

LITERATURE SURVEY

Project Title : Smart Fashion Recommender System

Category : Cloud App Development

Project Members : Alagu Senthur, Aldo Jenus, Mohamed Riyas, Goldwin Augustin

Existing Systems :

1. Fashion Recommendation on Street Images

Year : 2019

Authors : Huijing Zhan; Boxin Shi; Jiawei Chen; Qian Zheng; Ling-Yu Duan;
Alex c.kot

ABSTRACT:

Learning the compatibility relationship is of vital importance to a fashion recommendation system, while existing works achieve this merely on product images but not on street images in the complex daily life scenario. In this paper, we propose a novel fashion recommendation system: Given a query item of interest in the street scenario, the system can return the compatible items. More specifically, a two-stage curriculum learning scheme is developed to transfer the semantics from the product to street outfit images. We also propose a domain-specific missing item imputation method based on style and color similarity to handle the incomplete outfits. To support the training of deep recommendation model, we collect a large dataset with street outfit images. The experiments on the dataset demonstrate the advantages of the proposed method over the state-of-the-art approaches on both the street images and the product images.

2. Smart Clothing Recommendation System with Deep Learning.

Year : 2019

Authors : Batuhan AŞIROĞLU , Mehmet İlkay ATALAY, Alkan Balkaya , Erden Tuzunkan , Mustafa Dağtekin , Tolga Ensari.

ABSTRACT :

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.

3.A Review on the Literature of Fashion Recommender System using Deep Learning

Year : 2020

Authors : Angel Arul Jothi Ja, Razia Sulthana

ABSTRACT :

Over the years, much research has been conducted on fashion recommendation systems. Different techniques such as image processing, machine learning, or deep learning have been incorporated in the recommendation systems. Online e-stores like Amazon, eBay, etc. customize fashion recommendation systems to satisfy the daily requirements of their customers. A number of different approaches are proposed to study the purchase pattern of the customers. This article reviews various works in fashion recommenders using deep learning that are published from 2016 to 2020. Researchers have used deep learning models distinctly or by pairing with other machine learning models in building the recommendation system. The manuscript provides a brief description of the persuading deep learning models that owns a place in recommendation systems.

4.Fashion Recommendation System Reflecting Individual's Preferred Style

Year : 2021

Authors : Maria Iso; Ikuko Shimizu

ABSTRACT :

The type of fashion style that people prefer varies from person to person, and the classification of fashion styles often differs from person to person as well. Against this background, many methods have been proposed that generate different outfit images from a given outfit image. However, previous methods focus on the diversity and compatibility of the generated images, and often fail to reflect individual preferences. The purpose of this paper is to develop a system which outputs outfit images with partially modified outfit of the input image according to the user's preferred style. The generation of an outfit image with some changes in the outfit of the input image is achieved by extracting and updating the features of the color, texture and shape of the clothes from the original image and its segmentation mask. To classify images into the style of the individual's preference, we create the user's original dataset to learn the user's preference in advance by asking the user to classify a group of images into 4 styles. We conducted an evaluation experiment of our system to confirm that our system reflects user's individual preference. As a result of the evaluation experiment, it was confirmed that the same image was recommended as

different styles for different users, and that the users also thought that the recommended style was match to the style that the user's classification of the style. There are some challenges related to the bias of the data used and the learned model used to generate the images. Therefore, it is expected that improving these points will result in a system with higher recommended accuracy.

5.Single-Item Fashion Recommender: Towards Cross-Domain Recommendations

Year :2022

Authors : Seyed Omid Mohammadi; Hossein Bodaghi; Ahmad Kalhor

ABSTRACT :

Nowadays, recommender systems and search engines play an integral role in fashion e-commerce. Still, many challenges lie ahead, and this study tries to tackle some. This article first suggests a content-based fashion recommender system that uses a parallel neural network to take a single fashion item shop image as input and make in-shop recommendations by listing similar items available in the store. Next, the same structure is enhanced to personalize the results based on user preferences. This work then introduces a background augmentation technique that makes the system more robust to out-of-domain queries, enabling it to make street-to-shop recommendations using only a training set of catalog shop images. Moreover, the last contribution of this paper is a new evaluation metric for recommendation tasks called objective-guided human score. This method is an entirely customizable framework that produces interpretable, comparable scores from subjective evaluations of human scorers.