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IoT – Virtual Trial Room Using Image Processing

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ABSTRACT*:* - The Internet has become an essential part of our daily life, and companies realize that the Internet can be a shopping channel to reach existing and potential consumers. An online shopping system that permits a customer to submit online orders for items and/or services from a store that serves both walk-in customers and online customers. The online shopping system presents an online display of an order cutoff time and an associated delivery window for items selected by the customer. With this consensus Online Shopping as a whole has rapidly grown. The biggest surprise is that clothing is one of the top categories purchased online.

Augmented Reality is direct and indirect view of real world elements that are augmented on computer software. It mainly adds the software information and refines the users view to actual environment. The aim of this work is to develop Virtual trial Room application using AR which allows a user to try on different colors of clothes. Most of the early applications attempted to do this by overlying a static image of clothing over an image of the user captured by a camera or any digital camera. But, like any other idea, the virtual trial room involved from very basic solutions to more advanced solutions which were more synchronizing with actual reality. This is the motivation behind any AR application. This application is implemented using Open CV and web camera to capture video. Once the video is captured, it identifies the background and object of human and changes the color of the T-shirt and adds the selected logo according to the users' choice. This application use OpenCV for identifying the user and to change the color and logo according to user's choice.

I. INTRODUCTION

Shopping is an important part of our daily life and today's vibrant economy. According to the Year 2013 Singapore government report2, among receipts totaling S$23.5 billion are for shopping. With the proliferation of smartphones and ubiquitous supporting of 3G/4G/LTE networks, we have the opportunity to enhance the shopping experience through mobile technology. In reference paper, demonstrate IntelligShop, a novel location-based augmented reality application, for intelligent shopping in malls

II. LITERATURE SURVEY

Many of the existing systems have variable perceptions in the area of Augmented Reality which made possible the implementation of Trial Room concept virtual. Few such ECommerce sites like Lenskart, Abof, Snapchats etc, have developed applications based on virtual reality. One of those ideas is the Virtual Trial Room which displays the user in desired attire. But, none of the current applications provide the three dimensional dynamic imaging. In order to improve on this area we are proposing a new system called the "3D Virtual Trial Room"

Augmented Reality is direct and indirect view of real world elements that are augmented on computer software. Augmented Reality considers real and virtual elements. It mainly adds the software information and refines the users view to actual environment. This work is an implementation to develop Virtual trial Room application using AR which allows a user to try on different colors of clothes. Most of the early applications attempted to do this by overlying a static image of clothing over an image of the user captured by a camera or any digital camera. But, like any other idea, the virtual trial room involved from very basic solutions to more advanced solutions which were more in sync with actual reality. This is the motivation behind any AR application. This work presents an image processing design flow for Virtual Trial Room applications, targeting personal computers.

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III. PROBLEM DEFINITION

In Virtual dressing rooms for the fashion industry and digital entertainment applications aim at creating an image or a video of a user in which he or she wears different garments than in the real world. Such images can be displayed, for example, in a magic mirror shopping application or in games and movies. Current solutions involve the errorprone task of body pose tracking

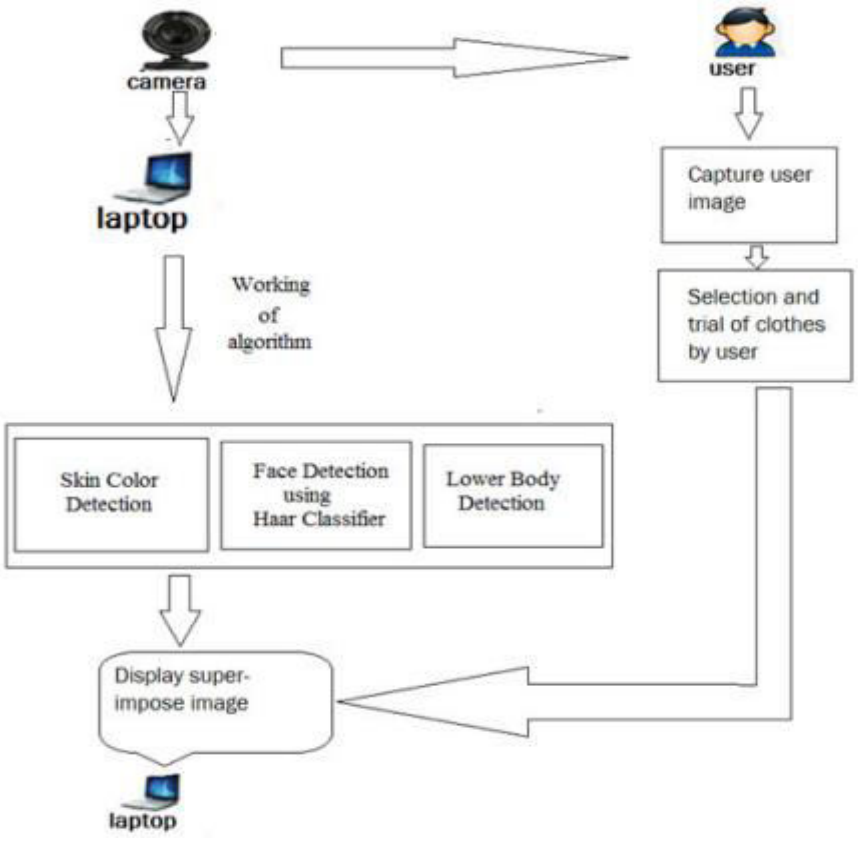
IV. METHODOLOGY

In this paper, we demonstrate IntelligShop, a novel location-based augmented reality application, for intelligent shopping in malls. The key functionality of IntelligShop, as shown in Figure 1, is to provide an augmented reality interface people can simply use ubiquitous smartphones to face the retailers, then IntelligShop will automatically recognize the retailers and bring their online reviews from various sources (including blogs, forums and publicly accessible social media) to display on the phones. It is worth noting that, IntelligShop provides seamless location based augmented reality, which makes the review obtaining process much easier – the user now does not need to type the retailer name or browse through some retailer catalog; instead she just simply raises the phone camera against the retailer for immediately getting its reviews displayed at the right location.

V. ADVANTAGE

1. Real time data
2. Additional environmental data collection
3. Newer technology provides long range tracking
4. Better understanding of cloth ranges and environments
5. Data collection for users.

VI. SYSTEM ARCHITECTURE



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VI. CONCLUSION

We can say that for implementing the real time virtual dressing room different technologies, frameworks and algorithms are used. We concluded that this is very time saving activity. It does not require more efforts. This virtual machine is used by any non-technical person. It does not require much technical knowledge. So, it is user friendly. So it is an optimal addition for cloth store. Overall, the presented virtual dressing room seems to be good solution for quick and accurate try on of cloths virtually.

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