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PROJECT TITLE	SMART FASHION RECOMMENDER SYSTEM
PROJECT DESIGN AND PLANNING	PROPOSED SOLUTION
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FASHION RECOMMENDER SYSTEM:

The Fashion industry is one of the larger industries around the world. One of the things that has remained constant throughout human civilization is humans covering their bodies with a piece of cloth.

Initially, this cloth was worn as protection from the harsh climates of those ages. Later on, as we humans learned to fend for ourselves from the unforgiving climates, the cloth started to serve a different purpose. Fashion these days showcases the individuality of the person. There are many things that can be said about a person based on their fashion sense.

There is currently no existing system that is capable of recommending clothes based on the occasion. Different occasions call for different clothing. Moreover, a lot of fashion is based on the color combinations of outfits.

A person with no or little fashion sense will have a hard time to decide on clothes that leave a lasting impression. The proposed Fashion Recommendation System is intended to be used by individual users in order to store images of the clothes that they own in what is called a digital wardrobe and also to get recommendations by the system on what clothes to wear for a given occasion.

The main aim of the project is to recommend the most appropriate clothes for a given occasion based on the clothes existing in the user's wardrobe to

relieve the user of the burden of making decisions about what clothing to wear. Such a system should be capable of helping someone who has no fashion sense to wear clothes that leave a good impression on others.

The system should be such that it is easily accessible and easy to take advantage of the various features that it provides. One of the features should be the ability to store images that the user uploads into a wardrobe. A wardrobe is a very useful entity that the user can use to view and manage the images of clothes that they have uploaded.

This feature can also be used by the recommendation algorithm to recommend the clothes. Another feature is the classification of the type and color of the clothing that is uploaded by the user. The system should be capable of handling the 4 basic clothing types: Shirt, T-Shirt, Pants and Shoe.s

II. LITERATURE REVIEW

The work of this project is based on combining two deep learning models to detect the type and color of the clothing in the given image. The recommendation algorithm however is written by us. Hence, it is safe to say that no existing system has been proposed but work has been done in detecting objects, types and colors of clothes by using public datasets and applying machine learning techniques. The related work is presented as follows:

In Deep learning classification of clothing apparel was discussed. The approach followed in this system was using Convolutional Neural Networks (CNNs). The Deep Learning technique Inception v-3 was used for different object detection problems. A wide variety of clothing types were used in the paper about 13 different classes, some of which were: Coat, Poncho, Blouse, Dress, Shirt, Vest, Lingerie, T-shirt, Uniform, Suit, Sweater, Jacket, Sports sweater. The recognition rate is about 70%.

Out of all these classes the ones are of utmost importance are only Shirt and T-shirt. Both of which have accuracy rates of 50 and 60% respectively. There are two more classes of interest namely Pant and Shoes that were not included in this study.

We need a model with better accuracy and capable of handling the two missing classes as well. Another drawback is there is no standalone web application that makes it easy for the users to use. Hence, we cannot use this in our system.

The drawback is there is no standalone application that can be used by the patient to use this model.

In Deep learning techniques were used to detect the type and color of the clothing. Hence, Convolutional Neural Networks were used. The resultant accuracy of the resultant model was around 86%. The intention of this paper was to create model that does proper labelling of clothes. Hence it is not a Fashion Recommendation System that recommends clothing choices to the user. We can improve the accuracy and also create a user friendly website for ease of access. The paper also does not provide any wardrobe for the user.