CONNECTING SOCIAL MEDIA TO ECOMMERCE

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***Abstract*: In recent years, the border between e-commerce and social networking have become more popular. Many e-commerce websites support for the mechanism of login to social web sites. In this users can sign on the websites using their social network identities such as their Facebook or Twitter accounts. Users can also post their newly purchased products with links to the e-commerce product web pages. We propose a novel solution for cross-site product recommendation, which aims to recommend products from e-commerce websites to users at social networking sites in "recommendation" situations. A major task is how to leverage knowledge extracted from social networking sites for product recommendation.**
We propose idea to use the linked users across social networking sites such as e-commerce websites as a bridge to map users' social networking features to another feature representation for product recommendation. In specific, we propose learning both users' as well as products' feature representations is called as embedding a user from data collected from e-commerce websites using recurrent neural networks
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Index Terms: e-commerce, product recommender, product demographic, micro blogs, social trust, Recommender systems.

1. INTRODUCTION

In recent years, the border between Online Media and E-Commerce is diminishing. Almost every person in a metropolitan daily uses both social networking sites like Facebook, Twitter, etc. for networking internet is used to make huge purchases using e-commerce sites like Flipkart, Amazon etc. The author can also share our recent purchase details on the social media using the links to the product pages of e-commerce sites. The major focus is on the recommendation of product to the users on e-commerce sites by keeping whatever information or knowledge gained from the users social accounts. This will enable to assess the needs of the user in cold start situations. Product recommendation is a state when user logs in to the ecommerce website for the first time and The author don't have any information about the history of purchases, shopping trends, etc. as it is not yet created or available. When The author have users social account information (no confidential information will be accessed) like posts, friends, shares, etc. then the author can harness this to our benefit.

1.1. **Social media** Websites and applications that enable users to create and share content also give review and to participate in social networking. Social media are computer-based technologies that are used for the creation and sharing of information, ideas, career interests and other forms of expression via virtual communities and networks.

1.2. **Social networking** is used to interact with other users, or to find people with similar interests to one's own. A social networking service is platform that people use to build social networks or social relations with other people who share similar information or career interests, activities, backgrounds or real-life connections

1.3. **E-commerce** is buying or selling of goods and services, as well as the transmitting of funds or data, over an electronic network, it can be done with internet. These business transactions occur either as business-to-business, business-to- consumer, consumer-to-consumer or consumer-to-business.

1.4. **Micro blogging** is a broadcast medium that exists in the form of blogging. These are small messages are sometimes called micro posts.

1.5. Data Mining Generally, data mining (sometimes called data or knowledge discovery) is the process of analyzing data from different perspectives and summarizing it into useful information - information that can be used to increase revenue, cuts costs, or both. Technically, data mining is the process of finding correlations or patterns among dozens of fields in large relational databases. Social media mirrors a perfect bonding between e-commerce and social media which involves leveraging social media and social interactions to help promote the buying and selling of products and services online. Data mining software is one of a number of analytical tools for analyzing data. It allows users to analyze data from many different dimensions or angles, categorize it, and summarize the relationships identified

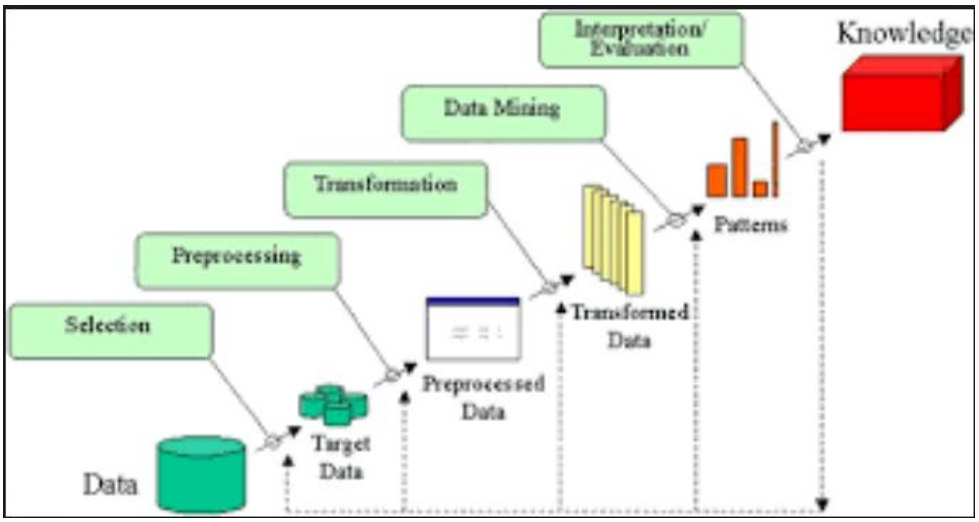

Fig.1. Knowledge Discovery in data Mining

2. OBJECTIVES OF SOCIAL MEDIA

1. To recommend the products according to users profession and personal interest.
2. To recommend the sorted products on the basis of friends ratings on the social media.
3. To analyze the recommended product on the basis of reviews given by customers.
4. To create a bridge between e-commerce and social media.

3. Related Work

E-commerce recommender systems aim to recommend the right product for a user, based on whether the user is likely to purchase or like a product. The effectiveness of recommendations also depends on the time of the recommendation. E-Commerce recommendation is a system to predict the item. It is a system which helps the people to find information that will interest them by facilitating social connections. Sometimes we argue that a system should not only recommend the most relevant item, but also recommend at the right time. How to recommend the right product at the right time?

A recommender system was built based on a fast online thin Singular Value Decomposition. It is shown that data modeling at a finer level of detail by clustering across customer types and demographics yields which improved performance as compared to a single aggregate model built for the entire dataset. Product sale analysis it enable retailers to continuously monitor point-of-sale to track product demand, uncover the sale trends.

Recommendation algorithms are best known for their use on e-commerce Web sites, where they use input about a customer's interests to generate a list of recommended items. Many applications uses the items that customers purchase/buys and based on that they can rate to represent their interests, but they can also use other attributes, including items viewed, demographic data, subject interests, and favorite artists. At Amazon.com, uses recommendation algorithms to personalize the online store for each customer. Based on customer interests the store radically changes, showing programming titles to a software engineer and baby toys to a new mother. There are three common methodologies to solving the recommendation problem: traditional collaborative filtering, cluster models, and search-based methods. Marketing includes a broad range of business strategies that range from research and development to promotion and support after the sale. To concentrate on a particular type of customer or user, many businesses engage in market fragmentation. Demographic factors-such as female working status, age, income, and marital status-and a wide range of variables associated with preparation for and execution of supermarket shopping. Geographic segmentation divides up potential customers.

4. RECOMMENDER SYSTEM METHODOLOGY

Recommender system is a system that predict “rating” or “preference” that a user given on an item.

Two ways of recommendation

4.1 Collaborative filtering

4.2 Content based filtering

4.1 Collaborative filtering -

It is a method of making automatic predictions. This methodology based on collecting and analyzing large amount of information on user’s behavior and predicting what users will like based on similarity of other users

4.2 Content based filtering-

In this method recommend the items similar to those a user has liked in the past

5. SYSTEM ARCHITECTURE:

The author propose to use the linked users across social networking sites and e-commerce websites as a bridge to map user’s social networking features to latent features for product recommendation. User’s social networking features into user embeddings. The above figure shows the combination of the social and e-commerce. This system gives the more accuracy for analyzing the both technology. If any user can purchases 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 sends that review then that post is updated on social to recommendation friends. Therefore, one huge challenge is to transform users' micro-blogging information into another meaningful representation, which can be used more effectively for product recommendation.

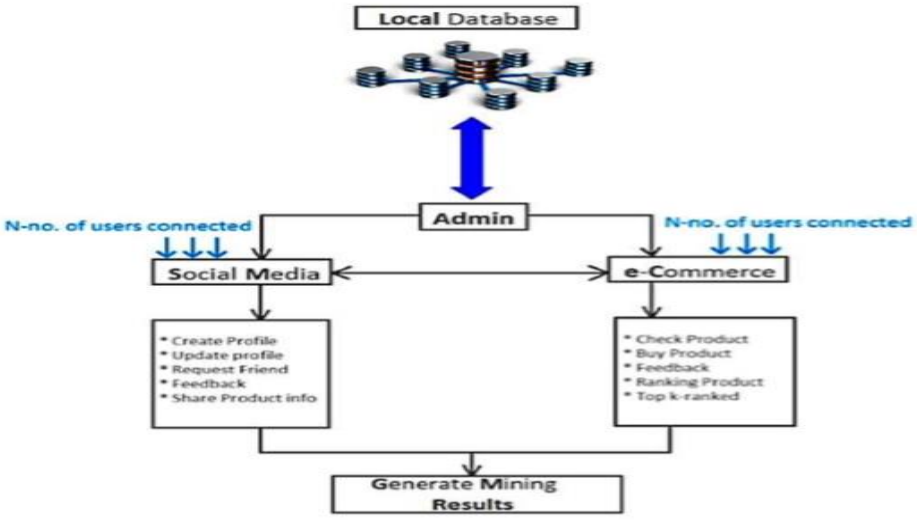

Fig.4 How Social media connected to e-commerce.

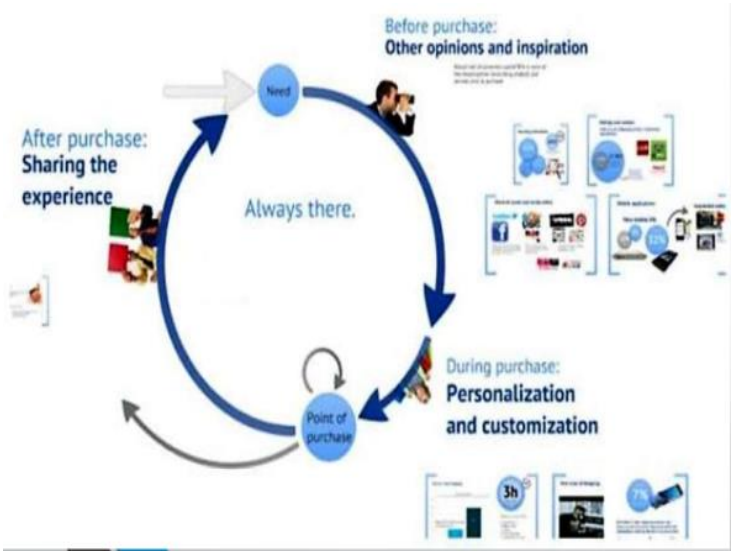

Fig.4.1 Data Analysis

6. ADVANTAGES:

6.1 Modified Product reviews

Now days, social media channels do an incredible job of pushing your goods and reaching your target audience. It's all about proper social media marketing and professional business practices.

6.2 Immediate purchase notifications

Another aspect of social media in ecommerce is the fact that when a consumer makes a purchase of any product , people within their respective groups will receive a notification that one of their friends has made a purchase of something that they may be interested in as well. Even more interesting is the fact that social media users can also recommend the products/services they like or find interesting to their friends on the same network because they feel that they can benefit from them too. Online social media shopping at its best. And now days it's increasing more.

6.3 Content marketing

The content that is being created by consumers or customers is usually good quality, fresh and extremely valuable for their and other people's shopping experience. That's why it's so successful. This is why you have to make the most out of content marketing

yourself. Together with proper social media activity and marketing, it's essential that your ecommerce website works properly and provides all the necessary info for your prospective customers.

7. CONCLUSION

The e-commerce websites, users and products can be represented in the same latent feature space through feature learning with the recurrent neural networks. By using a set of linked users across e-commerce websites and social networking sites considering as a bridge, we can learn feature mapping functions, which maps users attributes extracted from social networking sites onto feature representations learned from e-commerce websites.

This study will have good impact on both research and industry communities and increases the sale marketing.

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