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CUSTOMER PERSPECTIVE ON ARTIFICIAL INTELLIGENCE IN ONLINE PURCHASES USING VIRTUAL TRY ON

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Abstract

Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. Examples of AI applications include expert systems, natural language processing, machine vision and speech recognition. As the hype around AI has accelerated, vendors have scrambled to promote how their products and services incorporate it. AI requires specialized hardware and software for writing and training machine learning algorithms. AI systems work by ingesting large amounts of labelled training data, analyzing that data for correlations and patterns, and using these patterns to make predictions about future states. Virtual try on clothes, shoes, accessories helps customers to customize their outfits to suit different styles and occasions which enrich the fashion experience. The fashion-forward trendsetters or makeup enthusiasts explore products online using virtual try-ons and familiarize themselves with the outfit. Virtual try-on help consumers to select accessories complementing their style.

AI driven virtual try-on offer a dynamic and immersive way for customers to interact with fashion. The advanced technology reduces the hassle of returns and builds customer confidence, brand's loyalty and sales. Virtual try-on have redefined the way consumers experience and interact with fashion in the digital age. These innovative technologies bridge the gap between online shopping and the tactile nature of traditional in-store shopping. This article represents the perceived usefulness experienced by consumers after using virtual try-ons.

Introduction

Artificial intelligence (AI) refers to computer systems capable of performing complex tasks that previously only a human could do, such as reasoning, making decisions, or solving problems. The term "AI" describes a wide range of technologies that power many of the services and goods

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we use every day – from apps that recommend TV shows to chatbots that provide customer support in real time. AI is the theory and development of computer systems capable of performing tasks that required human intelligence, such as recognizing speech, making decisions, and identifying patterns. AI is prevalent across many industries. Automating tasks that don't require human intervention saves money and time, and can reduce the risk of human error.

AI is just a practical tool as good as the algorithms and machine learning techniques that guide its actions. AI can get really good at performing a specific task, but it takes tonnes of data and repetition. It simply learns to analyse large amounts of data, recognize patterns, and make predictions or decisions based on that data, continuously improving its performance over time.The machine learning has become so "competent" as to generate everything from software code to images, articles, videos and music. While traditional AI systems are primarily used to analyse data and make predictions, generative AI goes a step further by creating new data similar to its training data.

Virtual try-ons are advanced solutions allowing consumers to virtually try on accessories, clothing, and cosmetics. They work by superimposing digital representations of clothing and accessories onto a user's real-time image or video. AI-enabled virtual try-ons have redefined the fashion and cosmetics industries, offering consumers a highly interactive and convenient way to explore products before making a purchase. These virtual try-on systems leverage advanced artificial intelligence and augmented reality technologies to provide immersive and realistic experiences, enhancing the overall shopping journey.

They are innovative digital solutions allowing consumers to virtually try on accessories, clothing and even makeup without the need to physically do so in a store. These solutions employ a fusion of advanced technologies. Computer vision is utilized to analyse the user's physical features, while Augmented Reality (AR) overlays digital images of products onto these features. AI contributes by optimizing the fit and style recommendations based on user preferences and body dimensions. These technologies provide an immersive and interactive experience, transforming the

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way consumers shop for fashion and beauty products.

In the realm of fashion, they empower customers to virtually try on clothing and accessories from the comfort of their homes. By uploading a photo or using a live camera feed, users can see how different outfits look on them, helping to alleviate concerns about sizing, fit, and style. This not only reduces the number of returns but also enhances the online shopping experience, making it more engaging and personalized. Cosmetic brands have also harnessed the power of AI to create virtual try-on experiences for makeup products. With these tools, individuals can experiment with different makeup looks, including lipstick shades, eye shadows, and even complete makeup collections. AI algorithms accurately detect facial features, allowing users to visualize how a particular product will appear on their skin tone and face shape. This empowers consumers to make more informed choices when selecting makeup products and helps brands cater to a wider and more diverse audience.

Keywords: Artificial Intelligence, Consumers, Perceived Usefulness, Customer Perspective

Conceptual Framework

Artificial Intelligence: Artificial intelligence is a technical and scientific field devoted to the engineered system that generates outputs such as content, forecasts, recommendations or decisions for a given set of human-defined objectives.

Consumers: A consumer might be generally understood as a purchaser of goods and services for the personal satisfaction of themselves or other members of their households, as distinct from use to generate further income.

Perceived Usefulness: Perceived usefulness is the subjective perception of users where they believe that using certain technologies can improve the performance of their work.

Customer Perspective: Customer perspective involves seeing the world from the viewpoint of the individuals who purchase and utilize products or services, focusing on their needs, wants, and expectations to build strong relationships and improve customer satisfaction.

Objectives of the Study

- To study the impact of artificial intelligence on Buying behaviour of consumer

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- To understand the relationship between perceived usefulness and age group

Hypothesis

H_0=There is no relationship between perceived usefulness and age group

Review Of Literature

Choi Y, Lee J. and Lee H, "The Impact of Virtual Try-On Systems on Consumer Behaviour: An Exploratory Study" (2020) emphasized that virtual try-on technology helps customers simulate real-world interactions with products, leading to increased satisfaction, engagement, and a higher likelihood of purchase. This interactive experience is particularly important in product categories where visual appearance plays a significant role, such as clothing, eyewear, and cosmetics.

Prabhu S., Tiwari P. and Singh A., "Realism in virtual try-ons: Integrating AR, AI and lighting for a seamless user experience" (2022) explored how AR and AI technology can make virtual garments and makeup look more realistic by adding dynamic lighting, textures, and shadows to simulate different environments.

Sarkar S., Sharma K. and Gupta R., "Reducing e-commerce returns with AI-driven virtual try-on technology" (2022) observed that virtual fitting rooms powered by AI offer a significant potential to reduce returns in e-commerce, as they allow customers to make better-informed purchase decisions.

Feng Y., Zhou L. and Li, "Factors Influencing Consumer Trust in Virtual Try-On Technology. Computers in Human Behaviour" (2022**)** found that customers' willingness to adopt virtual try-on technologies is highly correlated with how easy and enjoyable the experience is. They found that incorporating personalized avatars and AI-based product suggestions based on customer preferences led to a significantly higher level of engagement and satisfaction.

Research Methodology

Methods of Data collection

Data was collected from primary and secondary sources. Primary data was collected in the form of structured questionnaires; which were distributed among 50 respondents. Secondary data was collected through articles, books, journals, newspaper and internet.

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Sampling method and Sample size

Random Sampling Method was adopted to select respondents. The study was conducted with 50 respondents.

Analysis of data

Classification and tabulation of data and regression co-efficient technique were performed using MS Excel.

Data Analysis

Table 1: Socio-economic profile of respondents

S. No.	Category	No. of respondents	% of respondents
1	**Age group**		
	Below 20	10	20
	21-30	26	52
	31-40	11	22
	41-50	02	04
	Above 50	01	02
	Total	**50**	**100**
2	**Gender**		
	Male	21	42
	Female	29	58
	Total	**50**	**100**
3	**Qualification**		
	Graduate	26	52
	Post graduate	14	28
	Professional	10	20
	Total	**50**	**100**
4	**Occupation**		
	Private employee	33	66
	Public employee	14	28
	Self-employed	03	06
	Total	**50**	**100**
5	**Annual income**		
	Below 300000	08	16
	300001-500000	25	50
	500001-700000	15	30
	Above 700000	02	04
	Total	**50**	**100**
6	**Marital status**		
	Married	13	26
	Unmarried	37	76
	Total	**50**	**100**

Source: Primary data

Table 2: Products purchased by respondents online

S. No.	Product	No. of respondents	% of respondents
1	Clothing and accessories	26	52
2	Footwear	04	08
3	Beauty and Skincare	05	10
4	Electronics	03	06

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5	Home goods and furniture	02	04
6	Jewellery and Watches	10	20
Total		**50**	**100**

Source: Primary data

Table 3: Have you used virtual try-on

S. No.	Opinion	No. of respondents	% of respondents
1	Yes	48	96
2	No	02	04
Total		**50**	**100**

Source: Primary data

Table 4: Reliability of output of virtual try-on

S. No.	Opinion	No. of respondents	% of respondents
1	Always accurate	18	36
2	Sometimes accurate	29	58
3	Not accurate	03	06
Total		**50**	**100**

Source: Primary data

Table 5: Influence of virtual try-on on purchase decision

S. No.	Opinion	No. of respondents	% of respondents
1	Strongly influences	19	38
2	Somewhat influences	30	60
3	Not influences	01	02
Total		**50**	**100**

Source: Primary data

Table 6: Perceived usefulness of virtual try-on

S. No.	Opinion	No. of respondents	% of respondents
1	Yes	46	92
2	No	04	08
Total		**50**	**100**

Source: Primary data

Table 7: Concerned about use of data by AI for virtual try-on

S. No.	Opinion	No. of respondents	% of respondents
1	Yes	38	76
2	No	12	24
Total		**50**	**100**

Source: Primary data

Table 8: Advantages of using virtual try-on

S. No.	Advantage	Rank order					Score	Rank
		1	2	3	4	5		
1	Easy pick-up	12	9	9	6	14	149	2
2	Personalised products	33	12	2	3	0	225	1
3	Reduces return	3	11	13	13	10	134	3
4	Variety	1	4	15	16	14	112	5
5	Increased Savings	1	14	11	12	12	130	4

Source: Primary data

Table 9: Relationship between age group and perceived usefulness

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Variable	Coefficient	Level of Significance (significant @ 0.05)
Occupation	0.257	0.429

Source: Computed from primary data

The above table shows that perceived usefulness has no relationship with age group at significant level 5%.

Findings

1. 52% of respondents belong to age group 21-30.
2. 66% of respondents are privately employed.
3. 52% of respondents purchase clothing and accessories online.
4. Majority of respondents are comfortable with virtual try-on.
5. 58% of respondents feel that virtual try-on is mostly accurate.
6. 60% of respondents are influenced by virtual try-on in purchase decisions.
7. Majority of respondents feel perceived usefulness of virtual try-on.
8. 76% of respondents have concerns over use of data by AI for virtual try-on.
9. Majority of respondents feel that the products recommended by virtual try-on are personalised.
10. Age group has no influence on perceived usefulness of virtual try-on.

Conclusion

It was observed that virtual try-ons powered by AI have a tremendous impact on consumer purchase behaviour. The current period is witnessing a major shift in the marketing trend. Virtual try-on saves time and money by reducing returns. Majority of respondents are privately employed. Age group has no influence on perceived usefulness of virtual try-ons which was analysed through regression co-efficient. The study is limited to Chennai city. It will be simple for companies to modify the buying habits of consumers by having virtual try-on for their products.

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