A Review on VIRTUAL CLOTHS TRIAL

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***Abstract*: The clothing industry portrays a major part of a respective country`s economy. Due to the predilection for clothing items of the people have led to the increasing of physical and online clothingstores in all around the world. Most of the people are used to go to the physical shopping and purchase their desired clothing items. But, as a consequence of the current pandemic situation, most of the people are unable to step out from their homes. This application is intended to cater an opportunity to the customers, who are not able to reach the physical clothing stores due to a pandemic situation and mobility difficulties. In addition, this application diminishes the time wastage, clothing size mismatches and the lesser user satisfaction ratio inside a physical clothing store. A customized 3D model has featured in the application to cater the virtual fitting experience to the customer. And the AI chatbot assistant in the application interacts with the user while catering virtual assistance for a better cloth selection process. In addition to that, this application hasconcentrated on the clothing shop by providing a future sales prediction component utilizing the K- Nearest Neighbors algorithm to provide an aid to their business commitments.**

***Keywords*: machine learning, image processing,e- commerce, shopping.**

INTRODUCTION

Despite increasing access to technology, people in the modern world are increasingly busy. For many, however, attention to one's appearance remains a high priority. Many people continue to invest time in maintaining and augmenting their wardrobes, shopping for special outfits, etc. In some cases, the investment in time has to do with going to a retail store to try on and purchase clothing and accessories. The process of selecting the right garment in the right size by trying on a series of candidate garment can be very time consuming.

Online shopping provides a faster alternative to the conventional store setting. Despite its advantages, however, online shopping presents certain drawbacks. One drawback is that it may be difficult for a person to visualize how a given article would look if worn by that person-owing to the rich variation in body size and shape, hair and skin color,etc., in a human population. In the last decade, garment trying simulation has attracted the interest of many researchers [5, 6, 7, 8, 9]. Many of these research works were using multi-view systems for cloth tracking and retexturing [9, 10, 11, 12, 13]. Optical flow has been widely used in current garment tracking and retexturing [14, 5]. Scholz and Magnor used optical flow tocalculate 3D scene flow in a multi-view system and they improved their method by using colour-code with more codewords. The purpose of the application is to make easier the process of trying clothes while shopping, which would provide comfort for both the vendor and the customer, Reducing the time and helping people to select a wide range of clothing were a motivation to make a program that helps in this area, so it has become important (very necessary) to make the process of trying and buying of clothes more comfortable, easier and more efficient. Moreover, the accelerating pace of development in modern technology – and the software programs – and their dramatic entry into life have led to the development of this application on a large scale. One of the main reasons behind this tremendous development in technology is the direct interaction between man and computer. This type of application has become a hot topic of research [1, 2, 3, 4]. since it is related to several areas in the human-computer interaction, such as interaction for the purposes of learning, entertainment, fields of medicine and e-commerce operations. E-commerce is one of the modern termsthat have entered our daily life that they are used in many life activities that are related to the revolutionin information and communication technology.

LITURATURE SURVEY

Cloth simulation and online virtual try on applications are typical applications that demand massive computing powers in order to obtain real- time and high-fidelity simulation. Computer cluster provides infrastructures and solutions to solve large scale, computing-intensive and high throughputproblems such as fine-grained cloth simulation. In this paper, a fast body modeling algorithm for cloth simulation is proposed and the key techniques for cluster computing based online Virtual Fitting Room (VFR) are discussed and a hierarchical architecture is proposed. In the implementation, the response time of the database is less than 1 second, and the whole-body modeling process and contact computation is less than 10 seconds, which can meetthe online virtual try on requirements for real-time interaction. The experiment results also show that the proposed hierarchical architecture can achieve real-time, high-fidelity cloth simulation and provide amazing online virtual fitting experiences.
Applications such as online virtual fitting room for clothes demand massive computing powers in order to obtain real-time and high-fidelity simulation.

Computer cluster provides the infrastructure and solution to solve large scale, computation intensive and high throughput problems like fine-grained cloth simulation. In this paper, some key techniques for cluster computing based online virtual fittingroom are discussed and a prototype system is implemented. The experiment results show that the proposed architecture can achieve real-time, high- fidelity cloth simulation and provide encouraging online virtual fitting experiences.
It is time-consuming and expensive to design and develop a real time, large scale, and high-fidelity interactive cloth simulation system, especially for anonline virtual fitting room. In this paper, a new bodymodeling algorithm for cloth simulation is introduced and the key techniques for GOVFiR, a grid computing based online virtual fitting room, arediscussed and a hierarchical architecture of GOVFiR is proposed. The grid infrastructure provides massive computing powers in order to obtain real-time and high fidelity simulation. The experimental results of GOVFiR show that GOVFiRcan provide amazing online virtual fitting experiences, including garments selection and visualization of the garments in oenophiles body. Moreover, GOVFiR has also obtained good performance such as contact computation speedup, strong robustness and scalability.

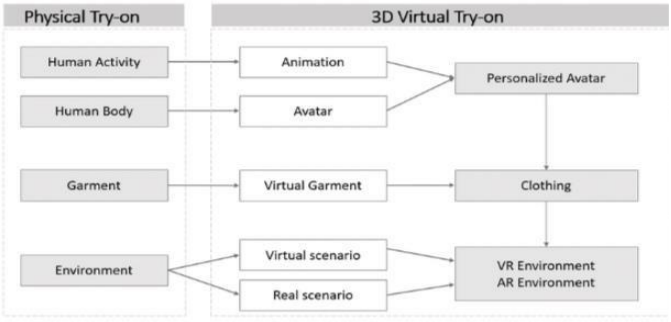
The Virtual Fitting Room (VRF) application presented in this paper is a real-time human friendly interface, which allows trying new clothes using webcams or smartphones. We propose a three stage algorithm: detection and sizing of the user's body, detection of reference points based on face detectionand augmented reality markers and superimposition of the clothing over the user's image. The proposed algorithm is implemented as a universal Java applet using OpenCv library functions and it can run in real-time on existing mobile devices.

AIM & OBJECTIVES

1. Users can get details about clothes.
2. System will provide a virtual trailexperience for user
3. It saves user time
4. The system provides a view productdetails.

MOTIVATION

The proposed project There has been a great increase in interests towards online shopping. Incase of purchase of products like apparels which always require a sense of knowledge on how cloths would fit upon a person. This is the major reason why less number of apparels are being shopped online. Hence, a virtual dressing room which would make people know how cloths personally fits in would be a great luxury for the online sellers which could give a wide choice for customers. For online marketers, this would be a great tool for enhancing its market.



FUNCTIONAL & NON-FUNCTIONALREQUIREMENTS

Functional requirements: may involve calculations, technical details, data manipulation and processing and other specific functionality that define what a system is supposed to accomplish. Behavioral requirements describe all the cases where the system uses the functional requirements; these are captured in use cases.

Nonfunctional Requirements: (NFRs) define system attributes such as security, reliability, performance, maintainability, scalability, and usability. They serve as constraints or restrictions on the design of the system across the different backlogs.

Functional requirements

- Registration
- User Login
- Creation of database: Users Mandatory Information

Design Constraints:

1. Database
2. Operating System
3. Web-Based Non-functional RequirementsSecurity:

1. User Identification
2. Login ID
3. Modification Performance Requirement:
1. Response Time
2. Capacity
3. User Interface
4. Maintainability
5. Availability

SYSTEM REQUIREMENTS

Software Used:

- Python 3.9.0 or above,Kaggle and PyCharm

Hardware Used:

- I3 processor or above
- 150 GB Hard Disk or above
- 4 GB RAM or above

CONCLUSION

We proposed a computerized method for the segmentation and identification of a brain tumor using the Convolution Neural Network. The input MR images are read from the local device using the file path and converted into grayscale images. Theseimages are pre-processed using an adaptive bilateral filtering technique for the elimination of noises that are present inside the original image. The binarythresholding is applied to the denoised image, and Convolution Neural Network segmentation is applied, which helps in figuring out the tumor region in the MR images. The proposed model had obtained an accuracy of 84% and yields promising results without any errors and much less computational time.

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