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Connecting Social Media to E-Commerce: Cold-Start Product Recommendation using Micro blogging Information

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ABSTRACT: In recent years, the boundaries between e-commerce and convivial networking have become increasingly blurred. Many e-commerce websites support the mechanism of gregarious authenticate where users can sign on the websites utilizing their gregarious network identities such as their Face book or Twitter accounts. Users can withal post their incipiently purchased products on micro blogs with links to the e-commerce product web pages. In this paper, we propose a novel solution for cross-site cold-start product recommendation, which aims to recommend products from e-commerce websites to users at convivial networking sites in cold-start situations, a quandary which has infrequently been explored afore. A major challenge is how to leverage cognizance extracted from gregarious networking sites for cross-site cold-start product recommendation. We propose to use the linked users across gregarious networking sites and e-commerce websites (users who have gregarious networking accounts and have made purchases on e-commerce websites) as a bridge to map users' gregarious networking features to another feature representation for product recommendation. In categorical, we propose learning both users' and products' feature representations (called utilizer embedding and product embedding, respectively) from data accumulated from e-commerce websites utilizing recurrent neural networks and then apply a modified gradient boosting trees method to transform users' gregarious networking features into utilizer embedding.

Related Work: In our recommendation system for recommending colleges, we decided to take a different approach to the problem. Existing approaches tend to focus on user-item matrix techniques and neighbourhood approach, and their models reflect this line of thinking. We still do similarity calculations, but in a different way for recommending colleges as venues. There are some concepts that we use, which are common to most currently existing recommendation colleges. our project systems rely on information derived from the online of users, such as opinions or ratings, to form predictions, or produce recommendation of colleges . Existing collaborative filtering techniques involve generating a user item in fake matrix, from which recommendation results could be derived.

I. INTRODUCTION

In recent years, the boundaries between e-commerce and social networking have become increasingly blurred. E-commerce websites such as eBay features many of the characteristics of social networks, including real-time status updates and interactions between its 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 services such as Facebook, Twitter or Google+. To address this challenge, we propose to utilize the linked users across convivial networking sites and e-commerce websites (users who have gregarious networking accounts and have made purchases on e-commerce websites) as a bridge to map users' gregarious networking features to latent features for product recommendation. In concrete, we propose learning both users' and products' feature representations (called utilizer embeddings and product embeddings, respectively) from data amassed from ecommerce websites utilizing recurrent neural networks and then apply a modified gradient boosting trees method to transform users' gregarious networking features into utilizer embeddings. We then develop a feature predicated matrix factorization approach which can leverage the learnt utilizer embeddings for cold-start product recommendation. We built our dataset from the most immensely colossal Chinese micro blogging accommodation SINA WEIBO2 and the most astronomically immense Chinese B2C e-commerce website, containing a total of 20,638 linked users. The experimental results on the

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dataset have shown the feasibility and the efficacy of our proposed framework. Our major contributions are summarized below:

• We formulate a novel quandary of recommending products from an e-commerce website to convivial networking users in "cold-start" situations. To the best of our erudition, it has been infrequently studied afore.

• We propose to apply the recurrent neural networks for learning correlated feature representations for both users and products from data amassed from an e-commerce website.

• We propose a modified gradient boosting trees method to transform users' micro blogging attributes to latent feature representation which can be facilely incorporated for product recommendation.

• We propose and instantiate a feature-predicated matrix factorization approach by incorporating utilizer and product features for cold-start product recommendation.

II. IMPLEMENTATION

Module Description:

A. Twitter Login

Twitter has evolved from a micro blogging service into a popular social messaging platform, it has been instrumental in providing the "pulse" on news and events across the globe. In addition to its widespread acceptance among the news media and entertainment industry, Twitter has also become a popular social media marketing tool and a great way to communicate with both friends and co-workers. It is many different things to many different people. It can be used by a family to keep in touch, or a company to coordinate business, or the media to keep people informed or a writer to build up a fan base. Twitter is micro-blogging. It is social messaging. It is an event coordinator, a business tool, a news reporting service and a marketing utility.

1. Register: When you join Twitter from your phone, we collect all of your updates on the web. When you're ready to activate your web account, all you have to do is add an email address and a password to complete your profile and log in.

Enter your full details of the signup page.

- Enter your **phone number** when prompted.
- Twitter will send a **verification code** to your phone. When you get that text message, enter the code (shown below).
- You'll then be asked to create an account by entering your **email address**, a **password**, and a **name** for your account. Your username will already be entered, since you created this when you signed up via SMS.
- Click **Create my account** as shown below, and you're all done! Twitter will walk you through finding some friends you may know on Twitter, then will direct you to your home page

2. Followers: A number of companies have sprung up offering to help people and companies grow their Twitter following the easy way by forking over a little cash. The usefulness of a large Twitter following isn't simply a number. Having 10,000 followers won't do you much good if only half of them are real people and most of them aren't interested in anything you tweet. It may change the number of followers at the top of the screen, but it will have little effect on how many people actually follow what you say. The entire point of growing a large Twitter following is to communicate with people who are interested in your topic, your company or your brand. They want to read what you write, retweet what you tweet and check out the links you post. This is what makes a Twitter following valuable. And a Twitter following that simply ignores your tweets simply isn't worth it.

3. Follow: Twitter can be a great way to promote you, your brand or your company. Actors, writers, sports stars and others are turning to Twitter as a way to connect with fans and promote themselves to millions of people across the globe. Twitter is also a great way for bloggers to gain more traction in the blogosphere and get noticed.
But how do you build up a Twitter following? These simple tips will help you get started.

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Follow People. The number one way to gain followers is to follow people. Many Twitter users follow anyone that follows them, while others check to see if the profile is active before deciding to follow it. You can find interesting people to follow by doing a Twitter search.
Be Active. Don't just link your web feed to your Twitter profile. Post messages and make your Twitter page a place to connect with your readers.
Engage People. Ask questions. Conduct polls. Find ways to engage your followers in the discussion.
Promote your Profile. Add a link to your Twitter profile to your blog, website and as part of your signature in email messages and discussion forums.
Respond to Messages. Always pay attention to who mentions you. If you aren't following them, do so. And when you get a direct message, make sure you respond.

4. Tweets: A tweet is a post or status update on Twitter, a micro-blogging service. Because Twitter only allows messages of 140 characters or less, "tweet" is as much a play on the size of the message as it is on the audible similarity to Twitter.

5. Re-tweet: A "retweet" is a reply to a tweet that includes the original message or a tweet that includes a link to a news article or blog post that you find particularly interesting. Like hash tags, re-tweets are a recent community-driven phenomenon on Twitter with the aim of making the service better and allowing people to follow discussions easier.

B. Data Sets

Job hunting dataset: This data set is related to a controversial post by a famous person in Japan that "the reason students having difficulty finding jobs is, because they are stupid" and various replies to that post. The keyword used in the keyword-based methods was "Job hunting." Figures 5a and 5b show the results of the proposed link-anomaly-based change detection and burst detection, respectively. Figures 5c and 5d show the results of the text-anomaly-based change detection and burst detection, respectively. Figures 5e and 5f show the results of the keyword-frequency-based change detection and burst detection, respectively.
You tube dataset: This data set is related to the recent leakage of some confidential video by the Japan Coastal Guard officer.
NASA dataset: This data set is related to the discussion among Twitter users interested in astronomy that preceded NASA's press conference about discovery of an arsenic eating organism. The keyword used in the keyword-based models was "arsenic."
BBC dataset: This data set is related to angry reactions among Japanese Twitter users against a BBC comedy show that asked "who is the unluckiest person in the world" (the answer is a Japanese man who got hit by nuclear bombs in both Hiroshima and Nagasaki but survived).The keyword used in the keyword-based models was "British" (or "Britain").

C. Computing the link-anomaly score

In this subsection, we describe how to compute the deviation of a user's behaviour from the normal mentioning behaviour modelled in the previous subsection; In order to compute the anomaly score of a new post $\boldsymbol{x} = (t, u, k, V)$ by user u at time t containing k mentions to users V. The two terms in the above equation can be computed via the predictive distribution of the number of mentions , and the predictive distribution of the mentioned , respectively.

In module given input and expected output:

Given input : Input, Query, Dataset Query entered by utilize
Output : Utilized will get recommendation regarding of that product on ecommerce website.

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III. SYSTEM MODEL AND FRAMEWORK

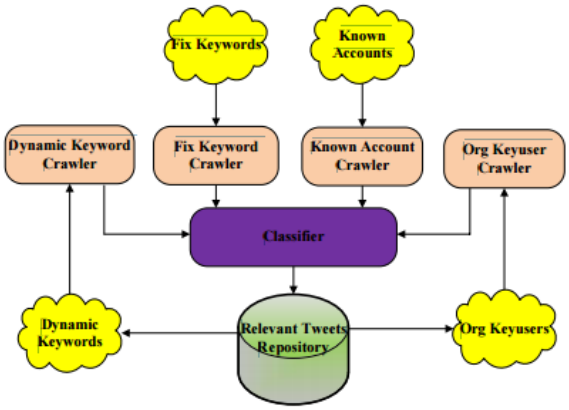

Fig: System Architecture

IV. ADVANTAGES

1. The proposed method does not rely on the textual contents of social network posts. It is robust to rephrasing and it can be applied to the case where topics are concerned the information other than texts, such as images, videos, audio and so on.

2. The proposed link anomaly based method performed even better than the keyword based methods on "NASA" and "BBC" dataset.

V. CONCLUSION

In this paper, we proposed an authentic-time framework for detecting sultry colleges for organizations in convivial media Context. First, we introduced four sources of crawling organization data from multiple perspectives to ascertain a more consummate set of data set for the target organization. Second, we discovered colleges and extracted available features from both the organization and topic perspectives. Thirdly, we developed semi-supervised learners to facilitate timely identification of sultry colleges for organizations. We demonstrated the efficacy of our proposed framework by comparing them with the state-of-the-arts methods. Empirical evaluation on the Twitter data sets on three organizations illustrated the efficacy of the proposed emerging topic detection framework. One can envision several directions for future work. While the current work is predicated on organizations to detect evolving and evolving colleges, we can elongate our framework to more general entities, such as the people and location, etc. The other consequential direction is to build human readable colleges summation for organization users.

REFERENCES

[1] J. Wang and Y. Zhang, "Opportunity model for e-commerce recommendation: Right product; right time," in SIGIR, 2013.
[2] M. Giering, "Retail sales presage and item recommendations utilizing customer demographics at store level," SIGKDD Explor. Newsl., vol. 10, no. 2, Dec. 2008.
[3] G. Linden, B. Smith, and J. York, "Amazon.com recommendations: Item-to-item collaborative filtering," IEEE Internet Computing, vol. 7, no. 1, Jan. 2003.
[4] V. A. Zeithaml, "The incipient demographics and market fragmentation," Journal of Marketing, vol. 49, pp. 64–75, 1985.
[5] W. X. Zhao, Y. Guo, Y. He, H. Jiang, Y. Wu, and X. Li, "We ken what you optate to buy: a demographic-predicated system for product recommendation on micro blogs," in SIGKDD, 2014.

[6] J. Wang, W. X. Zhao, Y. He, and X. Li, "Leveraging product adopter information from online reviews for product recommendation," in ICWSM, 2015.
[7] Y. Seroussi, F. Bohnert, and I. Zukerman, "Personalized rating presage for incipient users utilizing latent factor models," in ACM HH, 2011.