CLOUD APPLICATION DEVELOPMENT

SMART FASHION RECOMMENDER APPLICATION

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LITERATURE SURVEY

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LITERATURE SURVEY

Survey 1:

LIU, C., & WU, X. (2016):

A SURVEY ON E-COMMERCE RECOMMENDATION SYSTEM:

Several papers on RSs surveys had been published in the last decade in order to analyse major problems of traditional and non-traditional RSs. Li & Karahanna (2015) provide comprehensive research on e-commerce RSs addressing three major areas: understanding consumers, how recommendations work and the impacts of RSs. More akin to the methodology used in this paper, Lu et al, (2015) review the latest application developments of RSs in several application domains such as e-government, e-business and e-commerce through recommendation methods, software, and application platforms. While, Adomavicius and Tuzhilin (2005) reviewed the RSs, such as content-based, collaborative filtering-based and hybrid approaches; and discussed their limitations and possible solutions to enhance recommendation performance.

In this research, two types of articles that were published in the last three years were reviewed and classified:

    1) Articles on RS techniques, specifically related methods and approaches;

    2) Articles on RSs designed particularly for e-commerce domain.

The research and selection of these articles were performed as follows:

A. The following journal databases were used in order to select research papers on RSs for our study: ACM Digital Library, IEEE Xplore, Science Direct and SpringerLink.

B. Therefore, the search was implemented based on related keywords of RSs in e-commerce (such as, recommender system, e-commerce recommender system), while holding the following two criteria:

    1) The articles must propose a novel recommender approach which addresses current limitations;

    2) The articles must propose a novel recommender technique designed for e-commerce.

C. Based on the keywords related to e-commerce domain, these papers were divided by RS methods such as collaborative filtering-based, content-based, hybrid approaches and social-network based techniques.

Large e-vendors such as Amazon.com, eBay.com and Taobao.com are the best examples of massive implementers of recommender systems.

The products are usually recommended based on popularity, customer demographics and analysis of the customer's past purchase behaviours. (Schafer et al., 1999) Purchased product rating is a common function in e-shops. For example, in Amazon.com, feedbacks for purchased items are provided by giving a rating between 1 and 5. These ratings data can be used to make recommendations. (Lu et al., 2015).

Survey 2:

ZHANG, Y.; CAVERLEE, J.(2019):

RECURRENT FASHION RECOMMENDATION WITH IMPLICIT VISUAL INFLUENCE:

Fashion-focused key opinion bloggers on Instagram, Facebook, and other social media platforms are fast becoming critical influencers. They can inspire consumer clothing purchases by linking high fashion visual evolution with daily street style. In this paper, they build the first visual influence-aware fashion recommender (FIRN) with leveraging fashion bloggers and their dynamic visual posts. Specifically, they extract the dynamic fashion features highlighted by these bloggers via a BiLSTM that integrates a large corpus of visual posts and community influence. Then they learnt the implicit visual influence funnel from bloggers to individual users via a personalized attention layer. Finally, they incorporate user personal style and her preferred fashion features across time in a recurrent recommendation network for dynamic fashion-updated clothing recommendation. Experiments show that FIRN outperforms state-of-the-art fashion recommenders, especially for users who are most impacted by fashion influencers, and utilizing fashion bloggers can bring greater improvements in recommendation compared with using other potential sources of visual information. They also release a large time-aware high-quality visual dataset of fashion influencers that can be exploited for future research.

Survey 3:

JH (JANGHYUN), BAEK; JOHN, TSAI; JUSTIN, SHAMOUN; MURIEL, MARABLE; YING CUI, YING; (2020):

AMAZON RECOMMENDED SYSTEM:

Amazon has been collecting, storing, processing, and analysing personal information from customers as a means of determining how they spend their money. Amazon currently uses item-item collaborative filtering, which scales to massive datasets and produces high quality

recommendation systems in real time. This system is a kind of an information filtering system which seeks to predict the "rating" or preferences which user is interested in.

Product recommendations tailored to a user are more likely to lead to higher conversion. Recommended products account for 35% of Amazon revenue (MacKenzie). Furthermore, users want recommendations of similar items to help discover new products, or compare items.

Survey 4.

QINGQING TU, LE DONG (2010):

AN INTELLIGENT PERSONALIZED FASHION RECOMMENDATION SYSTEM:

In this paper, they proposed a novel system-Intelligent Personalized Fashion Recommendation System, which created a new space in web multimedia mining and recommendation. The proposed system of this project significantly helped customers to 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 favourable fashion factors in trend.

(ii). Evolutionary hierarchical fashion multimedia mining model, which created a hierarchical structure to filer the key components of fashion multimedia information in the virtual space, and it proved to be more efficient for web mass multimedia mining in an evolutionary way.

(iii). Colour tone analysis model, a relevant and straightforward approach for analysis of main colour tone as to the skin and clothing is used. In this model, a refined contour extraction of the fashion model method was 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 outperformed in effectiveness on mass fashion information in the virtual space compared with human, and thus developed a personalized and diversified way for fashion recommendation

Survey 5:

BATUHAN AŞIROĞLU (2019):

A SMART CLOTHING RECOMMENDATION SYSTEM WITH DEEP LEARNING:

They developed a cloth recommendation system with using only single photo of user with scalable embedded system. This study led to important results and gave new opportunities for clothing companies and advertisements. In this study, they showed that how their system recommended a cloth options without user's previous shopping act data with embedded system and machine learning. In order to recommend a cloth, they developed two inception based convolutional neural networks as prediction part and one feed forward neural network as recommender. In this study, they reached to 98% accuracy on colour prediction, 86% accuracy on gender and cloth's pattern predictions and 75% accuracy on clothing recommendation

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