

Try Before You Buy – Virtual Dressing Room

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Abstract: Due to the rapid growth of technology development, our daily life is heavily affected by smart systems, which facilitates our activities. For instance, online shopping grew up very fast. People are getting more used to online shopping, online auctions, etc., to purchase their interested products. This way of transaction has become the main trend and it brings great convenience to customers

Keywords: Dressing room

I. INTRODUCTION

Due to the rapid growth of technology development, our daily life is heavily affected by smart systems, which facilitates our activities. For instance, online shopping grew up very fast. People are getting more used to online shopping, online auctions, etc., to purchase their interested products. This way of transaction has become the main trend and it brings great convenience to customers.

However, an issue for buying clothes online is that client cannot try the product before he/she gets that product. The feeling after dressing on affects the client decision about buying the clothes. Therefore, there is an increasing demand to develop virtual dressing room to simulate the visualization of dressing.

1.1 Problem Statement

- Inability to Try Before Buying in E-Commerce.
- High rate of returns, while shopping online.
- Time-Consuming In-Store Try-Ons

1.2 Objective

- To explore and understand the technology foundation of virtual dressing rooms, such as computer vision, machine learning, augmented reality, and virtual reality, as well as how these components work together to provide a smooth user experience.
- Create and implement a simple to use user-friendly interface for the virtual dressing room that allows users to make it an easy and enjoyable experience.
- To create a realistic virtual clothing fitting and allows customers to see how clothes will fit them, use advanced 2D modeling and body tracking techniques.
- To offer size-based recommendations.

II. PROPOSED SYSTEM

Our project offers a user-friendly virtual dressing room experience with the goal of revolutionizing online buying. Unlike conventional internet purchasing, where customers frequently have to guess sizes and deal with ambiguous product looks, our method guarantees accurate size and lifelike clothes portrayal. You can virtually try on the clothing you're interested in by using your camera to see yourself wearing it. We've used the camera on your device to our advantage so you can virtually try on clothing in real time and shop with the assurance that comes with knowing exactly how an outfit will look on you.

In addition, we will inquire about your size and style to provide you with personalized outfit recommendations. Modern body scanning technology will be used in our virtual dressing room to precisely measure the user's body dimensions.

The basis of our size-based recommendation engine will be these measurements. Customers and retailers will both profit from this tailored strategy, which will improve the overall shopping experience and dramatically lower the percentage of returns for misfitting of clothing. By filling in the holes in the present online purchasing experience, we hope to make online shopping entertaining, educational, and individualized

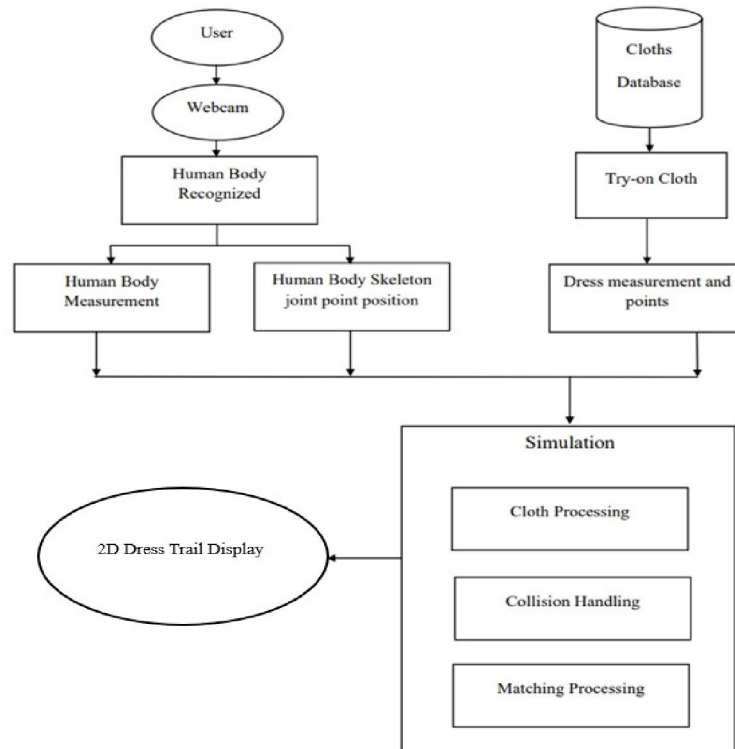


Fig. Block Diagram of proposed system

III. RESEARCH METHODOLOGY

Research methodology for a virtual dressing room typically involves a combination of qualitative and quantitative approaches to understand user preferences, behaviour, and satisfaction. Here's a basic outline of the steps involved:

3.1 Literature Review

Virtual try-on technology, commonly referred to as virtual fitting rooms, was mostly considered before the year 2000 as interactive technologies (IIT) that used 3D virtual simulation techniques to offer rotational properties, mix-and-match functionality, and 3D product display (Lee & Xu, 2020). While IIT focuses on virtual visualization based on consumers, goods, and the environment, 3D virtual simulation creates virtual reality in a whole environment.

Database selection and search strategy

Several databases, including Scopus, Emerald, Springer, Wiley, Science Direct, ProQuest, IEEE Xplore, and Web of Science, were searched for pertinent research papers to be reviewed. Together, these databases offer a wide range of scholarly and research resources covering a variety of subjects.

3.2 Keywords and search parameters

The terms “try-on technology,” “virtual fitting room,” “image interactivity technology,” “web interactivity,” and “virtual model” were used to identify studies pertaining to fashion try-on technology. Try-on technology, which allows consumers to digitally try on clothes and accessories, is the main topic of this study. This term's inclusion guarantees that the search results closely correspond with the study's main theme. Referred to as “virtual fitting room” in academic literature and studies on the topic, it is basically the same as “try-on technology.” It expands the search parameters to include a wider range of possible academic work descriptions for this technology.

Target demographic: younger generation

Young people are more inclined to quickly adopt new technologies, showing a higher level of tech knowledge and a desire to experiment with cutting-edge digital applications. As a result, they become an obvious choice as a target market for the adoption of ground-breaking try-on solutions. Younger generations show a greater interest in fashion and place a higher value on personal style and self-expression. Virtual fitting rooms and augmented reality clothing apps, for example, tie in perfectly with their need to learn about new fashion options and trends.

Evaluation criteria for chosen publications

Ultimately, 80 publications that met our requirements were chosen for evaluation. A description of the method for finding and choosing articles. The facts of each study, including the year and location of the study, the research techniques, hypotheses, antecedents, moderators or mediators, and TOT consequences, were documented at the reporting and dissemination stages.

IV. ACKNOWLEDGEMENTS

We would like to express our sincere appreciation to all those who contributed to the development and completion of the virtual dressing room project. First and foremost, we extend our gratitude to [Name/Role], whose guidance and expertise were invaluable throughout the project. Their insights and mentorship helped shape the direction of our research and development efforts.

We would like to acknowledge the contributions of the design and development team members, whose dedication and hard work brought the project to fruition. Their creativity, technical skills, and collaborative spirit were instrumental in overcoming challenges and delivering a high-quality product.

Finally, we extend our appreciation to our families, friends, and colleagues for their encouragement and understanding throughout the duration of the project.

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