

# AR Based Try on Clothing

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**Abstract** - E-commerce is one of the quickest growing agencies throughout the globe. Technology like Machine Learning and Artificial Intelligence are being carried out in those e-trade web sites to improvise the User level over their internet site or cellular utility. However, customers are nevertheless unhappy with the goods being delivered, due to the fact of the color or length mismatches of the product delivered. Augmented truth primarily based totally On-Line buying platform is a subsequent technology that gives a very immersive insight into the customers inside the E-commerce internet site platform. In this project, AR primarily based totally digital Tryon is advanced, that simply makes the consumer to strive for products, virtually, earlier than shopping for them therefore lowering client dissatisfactions and growing the consumer studies over the platform. This paper proposes an easy but powerful AR primarily totally based E-trade utility advanced using Unity software. The proposed device makes use of Face Tracking MetTerms-Virtual Try, Unity, Virtual Reality, Augmented Reality, e-commerce, Face tracking, horology to make the garment put at the human frame virtually.

**Index Terms** - Virtual Try, Unity, Virtual Reality, Augmented Reality, e-commerce, Face tracking.

## I.INTRODUCTION

E-commerce because the online exchange of products, services, and money within firms and between firms, and their customers. Within the past decade, E-Commerce and online shopping became popular, because they create peoples' lives easier, especially for people with disabilities and for others who have difficulty engaging in onsite shopping. In fact, in 2002, Lefebvre showed that e-commerce was growing faster than expected, which it absolutely was likely to own a dominant position within the future economy. However, e-commerce and online shopping still cannot fully replace onsite shopping, especially for products like clothing, shoes, jewelry, and furniture.

For such products, onsite shoppers frequently engage in some kind of interaction with their potential purchase, before buying it, to get the product's scent, texture, appearance, fit, or sound. Unfortunately, such interaction is commonly impossible for online purchases. As a result, internet buyers, particularly those buying clothing and shoe products, are often unhappy with the products they receive and related customer service, thanks to the dearth of interaction which onsite shopping could otherwise provide. 2D pictures or written descriptions utilized in traditional e-commerce systems often cannot provide enough product information. For such products, onsite shoppers frequently engage in some type of interaction with their potential purchase, before buying it, to get the product's scent, texture, appearance, fit, or sound. Unfortunately, such interaction is usually impossible for online purchases. As a result, internet buyers, particularly those buying clothing and shoe products, are often unhappy with the products they receive and related customer service, due to the dearth of interaction which onsite shopping could otherwise provide. 2D pictures or written descriptions employed in traditional e-commerce systems often cannot provide enough product information.

## II. VR & ECOMMERCE:

Virtual reality (VR) may be a computer-simulated environment which allows users to control 3D virtual models online. Recently, researchers are using VR for ecommerce, to produce consumers with a brand-new style of shopping experience. Hughes, Brusilovsky, and Lewis presented an adaptive navigation network for employing a virtual environment for online shopping. Sanna, Zunino, and Lamberti presented a VR e-commerce system supported VRML. They used Quick 3D to come up with 360-degree image-based immersive backgrounds and an animated virtual

human to assist web shoppers navigate through their e-commerce environment. Daugherty, Li, and Biocca conducted five experiments to check the usability of VR in e-commerce. Their results showed that users acquired more information about products when employing a VR-based e-commerce than when using other tools.

### III. AR & ECOMMERCE

Although prior studies show that VR can enhance e-commerce by providing more product information, through enhanced human-computer interaction, current VR methods for e-commerce still only provide scaled virtual product models displayed on traditional computer screens. New methods are needed to supply consumers with more realistic product models, with relation to size, customer experience, and user interaction. AR could be a technology which might mix or overlap computer generated virtual objects with the world scenes or objects. Unlike VR, which experientially replaces the physical world, AR enhances physical reality by integrating virtual objects into a physical scene. Generated virtual objects become, in a sense, an equal a part of the natural environment.

### IV. EXISTING SYSTEM

1. Smart Reflect:

A. Modular Smart Mirror Application Platform:

1. Smart Reflect: A. Modular Smart Mirror Application Platform: A smart mirror may be a device that functions as a mirror with additional capability of displaying multimedia data, like text, images, and videos. This device allows users to access and interact with contextual information, like weather data, seamlessly as a part of their daily routine. during this project, we developed Smart Reflect—a software platform for developing smart mirror applications. the most features of Smart Reflect are threefold: (1) it's modular, lightweight, and extensible; (2) It allows developers to sidestep the sandboxed environment created by web browsers; and (3) It supports plugins written in any programming languages. These improvements alleviate the hardware and software limitations inherent with the utilization of web browsers as a primary scriptable display method. during this paper, we describe the planning and implementation of Smart Reflect and compare it with other similar platforms. We also discuss the potential

uses and applications of smart mirrors with relevance the new capabilities that our platform provides.

B. From 2D Photos of Yourself to Virtual Try-On Dress on the Web

This paper describes an entire methodology for cloning and dressing people by employing a website. The input is easy photographs or body measurements that anybody can produce in any environment. Then the web-based virtual-try-on allows users to determine them dressed. the fundamental methodology uses a pre-calculated generic database to supply personally sized bodies and animate garments on an internet application. variety of recent studies identified the causes for consumer hesitancy, and of particular notes are the consumer's overwhelming concern with fit and proper sizing, and also the inability to do on items. Following a survey by the French company Lectra (Lectra, 2000), an estimated 30% of online garment purchases are sent back by consumers. Consumers that purchase garments online today base their purchase and size-selection decisions totally on 2D photos of clothes and sizing charts. This method isn't precise enough and not interactive enough to supply right sizing furthermore as right option to the buyer.

C. The influence of virtual reality in e-commerce

The development of video game (VR), along with other technological innovations will shape the longer term of e-retailing. This research studies the effectiveness of various VR formats and devices in a very virtual store environment, namely V-commerce. This study proposes and tests a conceptual model that analyses the relations between sense of presence, brand recall and buy intention, while also going deeper into their antecedents. Our findings suggest differences in purchase intention counting on VR format and device used. No differences are shown in sense of presence and affect by VR format and device. Our tested model suggests a dual route of influence of VR on consumers' purchase intention in virtual stores: one through emotions and sense of presence and therefore the other through the effect evoked by the virtual environment and brand recall. Lastly, some managerial implications and methodological issues are considered.

### V. PROPOSED SYSTEM

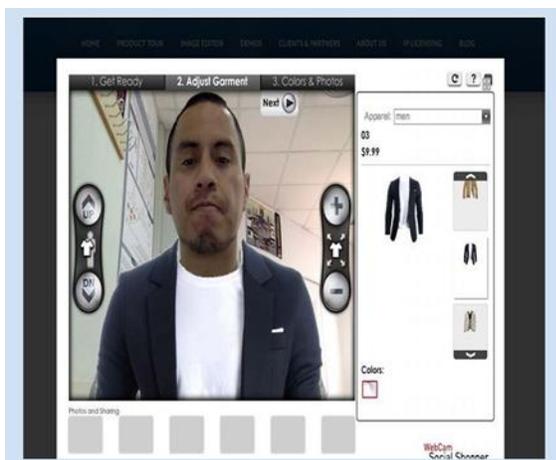
The proposed system has developed a dashboard in which the garment products are stored. The user will login in the application and access the products and view the description of the products available. The user can use the try on option to virtually try the product before buying it.

The proposed system uses Face Tracking technology to actually place the developed Garment model on the user. The 3d Models of the Garments are developed and interfaced within the application for rendering with the real environment (user).

### VI. BLOCK DIAGRAM



### VII. SAMPLE OUTPUT



### VIII. RESULT & FUTURE WORK

The proposed system was developed using Unity software. The user can login into the developed application and view the list of available products and try them with our application's feature Try-on before ordering the actual product. The application provides a unique experience to the user and thus increases the interaction with the product for the user even if they are in online shopping mode. The developed system has only garment products and the future scope shall include having various products and accessories added to the application for bringing an intact experience.

### IX. CONCLUSION

A system to bring a unique experience on e-commerce shopping has been developed. The system developed for 3 garment products, with an option to virtually try it and purchase the product upon user satisfaction.

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