LITERATURE SURVEY:

TITLE : A Trends-Driven collaborative fashion recommendation system.

YEAR: 2019

AUTHOR: Maria Anastassia Stefani, Vassilios Stefanis, John Garofalakis

ABSTRACT:

Fashion has a great impact in everyday life and therefore, people pay close attention to the way

they dress. Fashion item recommendation is typically a manual, curated process, where experts

recommend items and trends to large populations. However, there is increasing use of

automated, personalized recommendation systems, which have valuable applications in e-

commerce websites. In this paper, we propose a collaborative fashion recommendation system,

called CFRS. Apart from classic features, we propose a new metric, called trend score. Trend

score shows how trendy a product is and is calculated taking into account the ratings provided

by CFRS users (fashion experts and registered users). In particular, users rate (like/ dislike

scale) current trends about colors, prints and materials. Finally, trend score is used a) for sorting

products of each category from trendiest options to classic ones and b) to recommend trendy

products from different clothing categories.

ADVANTAGES:

We developed a new metric, the trend score, which is crucial to how the system functions.

DISADVANTAGES:

In partnership with industry professionals, we want to use data from an online fashion store to

assess how well our system performs in practise.

TITLE : What dress fits me best? fashion recommendation on the clothing style for personal

body shape.

YEAR: 2019

AUTHOR: Shintami Chusnul Hidayati , Cheng-Chun Hsu, Yu-Ting Chang, Kai-Lung Hua, Jianlong

Fu, Huang Cheng

ABSTRACT:

Clothing is an integral part of life. Also, it is always an uneasy task for people to make decisions

on what to wear. An essential style tip is to dress for the body shape, i.e., knowing one’s own

body shape (e.g., hourglass, rectangle, round and inverted triangle) and selecting the types of

clothes that will accentuate the body’s good features. In the literature, although various fashion

recommendation systems for clothing items have been developed, none of them had explicitly

taken the user’s basic body shape into consideration. In this paper, therefore, we proposed a

first framework for learning the compatibility of clothing styles and body shapes from social big

data, with the goal to recommend a user about what to wear better in relation to his/her

essential body attributes. The experimental results demonstrate the superiority of our proposed

approach, leading to a new aspect for research into fashion recommendation.

ADVANTAGES:

Additionally, we demonstrated how a wealth of stylish celebrity data that is readily accessible

online can be used, modelled, and examined to offer fashion styling advice.

DISADVANTAGES:

The system can recommend the most fashionable and well-fitting daily attire by using additional

personal information from the user.

TITLE : Fashion Recommendation System using CNN.

YEAR: 2022

AUTHOR: Anjan M, Abhishek V, C.Balamanikantan, Dheeraj , Dr. Venugeetha Y.

ABSTRACT:

Recommendation systems are the techniques that are used to predict the rating one individual

will give to an item or social entity. The items can include books, movies, restaurants and things

on which individuals have different preferences. These preferences are being predicted using

two approaches first content-based approach which involves characteristics of an item and

second collaborative filtering approaches which considers user&#39;s past behaviour to evaluate its

choices. This thesis proposes a fashion recommendation system which will recommend

clothing images supported the style sort of the provided clothing images. In this work, we focus

on the images of upper body as well as the lower body clothing and with human model in the

images. We have created our own datasets through web scrapping of different e-commerce

websites. In this paper we have come up with an idea to build a content-based recommendation

system using ResNet-50 convolutional neural network.

ADVANTAGES:

It enables marketers to instantly offer customers pertinent product recommendations.

DISADVANTAGES:

The engine is capable of making intelligent decisions regarding which algorithms and filters to

use for each specific circumstance and shopper.

TITLE : Outfit recommendation system based on deep learning.

YEAR: 2017

AUTHOR: Ying Huang a, Tao Huang b

ABSTRACT:

In this paper, we propose an outfit recommendation system based on deep learning. Our goal is

to use the system not only to judge an outfit if it is good or not but also to recommend good

outfit to users when it is given a pool of cloth items. Our proposed model includes two parts:

one is feature extractor based on ResNet-50, and the other is a binary classifier which is to

classify the outfits into good ones and bad ones. Since our model is based on deep learning, it

is necessary to use huge data to train the model. We collected a dataset which consists of

409,776 outfits with 644,192 items from the famous fashion website called Polyvore.com. With

this dataset, we trained our model and the performance of it is over 84%. And our model can

also recommend daily outfit to users.

ADVANTAGES:

ResNet is used as a feature extractor in the model we suggested, while a 2-layer MLP serves as

a binary classifier. We focused on training our binary classifier because the ResNet was already

well-trained.

DISADVANTAGES:

The 4096-fully-connected model performs the best out of numerous impractical models that we

tested.With great performance, our model can evaluate if an outfit is good or awful.

TITLE : A Comprehensive Review on image based style prediction and online fashion

recommendation.

YEAR: 2020

AUTHOR: Samit Chakraborty1∗ ID, Md. Saiful Hoque2 , S.M. Surid3

ABSTRACT:

Image analysis, processing, classification, and segmentation have become pivotal in style

prediction and fashion recommendation. Fashion retailers have shown an increasingly growing

interest in adopting this branch of artificial intelligence in their supply chains. Computer

scientists and engineers have published several scholarly works on this topic since the last

decade. Based on the previous studies, this is the first academic paper that has presented

comprehensive review on this topic. These scholarly articles are related to imagebased style

prediction and online fashion recommendation. This is a form of method paper that illustrates

research designs of the selected articles and research methods used by the researchers. Both

style prediction and online fashion recommendation have been reviewed together in this paper,

because study on recommendation system can facilitate an easy understanding of fashion style

prediction and vice versa. Finally, the study will be helpful for fashion retailers and future

researchers to understand the nature of style prediction and online fashion recommendation

using image processing technique. The scientific contribution of this paper is that it has

proposed a novel approach of reviewing research methods used in style prediction and fashion

recommendation systems. Additionally, the article has also proposed a personalized

recommendation model for the image-based fashion recommendation system.

ADVANTAGES:

The majority of image analysis studies use quantitative methods and entail creating an

experimental model using convolutional neural networks(CNN).

DISADVANTAGES:

More studies need to be done on social media images because they differ from celebrity shots

with high pixel counts and bright backgrounds in terms of resolution and technological aspects.

TITLE : Design and implementation of clothing fashion style recommendation system using

deep learning.

YEAR: 2021

AUTHOR: Muhammad KHALID1 , Mao KEMING1 , Tariq HUSSAIN2

ABSTRACT:

In recent years, the huge amount of information and users of the internet service, it is hard to

know quickly and accurately what the user wants. This phenomenon leads to an extremely low

utilization of information, also known as the information overload problem. Traditionally,

keywords are used to retrieve images, but such methods require a lot of annotations on the

image data, which will lead to serious problems such as inconsistent, inaccurate, and

incomplete descriptions, and a huge amount of work. To solve this problem, Content Based

Information Retrieval (CBIR) has gradually become a research hotspot. CBIR retrieves picture

objects based entirely on the content. The content of an image needs to be represented by

features that represent its uniqueness. Basically, any picture object can be represented by its

specific shapes, colors, and textures. These visual characteristics of the image are used as

input conditions for the query system, and a result the system will recommended nearest

images and data set. This research designs and implements two-stage deep learning-based

model that recommends a clothing fashion style. This model can use deep learning approach to

extract various attributes from images with clothes to learn the user&#39;s clothing style and

preferences. These attributes are provided to the correspondence model to retrieve the

contiguous related images for recommendation. Based on data-driven, this thesis uses

convolutional neural network as a visual extractor of image objects. This experimental model

shows and achieves better results than the ones of the previous schemes.

ADVANTAGES:

We built the model of stacked CNN to predict the features relevant to these attributes after

laboriously preprocessing and cleaning the data in a dataset.We then trained the models with

the dataset to produce precise predictions for practically all types of photos.

DISADVANTAGES:

The final examination to determine whether deep learning for style recovery is at a high

development and may be applied in selecting clothing.

TITLE : Fashion Evaluation Method for Clothing Recommendation Based on Weak Appearance

Feature.

YEAR: 2017

AUTHOR: YanZhang,1,2 Xiang Liu,1 Yunyu Shi,1 Yunqi Guo,3 ChaoqunXu,3 Erwen Zhang,4

JiaxunTang,1 and Zhijun Fang1

ABSTRACT:

With the rapid rising of living standard, people gradually developed higher shopping enthusiasm

and increasing demand for garment. Nowadays, an increasing number of people pursue

fashion. However, facing too many types of garment, consumers need to try them on repeatedly,

which is somewhat time- and energy-consuming. Besides, it is difficult for merchants to master

the real-time demand of consumers. Herein, there is not enough cohesiveness between

consumer information and merchants. Thus, a novel fashion evaluation method on the basis of

the appearance weak feature is proposed in this paper. First of all, image database is

established and three aspects of appearance weak feature are put forward to characterize the

fashion level. Furthermore, the appearance weak features are extracted according to the

characters’ facial feature localization method. Last but not least, consumers’ fashion level can

be classified through support vector product, and the classification is verified with the

hierarchical analysis method. The experimental results show that consumers’ fashion level can

be accurately described based on the indexes of appearance weak feature and the approach

has higher application value for the clothing recommendation system.

ADVANTAGES:

Makeup, accessories, and hair colour are excellent indicators of a consumer&#39;s fashion sense.

The support vector product is utilised in the paper to define and categorise the fashion level

model.

DISADVANTAGES:

The accuracy is more than 92%, and consumers’ fashion level is accurately classified. As the

accuracy is only 92.3 ,it can be developed based on any other algorithm to maintain accuracy

more than 95 .

TITLE : Smart fashion:A review of AI application in virtual drive-on &amp; fashion sysnthesis.

YEAR: 2021

AUTHOR: Seyed Omid Mohammadi1 , Ahmad Kalhor2

ABSTRACT:

The rapid progress of computer vision, machine learning, and artificial intelligence combined

with the current growing urge for online shopping systems opened an excellent opportunity for

the fashion industry. As a result, many studies worldwide are dedicated to modern

fashionrelated applications such as virtual try-on and fashion synthesis. However, the

accelerated evolution speed of the field makes it hard to track these many research branches in

a structured framework. This paper presents an overview of the matter, categorizing 110

relevant articles into multiple sub-categories and varieties of these tasks. An easy-to-use yet

informative tabular format is used for this purpose. Such hierarchical application-based multi-

label classification of studies increases the visibility of current research, promotes the field,

provides research directions, and facilitates access to related studies.

ADVANTAGES:

This article provides some insight into many systems-related applications, chronicles the

evolution of the field&#39;s study across time, and highlights its explosive development.

DISADVANTAGES:

The performance of the systems in comparison to human capabilities is one major problem.

TITLE : Fashion recommendation system, model and methods: A Review.

YEAR: 2021

AUTHOR: Samit chakraborty, Md.Saiful Hoque, Naimur Rahman Jeem , Manik Chandra Biswas,

Deepayan Bardhan , Edgar Lobaton

ABSTRACT:

In recent years, the textile and fashion industries have witnessed an enormous amount of growth 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.

ADVANTAGES:

Based on scholarly literature on the subject, this report reviewed fashion recommendation

systems,algorithmic models, and filtering strategies.

DISADVANTAGES:

Additionally, in order to create a useful recommendation system, future research should focus on

incorporating time series analysis and precise categorization of product photos based on variations in

colour, trend, and clothing style.

TITLE : Fashion Remcommendation Based on Style and Social Events.

YEAR: 2021

AUTHOR: Federico Becattini, Lavinia De Divitiis, Claudio Baecchi and Alberto Del Bimbo.

ABSTRACT:

Fashion recommendation is often declined as the task of finding complementary items given a

query garment or retrieving outfits that are suitable for a given user. In this work we address the

problem by adding an additional semantic layer based on the style of the proposed dressing.

We model style according to two important aspects: the mood and the emotion concealed

behind color combination patterns and the appropriateness of the retrieved garments for a

given type of social event. To address the former we rely on Shigenobu Kobayashi’s color image

scale, which associated emotional patterns and moods to color triples. The latter instead is

analyzed by extracting garments from images of social events. Overall, we integrate in a state of

the art garment recommendation framework a style classifier and an event classifier in order to

condition recommendation on a given query.

ADVANTAGES:

To train a style classifier that we utilised to filter the output of a memory network-based

garment recommender we benefited from Kobayashi&#39;s work.

DISADVANTAGES:

A range of outfit styles that are appropriate with the inquiry garment are suggested by the

recommendation system, according to experiments, which also demonstrate that our system

can generalise about colour trends and social occasions.