will make a buy. customers have higher confidence in their purchases and less returns while they can see matters in augmented reality. choices are made higher with using augmented reality (AR), in keeping with Dandawate et al. (2025), because it lets in for extra accurate product visualisation and enables corporations meet customer expectations. precise elements of AR have also been the difficulty of some of studies. Key augmented reality (AR) functions that favourably effect buy aim had been discovered through Konstantoulaki et al. (2024) as interaction, vividness, manipulate, and embedding. because it encourages purchasers to take part, interactivity is the maximum critical of these functions. in addition, Kleilat et al. (2025) elaborated on how augmented reality (AR) characteristics like vividness and novelty enhance perceived application and usefulness, which in turn boosts customer engagement and, in the long run, buy intent. extra importantly for the functions of influencing shopping choices, Awad (2025) discovered that AR enhances both emblem impression and customer trust. additional studies back the useful impact of AR on customer actions. in keeping with Prakash (2024), augmented reality (AR) greatly improves the clothing industry's whole shopping for revel in through enhancing customer connection. Avatars in augmented reality (AR) are critical, in keeping with Gahlot et al. (2024), as they permit for an extra customised shopping for revel in and higher tiers of client pleasure. fantastic emotional reactions precipitated through augmented reality (AR), in keeping with Watson et al. (2018), mediate the connection between era and preference to shop for. The studies are unanimous in its conclusion that augmented reality is an effective tool for reinforcing consumer engagement and intent to shop for inside the style retail industry.

Impact of Virtual Reality (VR) on Consumer Experience and Behavior

Every other immersive era that has attracted plenty of interest as an way to enhance the style buying revel in for clients is virtual reality (VR). various aspects of the revel in, which includes sensory, interactive, emotional, and cognitive ones, are chargeable for



the effect of virtual reality retail environments on purchase intention, in step with Chen et al. (2025). consumer happiness and propensity to purchase are each boosted by way of those activities, which make buying an greater exciting and unique pastime usual. Perceived usefulness and ease of use had been also diagnosed as critical mediating factors in the research. virtual reality (VR) complements consumer trust and brand connection through the supply of practical and immersive stories, in accordance to analyze by way of Asfaw and Menon (2025) that focused on the excessive-stop style quarter. It turned into determined that functions together with personalisation and user-friendliness had a sizeable position in determining shopping picks. Xue et al. (2020) [nine] have noted that purchasers, specifically the ones pushed by way of interest and pride, need practical and vibrant virtual reality settings. virtual reality (VR) has the ability to have an effect on what human beings purchase on impulse, in step with different research. Immersive virtual reality (VR) boosts choice to purchase by way of raising high-quality feelings and self-image, in step with Jang and Kim (2024). virtual reality (VR) complements purchaser trust, engagement, and product self assurance, which in flip leads to progressed shopping picks (Shilpa and Shrivastava, 2025). based totally on those results, virtual reality seems to be an effective device for growing retail stories which are each immersive and powerful in influencing purchaser behaviour.

Combined Impact of AR and VR on Engagement and Purchase Behavior

At the same time as promoting garb. Enyejo et al. (2024) observed that both AR and VR appreciably improve consumer engagement and pleasure with the aid of supplying interactive and immersive reviews. purchasers' propensity to make nicely-knowledgeable purchases is favourably impacted with the aid of those technology. digital fact and augmented fact (AR/VR) beautify the buying experience, decrease returns, and encourage green purchasing behavior, according to Ganesha and Jeevarathanam (2025). Indiran et al. (2024) focused on digital strive-on applications and observed that perceived usefulness is a key aspect influencing purchase intention among Gen Z purchasers. moreover, Li (2024) regarded examined digital becoming rooms and found that interactive reviews boost self assurance and pleasure of buying, which in flip will increase purchase intention. according to Park and Kim (2020), augmented fact (AR) is higher for intention-orientated buying at the same time as digital fact (VR) is higher for exploratory surfing, relying on the buying mode. The consequences of this research reveal that augmented and digital fact (AR/VR) may fit collectively to improve the buying experience. nonetheless, they pressure that those technology' efficacy is conditional on the consumer's movements and the environment wherein they're applied.

Research Gaps and Future Directions

Numerous gaps continue to be in the present day literature, in spite of the numerous research that have proven the beneficial influences of XR technology. factors together with person familiarity, realism, and emblem impression in augmented fact apps want greater investigation, as pointed out by means of Zambiasi and Pozzebon (2025). factors such as believe, social cost, and innovativeness—which are below-explored in XR research—were also delivered to light by means of Jawale et al. (2024). different technologies have an impact on customers' attention on gadgets, consistent with Chen et al. (2023), who hooked up the belief of attention allocation in XR settings. This factors to the need for greater research to elucidate the intellectual procedures involved in XR purchasing. further, Chen et al. (2024) confused the want of a holistic technique that takes into consideration technical, customer, and product-associated components simultaneously. troubles with study design and sample variety also represent a substantial vacuum. The findings are not applicable to a broader populace given that many research appoint small samples, such college students. mixed fact (MR) has also not been thoroughly investigated in the instructional community. To better apprehend customer behaviour in the style retail industry, future research ought to encompass different samples, focus on included XR environments, and explore numerous elements simultaneously, consistent with the literature. The present day study intends to fill that hole by means of investigating the effects of AR and VR in tandem inside a cohesive XR framework, something that has obtained little attention in the literature.

HYPOTHESIS OF THE STUDY

H1: System quality has a significant impact on consumer engagement in XR shopping environments.

H2: Information quality has a significant impact on consumer engagement in XR shopping environments.

H3: Compatibility of XR technology with consumers' lifestyle and preferences has a significant impact on consumer engagement.

H4: Trialability of XR technology has a significant impact on consumer engagement.

H5: Consumer engagement has a significant impact on purchase intention in XR shopping environments.

H6: Consumer engagement mediates the relationship between system quality, information quality, compatibility, trialability, and purchase intention.

RESEARCH OBJECTIVES

1. To examine the effect of system quality on consumer engagement in XR shopping environments in fashion retail.
2. To analyze the influence of information quality on consumer engagement in XR-based fashion retail platforms.
3. To determine the impact of compatibility of XR technologies with consumers' lifestyle and shopping habits on consumer engagement.
4. To evaluate the role of trialability of XR technologies in enhancing consumer engagement in fashion retail.
5. To investigate the relationship between consumer engagement and purchase intention in XR shopping environments.
6. To examine the mediating role of consumer engagement in the relationship between system quality, information quality, compatibility, trialability, and purchase intention.



RESEARCH METHODOLOGY

This section explains the studies approach used to observe the effect of prolonged fact (XR) shopping environments on purchaser engagement and buy purpose inside the fashion retail industry. It clearly describes the studies design, information series strategies, sampling procedure, equipment used for analysis, variables of the observe, boundaries, and moral concerns. The intention is to ensure that the studies is carried out in a right, systematic, and dependable way in order that significant conclusions may be drawn.

Research Design

The existing take a look at adopts a descriptive and analytical research layout. The descriptive layout is used to understand clients' perceptions, critiques, and reports regarding using prolonged reality (XR) purchasing environments in style retail. It allows in figuring out how clients interact with XR technologies such as Augmented reality (AR), digital reality (VR), and combined reality (MR), and the way these technologies have an impact on their purchasing experience. The analytical layout is used to have a look at the connection between the key variables of the take a look at, specifically system best, information best, compatibility, trialability, purchaser engagement, and purchase intention. This method allows in understanding how these technological factors have an impact on purchaser engagement and the way engagement in addition impacts purchase intention. The take a look at is move-sectional in nature, as the statistics is accrued at a unmarried factor in time from respondents.

Sources of Data

The study is based on both primary data and secondary data to ensure a strong and reliable research foundation.

Primary Data: An established questionnaire is used to get primary information immediately from respondents. The cause of the survey is to gauge clients' mind on virtual truth (VR) shopping reports, their involvement with the content, and their propensity to make a buy. with a view to efficiently capture the viewpoints, the answers are collected the use of a five-factor Likert scale, which tiers from strongly disagree to strongly agree.

Secondary Data: Secondary statistics is collected from research journals, books, websites, and previously posted studies associated with prolonged fact (XR), consumer engagement, records gadget models, and customer behavior in fashion retail.

Sampling Method

The principle pattern approach used in the research is convenience sampling. We use this approach as it gives us easy get entry to to the ones who've used augmented fact (AR) filters, virtual attempt-on, or other XR-primarily based buying features before. because of constrained time and resources, it's also the best alternative. human beings who've a few expertise or know-how with digital buying technology, including students and running experts, make up most of the people of the responses..

Sample Size

The sample length for the observe includes 200 respondents. This sample length is considered good enough to analyze customer behavior and to use statistical strategies for significant consequences.

Instrument for Collecting Data

A structured questionnaire with many questions touching on the study's primary constructs is used to accumulate the information. Sections of the questionnaire are classified in step with the subsequent variables: • Product Reliability • information Accuracy • running together taking into consideration trials • interaction with customers • cause to buy a five-point Likert scale is used to document solutions to many statements that check each dimension. To make sure the survey is legitimate and reliable, we primarily based its questions on preceding studies. Composite scores are generated through averaging the replies for each variable; those scores are then used in statistical analyses.

Variables of the Study

The following factors are considered in the study:

Factors Held by Others: • Product Reliability • Data Accuracy

• Working together

Allowing for trials

Independent variable: • Engaged Consumers Dependent Factor:

• Intent to Buy

The conceptual framework is used to identify these factors in order to comprehend the impact of XR retail environments on customer behaviour.

Tools for Data Analysis

The statistics will be very well reviewed for errors and lacking values earlier than evaluation to guarantee correctness. we are able to be utilising the subsequent statistical gear: • Reliability evaluation (Cronbach's Alpha): To make certain that the questions of the questionnaire are regular and reliable • Analysing the statistics the usage of a percentage to study the responder demography to discover overarching trends and summarise the statistics, descriptive information are beneficial. One manner to observe the interplay among several factors is via correlation evaluation. To decide how one-of-a-kind unbiased factors have an effect on purchaser engagement and purpose to buy, one may use regression evaluation. The motive of a mediation evaluation is to decide whether or not or not purchaser engagement acts as a moderator among the unbiased variables and the desire to buy. if you want to get specific

and understandable findings, the statistics will be analysed the usage of SPSS and Microsoft Excel. Focusing on the fashion retail zone, this study aims to evaluate the impact of XR purchasing environments on purchaser engagement and buy purpose. The impact of technological factors on purchaser involvement is often tested, which includes trialability, interoperability, device excellent, and data excellent. The most fundamental individuals inside the examine are those who buy commonly online or in virtual spaces, and those who have previous experience with XR elements which include virtual strive-on or interactive product visualisation. extra methods that fashion agencies can also use the examine's findings are to tailor and improve their virtual buying research.

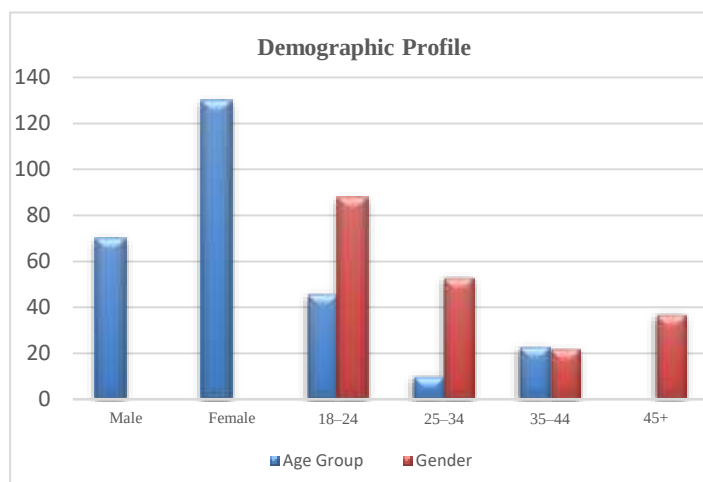
Limits on the research sure limits are mounted by the research itself. there is a threat that convenience sampling may not provide a real photo of the population. The research' reliance on solutions from the ones who've experienced the XR period makes them inappropriate to the overall population. because the responses are basically based totally on private reviews, there is sure to be bias in them. The investigation can best go so far due to time and budget boundaries. critical moral factors All processes used within the examine adhere to the very best ethical requirements. Respondents are apprised of the examine's desires before they're asked to participate within the survey, that is entirely voluntary. All statistics accumulated is used best for academic objectives, and their personal information is dealt with with the utmost confidentiality. summary in popular, the examine adheres to a methodical and organised studies manner by means of integrating analytical and descriptive techniques. The examine's *overarching aim* is to provide mild on the ways in which digital fact (VR) shopping environments have an effect on consumer engagement and purchase motive within the style retail industry by means of analysing number one and secondary statistics the usage of suitable statistical methods.

DATA ANALYSIS AND INTERPRETATION

Demographic Variables

Table 1: Demographic Profile of Respondents

Variable	Category	Frequency	Percentage
Gender	Male	70	35.0%
	Female	130	65.0%
	Total	200	100%
Age	18–24	88	44.0%
	25–34	53	26.5%
	35–44	22	11.0%
	45+	37	18.5%
	Total	200	100%



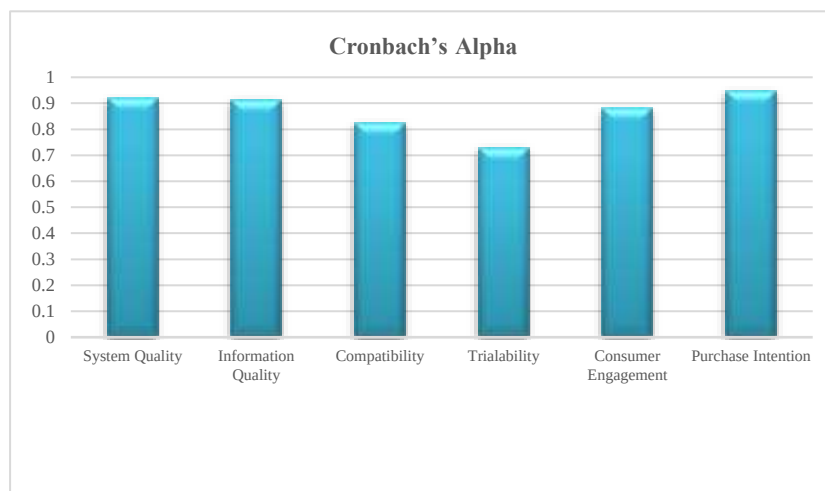
Graph 1. Demographic Profile of Respondents

Interpretation

As you can see from the data, the responses fit a certain demographic profile. the general public of responders are female (65%), but 35% of the overall sample are male. this is Significant because women make up a disproportionately large segment of the take a look at populace and have a first-rate amount of influence inside the fashion retail industry. the general public of replies come from the one's elderly 18–24, comprising 44% of the overall, with 26.5% falling into the 25–34 age bracket. There are eleven people inside the 45+ age institution, making up of 18.5% of the overall. the lowest represented age institution is that of 35–44 years antique, making up handiest 1% of the overall. That most people are younger and subsequently extra used to the use of virtual technology like XR purchasing environments is borne out by using the data. Analysing Reliability (Cronbach's Alpha) examining the internal consistency of the questionnaire's measuring scale is the motive of reliability evaluation. you can see whether or not the elements in each variable are certainly measuring the same element. device satisfactory, data satisfactory, Compatibility, Trialability, purchaser Engagement, and purchase aim are all measures of dependability in these studies. Cronbach's Alpha takes a look at is used for this motive. The possible values of Cronbach's Alpha are 0 and 1. Any number above 0.6 is adequate, however anything over 0.7 is first-rate. The dependability and consistency of the size are better indicated by using better numbers.

Table 2. Results of Reliability Analysis

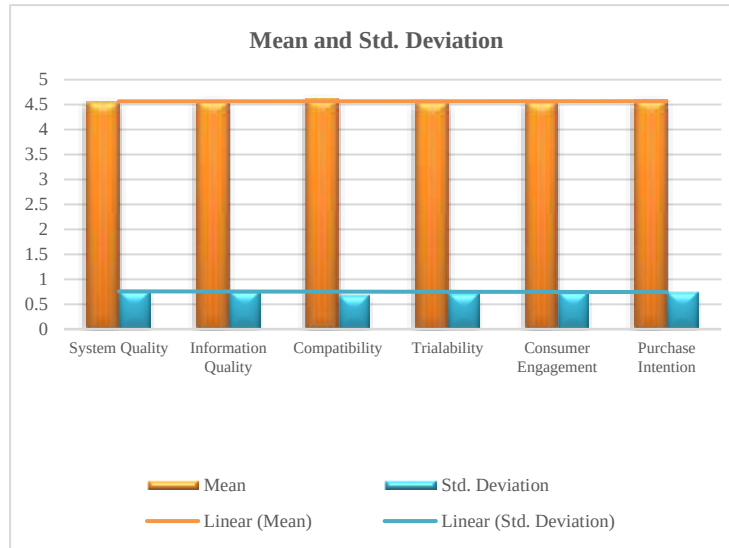
Variable	Cronbach's Alpha	No. of Items	Interpretation
System Quality	0.918	5	Excellent Reliability
Information Quality	0.911	5	Excellent Reliability
Compatibility	0.825	3	Good Reliability
Trialability	0.727	2	Acceptable Reliability
Consumer Engagement	0.879	5	Good Reliability
Purchase Intention	0.947	10	Excellent Reliability

**Graph 2.** Cronbach's Alpha**Interpretation**

The reliability analysis discovered that every one of the observe's variables exhibited best to outstanding ranges of inner consistency. With a Cronbach's Alpha of 0.918, gadget first-class is pretty dependable. This shows that the construct is continuously measured by all factors bearing on gadget performance, usability, and visual experience. The questions about the statistics's clarity, usefulness, and completeness are nicely-aligned, as proven by the very high dependability result of 0.911 in the statistics first-class class. With a Cronbach's Alpha of 0.825, compatibility is pretty dependable. The items trying out the compatibility of XR generation with human beings' interests and lifestyles are steady, as visible above. With a result of 0.727, trialability is deemed perfect. in spite of its reduced item count, the dependability remains excellent, making it the appropriate desire for similarly investigation. a high dependability score of 0.879 for client Engagement shows that the factors bearing on client engagement, hobby, and pleasure are very consistent. the highest Cronbach's Alpha score of 0.947 was determined on the purchase intention subscale, indicating highly effective reliability. all of the metrics used to gauge purchasers' propensity to purchase have a high diploma of correlation with one another.

Descriptive Statistics**Table 3.** Descriptive Statistics

Variable	Mean	Std. Deviation	Interpretation
System Quality	4.55	0.78	High Agreement
Information Quality	4.57	0.77	High Agreement
Compatibility	4.61	0.70	High Agreement
Trialability	4.54	0.73	High Agreement
Consumer Engagement	4.55	0.76	High Engagement
Purchase Intention	4.58	0.76	High Purchase Intention



Graph 3. Mean and Std. Deviation

Interpretation

The descriptive information of the study's number one variables are proven in the table above. with regards to virtual truth (VR) buying settings for garb retail, the majority of respondents are in settlement, when you consider that all the variables have imply values extra than four. With an average score of 4.55 at the system quality scale, it's clean that human beings suppose XR systems are dependable, user-pleasant, and aesthetically attractive. additionally, the information provided through XR platforms is obvious, informative, and useful for product assessment, as proven through the excessive imply of four. 4.57 for data quality. a median score of 4.61 for compatibility indicates that XR technology are properly desirable to customers' tastes and ways of dwelling, the exceptional score of any variable. features like virtual try-on decrease uncertainty and growth user self assurance, as proven through the imply trialability score of 4.54. With an average score of 4.55 on client Engagement, it's clean that XR retail studies are amusing, dynamic, and engaging for customers. customers' propensity to shop for fashion gadgets is favourably stricken by XR encounters, as seen through the imply value of 4.58 for purchase intention. general, the findings show that XR technology are properly-obtained through respondents, and that they substantially enhance engagement and preference to shop for. Analysing Correlations The direction and energy of the association between the study's variables may be tested the use of correlation analysis. the use of the Pearson Correlation method, this study examines the connections between XR retail environments' system quality, data quality, compatibility, trialability, client engagement, and preference to shop for. Values toward one shows a sizeable wonderful hyperlink, because the correlation coefficient (r) runs from minus one to plus one. The correlation between the variables is considered statistically sizeable if the p-value is much less than 0.05.

Table 4. Correlation Analysis

Variables	System Quality	Information Quality	Compatibility	Trialability	Consumer Engagement	Purchase Intention
System Quality	1	.883**	.835**	.694**	.756**	.821**
Significance (p-value)	—	<0.001	<0.001	<0.001	<0.001	<0.001
Information Quality	.883**	1	.890**	.721**	.780**	.872**
Significance (p-value)	<0.001	—	<0.001	<0.001	<0.001	<0.001
Compatibility	.835**	.890**	1	.781**	.792**	.861**
Significance (p-value)	<0.001	<0.001	—	<0.001	<0.001	<0.001
Trialability	.694**	.721**	.781**	1	.787**	.786**
Significance (p-value)	<0.001	<0.001	<0.001	—	<0.001	<0.001
Consumer Engagement	.756**	.780**	.792**	.787**	1	.899**
Significance (p-value)	<0.001	<0.001	<0.001	<0.001	—	<0.001
Purchase Intention	.821**	.872**	.861**	.786**	.899**	1
Significance (p-value)	<0.001	<0.001	<0.001	<0.001	<0.001	—

Interpretation

we will see the outcomes of the Pearson correlation check in desk 4. there may be a fantastic and statistically big association among all variables, in keeping with the data, at the 0.01 degree of significance. better machine overall performance, usability, and aesthetic enchantment greatly increase purchaser involvement in XR retail environments, as shown by using the tremendous fantastic connection among machine first-rate and purchaser involvement ($r = 0.756$). clear, helpful, and comprehensive product records complement purchaser engagement and interaction, as visible by using the excessive fantastic association among records first-rate and purchaser Engagement ($r = 0.780$). The truth that XR era boosts engagement levels whilst it fits in with customers' way of life and tastes suggests that compatibility performs a big position in this phenomenon ($r = 0.792$). A sturdy fantastic correlation among trialability and purchaser engagement ($r = 0.787$) indicates that trialability factors, which includes digital try-on and product checking out, resource in improving consumer connection and diminuting uncertainty. in addition, there may be a completely big fantastic association among purchaser involvement and purchase intention ($r = 0.899$), suggesting that a greater degree of involvement increases the chance of buying style goods in XR settings. Taken together, the data monitor a tremendous correlation among purchaser engagement and purchase intention, and a robust correlation among purchaser engagement and all independent factors.

Table 5. Hypothesis Result (correlation Analysis)

Hypothesis	Statement	Result
H1	System Quality has a significant impact on Consumer Engagement	Accepted
H2	Information Quality has a significant impact on Consumer Engagement	Accepted
H3	Compatibility has a significant impact on Consumer Engagement	Accepted
H4	Trialability has a significant impact on Consumer Engagement	Accepted
H5	Consumer Engagement has a significant impact on Purchase Intention	Accepted

Regression Analysis

Regression analysis is used to study the impact of independent variables along with system first-class, statistics first-class, Compatibility, and Trialability on customer Engagement in XR buying environments. more than one regression analysis is implemented to apprehend how these factors collectively have an impact on customer engagement.

Table 5. Multiple Regression Analysis

Model Summary			
R	R Square	Adjusted R Square	Std. Error
0.852	0.725	0.720	0.330
ANOVA			
Model	F Value	Significance (p-value)	
Regression Model	128.795	<0.001	
Coefficients			
Variables	Beta (β)	t-value	Significance (p-value)
System Quality	0.165	1.999	0.047
Information Quality	0.204	2.061	0.041
Compatibility	0.159	1.709	0.089
Trialability	0.401	6.616	<0.001

Interpretation

The outcomes of the a couple of regression evaluation are proven in desk five. consistent with the version summary, the R square cost is 0.725, which suggests that machine excellent, statistics excellent, compatibility, and trialability account for about seventy 2.5% of the variance in consumer involvement. This points to a robust version. consistent with the ANOVA findings, the version is statistically huge ($F = 128.795$, $p < 0.001$), indicating that the consumer involvement is notably stimulated by means of the impartial variables taken together. it is able to be visible from the coefficients desk that there's an extensive superb impact on consumer involvement from machine excellent ($\beta = 0.165$, $p = 0.047$) and statistics excellent ($\beta = 0.204$, $p = 0.041$). functions like digital strive-on greatly growth consumer engagement, suggesting that trialability has the maximum huge impact ($\beta = 0.401$, $p < 0.001$). due to the fact its p-cost is higher than 0.05, Compatibility ($\beta = 0.159$, $p = 0.089$) does now not meet the standards for statistical significance. consequently, compatibility changed into now not proven to seriously affect consumer involvement on this studies. The consequence consistent with the regression examine, there's a robust courting between consumer involvement in XR shopping environments and machine excellent, statistics excellent, and trialability. Trialability is the maximum influential variable. however, compatibility isn't always truely an issue on this situation. So, we may say that H1, H2, and H4 are proper, however H3 isn't always. simple evaluation of Regression in XR shopping settings, the effect of purchaser engagement on buy intention is investigated using easy linear regression evaluation. With this information, we are able to see whether or not there's a correlation between consumer involvement and motive to buy.

Table 6. Simple Regression Analysis

Model Summary			
R	R Square	Adjusted R Square	Std. Error
0.899	0.809	0.808	0.270
ANOVA			
Model	F Value	Significance (p-value)	
Regression Model	839.182	<0.001	
Coefficients			
Variables	Beta (β)	t-value	Significance (p-value)
Consumer Engagement	0.899	28.969	<0.001

Interpretation

The findings of easy regression observe that looked at how client involvement affected purchase aim are shown in desk 5. in step with the model precis, the R Squared value is 0.809, this means that that client engagement explains about 80.9% of the variance in purchase aim. This exemplifies a sturdy model. consumer involvement strongly impacts purchase aim, as shown by the statistically huge model ($F = 839.182$, $p < 0.001$), in step with the ANOVA findings. With a beta coefficient of 0.899 and a p-value much less than 0.001, the findings of the coefficient reveal that client interaction considerably impacts purchase aim. This indicates that the opportunity of buying apparel in XR settings grows extensively in share to the extent of client interaction. The outcome in step with the findings, in XR purchasing environments, client involvement is a key aspect in determining purchase aim. as a result, H5 is upheld. Analysing Mediation The reason of this mediation observe is to decide if, in XR purchasing environments, consumer Engagement mediates the relationship between machine satisfactory and purchase aim. With 5000 bootstrap samples, the analysis is completed using Andrew F. Hayes's procedure Macro (model 5).

Table 7. Mediation Analysis (System Quality → Consumer Engagement → Purchase Intention)

Path Analysis				
Relationship	Coefficient (β)	t-value	Significance (p-value)	Result
System Quality → Consumer Engagement	0.6980	16.274	<0.001	Significant
System Quality → Purchase Intention (Direct Effect)	0.2996	7.922	<0.001	Significant
Consumer Engagement → Purchase Intention	0.6437	15.709	<0.001	Significant
Indirect Effect (Mediation Effect)				
Effect	BootSE	BootLLCI	BootULCI	Result
0.4493	0.0638	0.3157	0.5738	Significant Mediation

Interpretation

Table 6 shows the results of mediation analysis using PROCESS Macro. The findings show that System Quality has a significant positive impact on Consumer Engagement ($\beta = 0.6980$, $p < 0.001$). Additionally, Consumer Engagement significantly influences Purchase Intention ($\beta = 0.6437$, $p < 0.001$).

The direct effect of System Quality on Purchase Intention is also significant ($\beta = 0.2996$, $p < 0.001$), indicating that System Quality directly affects purchase intention.

The indirect effect of System Quality on Purchase Intention through Consumer Engagement is also significant, as the bootstrap confidence interval (BootLLCI = 0.3157, BootULCI = 0.5738) does not include zero. This confirms the presence of mediation.

Result

The effects imply that consumer engagement partly mediates the relationship between system high-quality and purchase intention. which means system high-quality impacts purchase intention each immediately and circuitously thru consumer engagement.

Table 8. Hypothesis 6 Testing

Hypothesis	Statement	Result
H6	Consumer Engagement mediates the relationship between XR factors and Purchase Intention	Accepted

ANALYSIS AND DISCUSSION

This study's results prove without a doubt that augmented reality (AR) technologies significantly impact fashion shoppers' actions. Regarding XR purchasing settings, the majority of respondents had a positive impression. People often believe that XR makes



purchasing more engaging, simple, and thrilling because the descriptive effects shown excessive suggest values for all variables. This provides further evidence that consumers feel safe using virtual try-ons and interactive product viewing tools. It is clear from the correlation effects that there is a high degree of association between all of the variables. A high-quality link exists between consumer engagement and system quality, data quality, compatibility, and trialability. Customers are more engaged and invested when the XR system runs well, displays clear data, and allows them to try things completely. In addition, there is a strong correlation between customer engagement and purchase intent, meaning that consumers are more inclined to make a purchase when they had a positive experience.

These connections are better understood way to the regression analysis. The results display that purchaser involvement is extensively stricken by trialability, data great, and machine great. capabilities like virtual strive-on are very powerful in attracting clients because trialability has the largest impact. Having said that, the studies did no longer find compatibility to be a major aspect. this can be due to the reality that the majority of customers already have a highly effective draw close of digital generation and for this reason do no longer area a high fee on compatibility. there is a strong association among compatibility and purchaser engagement, however while other elements are taken under consideration, compatibility does no longer display any unbiased impact on engagement (regression observe). purchaser involvement extensively influences purchase intention, consistent with the basic regression findings. This indicates that a higher level of purchaser engagement is associated with a higher probability of a buy. proof like these demonstrates that interplay is fundamental in XR retail settings. a purchaser's desire to buy is strengthened once they experience engagement, interest, and self-guarantee. ultimately, the mediation analysis well-knownshows that the involvement of customers is crucial inside the dating among machine great and purchase intention. therefore, machine great impacts purchase intention both at once and indirectly thru engagement upgrades. to position it honestly, a terrific XR machine will increase purchase purpose through first attractive clients, after which this engagement in turn will increase buy purpose. In sum, the studies suggests that XR technology extensively enhance style shop income and purchaser pleasure.

Managerial Implications

Fashion retailers should prioritize investment in XR technologies, particularly virtual try-on features, as they significantly enhance customer engagement. Firms should focus on improving system quality and delivering accurate product information to build trust and reduce purchase uncertainty. Additionally, integrating AR and VR strategically can create competitive differentiation in digital retail environments.

CONCLUSION

In line with this research, consumers' shopping behavior are transferring in the fashion retail area as a result of prolonged truth (XR) era. digital try-on, interactive presentations, and immersive settings are some of the traits that consumers locate maximum beneficial in making shopping stories more interesting, fun, and handy. Findings spotlight the significance of trialability, records best, and system quality in boosting customer engagement. The compatibility thing becomes no longer shown to have a great influence on customer involvement, whilst trialability had the largest impact ($\beta = 0.401$). digital truth (VR) will increase consumer self belief and engagement, which in turn will increase the probability that they will make a purchase. whilst this research did no longer reveal that compatibility had a major influence, the overall information despite the fact that display that XR effectively establishes a deep bond between organizations and consumers. better XR stories first boost engagement, which in turn ends in multiplied buying alternatives, given that consumer engagement is a crucial courting between era and purchase intention. With the use of those technologies, fashion stores may also enhance the customer revel in, set up consider, and boost income in the cutting-edge virtual international. The research found that XR shopping environments notably affect consumer engagement and purchase intention. via highlighting customer interplay as a crucial courting between XR era and purchase intention in fashion retail, this research adds to the current literature.

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