INTERNATIONAL RESEARCH JOURNAL IN ADVANCED ENGINEERING AND TECHNOLOGY (IRJAET) E - ISSN: 2454-4752 P - ISSN : 2454-4744
VOL 3 ISSUE 6 (2017) PAGES 2512 - 2516
RECEIVED : 25.10.2017 PUBLISHED : 01.12.2017
Dec 01, 2017

SOCIAL MEDIA IN E-COMMERCE NETWORK

[1]M. Divyapriya, M.Phil, Research Scholar, K.M.G College Of Arts & Science, Gudiyattam,

[2]N.S.Rajanandan, Assistant Professor, PG & Research Department Of Computer Science & Applications, K.M.G College Of Arts & Science, Gudiyattam.

Abstract:

This Decade, the boundaries between e-commerce and social networking have become increasingly blurred. Lots of e-commerce web Application support the process of social login where users can sign on the websites using their social network username and password authentication such as their Twitter or Facebook accounts. Social Network users can also post their newly purchased products on microblogs with links to the e-commerce product web pages. In this paper, we propose a novel solution for cross-site cold-start product recommendation. We aim to recommend e- commerce product from e-commerce websites to users at social networking websites in "cold-start" situations. Cold- start situation is a problem which has rarely been explored before. A major challenge is how to leverage knowledge extracted from social networking sites for cross-site cold-start product recommendation. We propose to use the linked users across social networking sites and e-commerce websites as a bridge to map users' social networking features to another feature representation for product recommendation.

Keywords: E-Commerce, Cold-Start, Social Network.

1. INTRODUCTION

In these days, product recommendation is a very important area to concentrates in increased sales for any ecommerce website. For example, Netflix has re-leased an interesting fact that about 75% of its subscriber's watches are from recommendations system. There are many algorithms which focus on connecting the social media to ecommerce but none are focused on product recommendation by leveraging the social media information like demographic, micro-blogs, location, etc.Recommender systems currently used, focus on solving the information overload problem, by providing users with personalized and accurate information services. Typically, recommendation systems which use collaborative filtering, can automatically predict the need of an active user by collecting rating information from other similar users or items. Another way of recommending products is based on online reviews a purchaser leaves after a purchase and has his/her feedback. The information from the product reviews can be used by analyzing the knowledge hidden in it. But, this technique cannot address the Cold Start situations when there are no purchases or very less purchases for a start-up e-commerce website. Recommender Systems (RS) are programming tools and methods giving recommendations for items to be useful to a user [1]. The recommendations identify and helpful in decision-making processes, such as what products to buy, what music to listen to, or what online news to read. Currently, there are different application domains utilizing the methods of recommender systems. Based on these specific application domains, we define more general classes of domains for the recommender systems.

2. RELATED WORK

In recent years, inter personal communication between e- commerce and social networking have gotten progressively obscured. E-commerce websites such as eBay, flip kart highlights some features of social networks, including ongoing notices and other communications between its customers and dealers. Some e-commerce websites additionally bolster the mechanism of social login, which allows new user to sign in with their existing login information from social networking services such as Google+, Facebook, and Twitter. Recommending products in e-commerce web sites is a common challenge in analytics. An interesting issue here is that recommending products for the customers who don‟t have any historical records for him. This situation is called cold-start situation. In this paper, we concentrate an intriguing issue of recommending products from e- commerce websites to users at social networking websites who don‟t have any historical purchased records called cross-site cold-start product recommendation [4, 5, 6].Though we have extensively studied some product recommendation techniques, those studies are related to recommending the products and mostly constructing solution inside the e-commerce system mainly utilizing their user‟s historical transactions. To best of our insight, cross- site cold start product recommendation has examined some times recently. In this kind of problem setting here, only the users social networking information is available and it is challenging task to covert the social networking information in to latent user features which can be effectively used for product recommendation.

3. LITERATURE SURVEY

This paper studies the new problem: how to recommend the right product at the right time? We adapt the proportional hazards modeling approach in survival analysis to the recommendation research field and propose a new opportunity model to explicitly incorporate time in an e-commerce recommender system. The new model estimates the joint probability of a user making a follow- up purchase of a particular product at a particular time.

Product recommender systems are often deployed by e- commerce websites to improve user experience and increase sales. However, recommendation is limited by the product information hosted in those e-commerce sites and is only triggered when users are performing e-commerce activities. In this paper, we develop a novel product recommender system called METIS, a Merchant Intelligence Recommender System, which detects users' purchase intents from their microblogs in near real-time and makes product recommendation based on matching the users' demographic information extracted from their public profiles with product demographics learned from microblogs and online reviews.

This paper outlines a retail sales prediction and product recommendation system that was implemented for a chain of retail stores. The relative importance of consumer demographic characteristics for accurately modeling the sales of each customer type are derived and implemented in the model. Data consisted of daily sales information for 600 products at the store level, broken out over a set of non-overlapping customer types. A recommender system was built based on a fast-online thin Singular Value Decomposition. We have evaluated our system in a large dataset crawled from Sina Weibo. The experimental results have verified the feasibility and effectiveness of our system. We have also made a demo version of our system publicly available and have implemented a live system which allows registered users to receive recommendations in real time

INTERNATIONAL RESEARCH JOURNAL IN ADVANCED ENGINEERING AND TECHNOLOGY (IRJAET) E - ISSN: 2454-4752 P - ISSN : 2454-4744
VOL 3 ISSUE 6 (2017) PAGES 2512 - 2516
RECEIVED : 25.10.2017 PUBLISHED : 01.12.2017
Dec 01, 2017

4. IMPLEMENTATION

The boundary between e-commerce and social networking has become blurred. E-commerce websites such as Bay has many of the traits of social networks, including real- time updates and interaction between buyers and sellers. Some e-commerce websites also support the mechanism of social login, which allows new users to sign in with their existing login information from social networking.

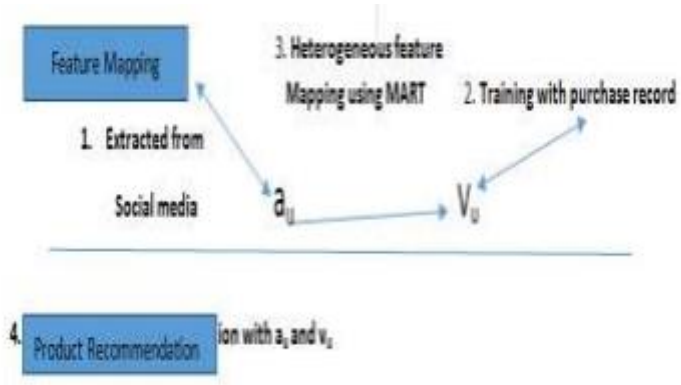

Fig.1.WorkFlow Structure

None of the e-commerce systems have adopted the use of micro- blogging and other demographic information for cold start situation where a customer to ecommerce site is offered suggestion of the products. We are focused on the details of the microblogs, demographic information, location information, etc. to address the product recommendation. In this paper, we address the problem of recommending products to users who do not have any purchase records, i.e., in "cold-start" situations. We called it cold-start product recommender. The above fig 1 shows that combining the socio and ecommerce. This system gives the more accuracy for analyzing the both technology. In this system user can user both website same location. If any user can purchase the any product from e-commerce website. But user use that product and he allow to give the review of the product, like how it is, how work functionality etc. so he can send review of the product. Once user send that review then that post is updated on social to recommendation friends. Word representations or embeddings learned to use neural language models help addressing the problem of traditional bag-of-word approaches which fail to capture words' contextual semantics. In word embeddings, each dimension represents a latent feature of the word and semantically similar words are close in the latent space. We employ the Skip-gram model implemented by the tool word2vec4 to learn distributed representations of words. Finally, we average the word vectors of all the tokens in a user's published document as the user's embedding vector.

5. ANALYSIS

Now we consider constructing the interview process for cold-start collaborative filtering. Assume that a new user registers at the recommendation system and nothing is known about her. To capture the preferences of the user, the system initiates several interview questions to query the responses from the

user. Based on the responses, the system constructs a profile for the user and provides recommendations accordingly. In the plain matrix factorization model described in Section 3.1, the user profile ui is estimated by optimizing the ℓ2 loss on the history ratings rij. This model does not directly apply to cold-start settings because no rating is observed for the new user prior to the interview process.

Fig.2.Producting adding

To build user profiles adaptively according to the user's responses in the course of the interview process, we propose to parameterize the user profile ui in such a way that the profile ui is tied to user i's responses in the form of a function, thus the name functional matrix factorization (FMF). We use recently proposed methods in learning word embeddings using recurrent neutral networks to learn user embeddings or distributed representation of user. We first discuss how to learn product embeddings and in the later part the word embeddings. There are two simple recurrent neutral architectures to train product embeddings, the Continuous Bag-Of-Words model (CBOW) and the Skip- gram model.

CONCLUSION

We study the new problem: how to recommend the right product at the right time? Experimental results on a data collected by a user e-commerce website show that it can predict a user's follow-up purchase behavior at a particular time with descent accuracy. Using a set of linked users across both e-commerce websites and social networking sites as a bridge, we can learn feature prediction of multiple users.

REFERENCES

[1]. J. Wang and Y. Zhang, "Opportunity model for E-commerce recommendation: Right product; right time," in Proc. 36th Int. ACM SIGIR Conf. Res. Develop. Inf. Retrieval, 2013, pp. 303– 312.

[2]. Opportunity Models for E-commerce Recommendation: Right Product, Right Time Jian Wang, Yi Zhang School of Engineering University of California

[3]. Retail Sales Prediction and Item Recommendations Using Customer Demographics at Store Level Michael Giering

[4]. Connecting Social Media to E-Commerce: Cold-Start Product Recommendation Using Microblogging Information.Wayne Xin Zhao, Member, IEEE, Sui Li, Yulan He, Edward Y. Chang, Ji-Rong Wen, Senior Member, IEEE, and Xiaoming Li, Senior Member, IEEE

[5]. Connecting Social Media to ECommerce System. Prof. Milind Hegade, Shital Arjun Salke, Snehal Mohan Shinde, Priyanka Gautam More, Samruddhi Vinod Shinde

[6]. K. Zhou, S. Yang, and H. Zha, "Functional matrix factorizations for Cold-start recommendation," in Proc. 34th Int. ACM SIGIR Conf. Res. Develop. Inf. Retrieval, 2011, pp. 315–324.