CASE STUDY 1

TITLE

Smart Fashion Recommender Application

PROJECT DESCRIPTION

In recent years, the textile and fashion industries have witnessed an enormous amount ofgrowth in fast fashion. On e-commerce platforms, where numerous choices are available, an efficient recommendation system is required to sort, order, and efficiently convey relevant product content or information to users. Image-based fashion recommendation systems (FRSs) have attracted a huge amount of attention from fast fashion retailers as they provide a personalized shopping experience to consumers. With the technological advancements, this branch of artificial intelligence exhibits a tremendous amount of potential in image processing, parsing, classification, and segmentation. Despite its huge potential, the number of academic articles on this topic is limited.The available studies do not provide a rigorous review of fashion recommendation systems and the corresponding filtering techniques. To the best of the authors' knowledge, this is the first scholarly article to review the state-of-the-art fashion recommendation systems and the corresponding filtering techniques. In addition, this review also explores various potential models that could be implemented to develop fashion recommendation systems in the future. This paper will help researchers,academics, and practitioners who are interested in machine learning, computer vision, and fashion retailing to understand the characteristics of the different fashion recommendation systems.

CASE STUDY 2

TITLE

Smart Fashion Recommender Application

PROJECT DESCRIPTION

Recommendation systems based on machine learning are very important both customers and sellers in our daily life. Many recommendation systems need user's previous shopping activities and digital footprints to make best recommendation purpose for next item shopping. In this study, we develop a cloth recommendation system with using only single photo of user with scalable embedded system. This study lead to important results and give new opportunities for clothing companies and advertisements. In this study, we show that how our system recommends a cloth options without user's previous shopping act data with embedded system and machine learning. In order to recommend a cloth, we develop two inception based convolutional neural networks as prediction part and one feed forward neural network as recommender. In this study, we reach to 98% accuracy on color prediction, 86% accuracy on gender and cloth's pattern predictions and 75% accuracy on clothing recommendation.

CASE STUDY 3

TITLE

Smart Fashion Recommender Application

PROJECT DESCRIPTION

In this paper, we propose a novel system-Intelligent Personalized Fashion Recommendation System, which creates a new space in web multimedia mining and recommendation. The proposed system significantly helps customers find their most suitable fashion choices in mass fashion information in the virtual space based on multimedia mining. There are three stand-alone models developed in this paper to optimize the analysis of fashion features in mass fashion trend: (i). Interaction and recommender model, which associated clients' personalized demand with the current fashion trend, and helps clients find the most favorable fashion factors in trend. (ii). Evolutionary hierachical fashion multimedia mining model, which creates a hierachical structure to filer the key components of fashion multimedia information in the virtual space, and it proves to be more efficient for web mass multimedia mining in an evolutionary way. (iii). Color tone analysis model, a relevant and straightforward approach for analysis of main color tone as to the skin and clothing is used. In this model, a refined contour extraction of the fashion model method is also developed to solve the dilemma that the accuracy and efficiency of contour extraction in the dynamic and complex video scene. As evidenced by the experiment, the proposed system outperforms in effectiveness on mass fashion information in the virtual space compared with human, and thus developing a personalized and diversified way for fashion recommendation.

CASE STUDY 4

TITLE

Smart Fashion Recommender Application

PROJECT DESCRIPTION

This paper proposes a new intelligent fashion recommender system to select the most relevant garment design scheme for a specific consumer in order to deliver new personalized garment products. This system integrates emotional fashion themes and human perception on personalized body shapes and professional designers' knowledge. The corresponding perceptual data are systematically collected from professional using sensory evaluation techniques. The perceptual data of consumers and designers are formalized

mathematically using fuzzy sets and fuzzy relations. The complex relation between human body measurements and basic sensory descriptors, provided by designers, is modeled using fuzzy decision trees. The fuzzy decision trees constitute an empirical model based on learning data measured and evaluated on a set of representative samples. The complex relation between basic sensory descriptors and fashion themes, given by consumers, is modeled using fuzzy cognitive maps. The combination of the two models can provide more complete information to the fashion recommender system, making it possible to evaluate if a specific body shape is relevant to a desired emotional fashion theme and which garment design scheme can improve the image of the body shape. The proposed system has been validated in a customized design and mass market selection through the evaluations of target consumers and fashion experts using a method frequently used in marketing study.