

# SocialCommerces: An product recommendation framework using social background and user history

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**Abstract** - In recent years, the boundaries between e-commerce and social networking became more and more blurred. several e-commerce websites support the mechanism of social login wherever users will sign up the websites victimisation their social network identities admire their Facebook or Twitter accounts. during this paper we tend to propose a unique answer for cross-site product suggestion that aims to recommend merchandise from e-commerce websites to users at social networking sites.. a significant challenge is the way to leverage information extracted from social networking sites for cross-site product recommendation. We tend to propose to use the joined users across social networking sites and ecommerce websites (users World Health Organization have social networking accounts and have created purchases on e-commerce websites) as a bridge to map users' social networking options to a different feature illustration for product recommendation. The info collected from social sites use for product recommendation victimisation data processing algorithmic program we tend to develop desktop application which might suggest product supported users collected knowledge from social sites.

**Key Words:** OSN, Data Mining, Prediction, Text Mining, E-commerce, Data Sharing.

## 1. INTRODUCTION

We have entered the age of social media networks, e.g., Facebook, Twitter, YouTube and Flickr. Net users currently pay longer on social networks than program. Business entities or public figures got wind of social network pages to boost direct interaction with on-line users. In this project we tend to propose a completely unique answer for cross-site product suggestion that aims to recommend merchandise from e-commerce websites to users at social networking sites. a significant challenge is the way to leverage data extracted from social networking sites for cross-site recommendation.

## 2. DISTRIBUTED ILLUSTRATION LEARNING WITH REPEATED NEUTRAL NETWORKS

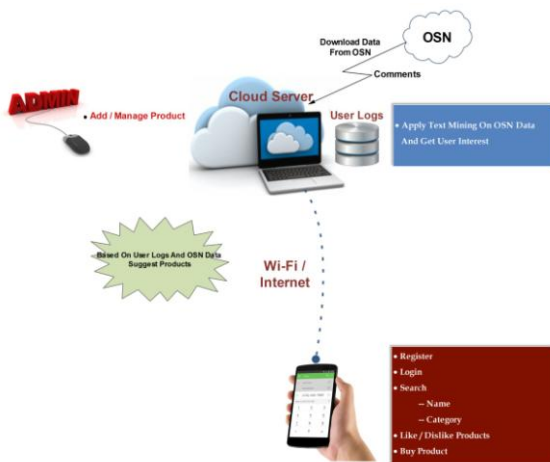
We've got mentioned the way to construct the microblogging feature vector  $au$  for a user  $u$ . However, it's not easy to ascertain connections between  $au$  and product. Intuitively, users and product ought to be diagrammatical within the same feature area so a user is nearer to the product that she has purchased compared to those she has not. Impressed by the recently projected ways in learning word embeddings mistreatment repeated neutral networks. We have a tendency to propose to be told user embeddings or distributed illustration of user  $vu$  during a similar method.

## 3. LEARNING USER EMBEDDINGS

Given product embeddings, if we will learn user embeddings during a similar method, then we will explore the related to representations of a user and product for product recommendation. We have a tendency to borrow the thought from the recently projected Paragraph Vector (para2vec) technique, that learns feature representations from variable-length items of texts, as well as sentences, paragraphs, and documents. We have a tendency to implement a simplified version of para2vec at the sentence level as follows. The acquisition history of a user will be thought-about as a "sentence" consisting of a sequence of product IDs as word tokens. A user ID is placed at the start of every sentence, and each user IDs and merchandise IDs square measure treated as word tokens during a vocabulary within the learning method. throughout coaching, for every sentence, the slippery context window can forever embrace the first word (i.e., user ID) within the sentence. during this method, a user ID is basically forever related to a collection of her purchase records (a context window of four product at a time). We will then use a similar learning procedure in word2vector for the estimation of  $Pr(\text{context}|\text{pt})$  and  $Pr(\text{pt}|\text{context})$ . We have a tendency to gift AN illustrative example of those 2 architectures. When learning, we have a tendency to separate user embeddings from product embeddings and use  $u$  and  $p$  to denote the learnt  $K$ -dimensional embedding for user  $u$  and merchandise  $p$  severally. The rationales of applying para2vec to model purchase information will be explained below. First, the user embedding illustration for every user ID reflects the users' customized purchase preference; Second, the encompassing context, i.e., product

purchases, is employed to capture the shared purchase patterns among users. Compared to the normal matrix factorisation, the (window-based) consecutive context is in addition sculptured additionally to user preference, that is predicted to doubtless yield higher recommendation results.

#### 4. PROPOSED SYSTEM



In this paper, collecting data from various social networking sites such as facebook, twitter which is stored on cloud server, using this data connecting to different e-commerce sites such as flipcart, amazon, ebay. Using social data predict user interest also using search history data recommendate product to users.

#### 5. LITERATURE SURVEY

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| <p>“A Data Mining-based Spam Detection System for Social Media Networks</p>  | <p>Xin Jin, Jiebo Luo, Cindy Xide Lin, Jiawei Han 2011</p> | <p>Real time detection challenges, provide scalability.</p>    |
| <p>“Authorization mechanism for multiparty data sharing in social network”</p>                                     | <p>Ashwajit Ramteke, Girish Talmale 2014</p>               | <p>The users share data on social sites using privacy.</p>     |
| <p>“Connecting Social Media to E-Commerce: Cold-Start Product Recommendation using Microblogging Information.”</p> | <p>Yongkun Li, John C. S. Lui 2016</p>                     | <p>The users are connect social media to e-commerce sites.</p> |

#### 6. CONCLUSIONS

Thus the data collected from social sites use for product recommendation using data mining algorithm. Main idea is that the e-commerce websites, users and products can be represented in the same latent feature space through feature learning with the recurrent neural networks. Using a set of linked users across both e-commerce websites and social networking sites as a bridge, we can learn feature mapping functions using a modified gradient boosting trees method, which maps users’ attributes extracted from social networking sites onto feature representations learned from e-commerce websites.

In this propose desktop application or mobile application which can recommend product based on users collected data from social sites.

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