SMART FASHION RECOMMENDER APPLICATION

TEAM MEMBERS:

1. YUGESH V S -19BEC038
2. SOBEKA T - 19BEC037
3. ARAVINTHAN B -19BEC035
4. MUKIL K -19BEC032

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 fashion related applications such as virtual try-on and fashion synthesis. Fitting rooms are the heart of customary in-store apparel shopping, where the customers make the final decision about the purchase. One of the main drawbacks of online shopping is the lack of such service. Virtual try-on and fashion synthesis systems are the solutions to this problem, preventing customers from buying unsuitable and unexpected items, making sure to provide the customers with an enjoyable experience. Moreover, they can decrease the refunding rate of online stores.

Keywords: Smart Fashion, Virtual Try-on, Fashion Synthesis, 3D Modelling.

LITERATURE REVIEW:

1.Smart Fashion: A Review of AI Applications in Virtual Try-On & Fashion Synthesis

University of Tehran, College of Engineering, School of Electrical and Computer Engineering, Tehran, Iran E

The primary focus is on two categories of AI fashion applications:

1. Fashion virtual try-on
2. Fashion synthesis.

Older review studies like in 2018 refer to these tasks very briefly. In 2020, dedicated a section of their survey on this matter, mentioning multiple essential works through the years. Also,in 2021 covered this subject and included several state-of-the-art methods, relevant datasets, and performance metrics.

A limitation of past studies is that they only report several significant works in the field. They had to cover many more subjects that simply could not go into all the details of virtual try-on and synthesis tasks.

The main contributions of the article are as follows:

• A survey of AI applications in virtual try-on and fashion synthesis systems is provided.

• A three-level hierarchy of related tasks is introduced and subsequently all relevant studies are listed and categorized using a multi-label scheme.

• The tabular format used in this article provides researchers with fast and easy access to relevant sources. Additionally, the introduction of a double keyword scheme eases the process of pointing to different input-output domains.

2. Smart Recommender System Using Deep Learning

Chetan J. Awati Assistant Professor, Department of Technology,Shivaji University Kolhapur, INDIA. Proceedings of the Sixth International Conference on Inventive Computation Technologies [ICICT 2021]

Deep neural system has been succeeded in solving recent complex problems in AI, image processing, and natural language processing. In Recommendation System innovation, deep learning is an enormous thing. Deep learning is applicable in various systems like music recommendation, speech recognition, book suggestion, and video on demand. Deep learning solves complex relations so many researchers use the deep neural network in their task. Most of the time task requires complex computation.

This paper has reviewed various methods of deep learning to enhance the recommendation quality of the recommender system. Collaborative filtering is selected to generate recommendations. Further collaborative filtering is implemented using matrix factorization.

Then collaborative filtering is implemented using a deep neural network. This method finds the relation between item and user. Then the system considers the past and present association of things and users. The focus is on building end-to-end neural networks considering past behaviour. The precise recommendation for using deep learning is predicted. The suggested method is going to be ready to overcome the sparsity problem in the recommendation System.

3.Chatbot design approaches for fashion E-commerce: an interdisciplinary review

A. R. D. B. Landima , A. M. Pereiraa , T. Vieirab , E. de B. Costab , J. A. B. Mourac , V. Wanick d and Eirini Bazakid a Graduate Program on Computer Science (PPGCC), University of Southampton Faculty of Humanities, Southampton, UK.

The theme-based literature review was carried out according to a 3-phase methodology we interactively adjusted from that by Okoli (2015) for simplicity and fidelity to actual procedures for the task at hand. Phases are not necessarily sequential: one may return to a previous phase after (partial) execution of a next phase – e.g. the review results provided a base to categorise chatbot studies and to enhance details of the review’s design and execution and associated analysis.

Computational papers have different categorisations. Here we focus on the high-level categories . Chatbots as conversational recommender systems take a more sophisticated approach, offering a richer set of interactions that help improve preference elicitation and interact with users through natural language (NL).

The main research gaps and needs the literature review unearthed and that serve to base suggestions of chatbot research directions in general and for the fashion domain in particular are presented here along the computational and non-computational perspectives

This paper presented an interdisciplinary, comprehensive review of what has been done in the field of conversational agents for fashion and retail e-commerce. Thus, this study adds to specialised literature in the field of chatbot design for fashion e-commerce by providing a comprehensive map of chatbot approaches that can be deployed by retailers. This study also revealed that despite the increasing investment in chatbots for e-commerce in general, research and use in fashion e-commerce are still relatively modest. Thus, further research and development on this topic are still needed.

4.Chatbots as recommender agents in conversational commerce platforms

* Conversational commerce refers to an array of m-commerce activities performed through mobile messaging applications which afford texts, emojis, and audio communications. These activities include browsing ,soliciting recommendations, and purchasing products or services. Conversational commerce has been increasingly adopted by businesses, as to cohere with the current trend and preference of shoppers in communicating through messaging applications using natural language interfaces.
* The objective of this study was to assess the effects of designing conversational commerce chatbots with expertise cues on perceived source expertise of chatbots, trusting beliefs toward the platform, and purchase intention through the conversational commerce platform
* The results of this study conform to the computers-are- social-actors paradigm; insofar that users reacted to social cues conveyed by the recommender chatbots in the conversational commerce platform. More specifically, it was demonstrated that the converged expertise cues derived from single functionality cues, labels and social descriptors in dialogue, as well as gender cues and appearance styles of chatbots, can effectively evoke users to attribute higher source expertise of chatbot and trust ability toward the conversational commerce platform
* This study employed a counterbalanced within-subject experimental design wherein all participants viewed the videos concerning the experimental condition (chatbots designed with specialty and expertise social cues) and the control condition (a chatbot without expertise cues).