

A Secure Based Preserving Social Media Data Management System



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Abstract: *Personalized suggestions are important to help users find relevant information. It often depends on huge collection of user data, especially users' online activity (e.g., liking/commenting/sharing) on social media, thereto user interests. Publishing such user activity makes inference attacks easy on the users, as private data (e.g., contact details) are often easily gathered from the users' activity data. during this module, we proposed PrivacyRank, an adjustable and always protecting privacy on social media data publishing framework, which protects users against frequent attacks while giving personal ranking based recommendations. Its main idea is to continuously blur user activity data like user-specified private data is minimized under a given data budget, which matches round the ranking loss suffer from the knowledge blurring process so on preserve the usage of the info for enabling suggestions. a true world evaluation on both synthetic and real-world datasets displays that our model can provide effective and continuous protection against to the info given by the user, while still conserving the usage of the blurred data for private ranking based suggestion. Compared to other approaches, Privacy Rank achieves both better privacy protection and a far better usage altogether the rank based suggestions use cases we tested.*

Keywords: *Privacy preserving, Adjustable privacy protection, Rank based suggestion.*

I. INTRODUCTION

Online selling platform has led to a fundamental change within the way that companies interact with their customers. most the famous platforms, like Taobao and Amazon, plan to attract new customers or to stay existing customers by developing good strategies to suggest products. Conventional suggestions usually use content based, collaborative filter based or hybrid methods. of these functions essentially group users into different

groups and make suggestions supported the grouping information. However, a recent survey shows that 84% consumers' purchase behaviours are strongly influenced by friends' behaviours or friends' recommendations. Exploiting the trust relationships between customers can significantly help E-Commerce. This actually has been demonstrated by social recommendation, which suggests that the recommendation performances are often significantly improved with trust relationships. However, social suggestion doesn't present successful applications in industry. for instance, consistent with IBM's Black Friday report, social networks like Facebook, Instagram and Twitter only contribute 0.34% of all online sales on Black Friday. one among the main challenges for using social suggestions to several E-Commerce platforms is that there's no trust relationships are available. Online social networks like Facebook and Twitter record many different kinds of social relationships, but not all relationships are trustful.

II. LITERATURE SURVEY

To protect user private data when publishing user information, the prevailing systems mainly depends on policies or user agreements. Example on the utilization and storage of the published data. However, there's no guarantee on this approach that the users' private information is really shielded from different attackers. In order, to supply effective privacy protection while publishing user data, privacy preserving data publishing has been extensively studied. The second category is especially supported theory and focuses on the Non-informative principle, i.e., the published data should provide attackers with as little private information as possible beyond background. Differential privacy a well-known technique which is understood to supply user privacy against attackers with additional background. we've also proposed Information-theoretic privacy protection approach therein context. They continuously attempt to measure privacy leakage mainly on various entropy-based metrics like conditional entropy and to style privacy-protection mechanisms supported those measures.

III. PROPOSED METHODOLOGY

Manuscript received on April 12, 2021.

Revised Manuscript received on April 26, 2021.

Manuscript published on April 30, 2021.

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The system has began to collect problem of consisting an outsized number of user interests like search history, mobile records, GPS information, etc. The system having some relationships acknowledged with differing types of trust or distrust by users or outsiders and its goal is to infer all the other trust and distrust relationships. one among the Effective thanks to train a supervised model by viewing each relationship as an instance. for instance , within the proposed system, the model should understand that if two persons are staying at an equivalent location it means they need some relationship.

IV SYSTEM ARCHITECTURE

This Paper Investigates The Way To Effectively Leverage Network Correlations To Infer Trust Relationships When An Outsized Number Of Neighbouring Relationships Are Unlabelled. To Deal With The Challenge Of Limited Labelled Relationships, Semi Supervised Learning Like Label Propagation Could Help, By Iteratively Propagating Trust Scores From Labelled Relationships To Unlabelled Relationships. However, Direct Communication Isn't Always Productive, Thanks To The Difficult Semantics Of Trust Relationships. For Instance In Figure 1, Mary Doesn't Know Ruby's Colleague Lucy, Allow Us To Think Lucy Is Alone. In Summary, These Contributions Of Labor Are Often Summarized As: We Categorized Trust Into Fine-Grained Types, And Investigate Potential Useful Correlations.

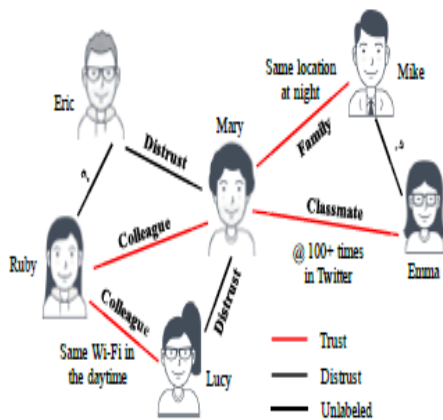


Figure 1: System Architecture

V WORKING MODEL

Functionalities of both the applications are always related in one or Mode ways. This system has many functionalities namely

- Admin module
- Seller Module
- Buyer Module
- Social Media Communication Module
- Recommendation module

Each of these functionalities are having their own importance in the whole system working.

Admin module— Login: To Login into this module we need to get the username and password from the authorized administrator of e-commerce and social media.

Add Categories: In order to add new categories of products to the e-commerce site from this module, the administrator is only authorized.

Add Products: The administrator is the only person who can add new products are to the ecommerce site under a pre-defined category in this module.



Figure 2: Home Screen

View User: The administrator can view and authorize the registered social media users in this module. The profile of the user along with the purchase history can be viewed here.
View History: The administrator can view the search made by the registered user in this module.

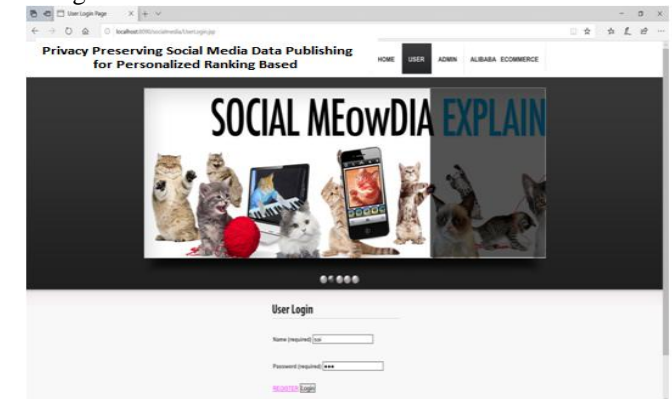


Figure 3: Login Screen

- Seller Module— Seller Module provides various activities described below
- Maintains of Products : this provides to maintain products in website
- Promote Brands : This provides to maintain various brands in ecommerce
- Promote Discounts : This provides various discounts for products
- Provide Combination of Products: Provides Combinations for products
- Provide Combination Offers : Provides various combinations for products



Figure 4: User Menu

Buyer Module— Buyer Module provides various activities described below



- Registration: Provides Registration for User to get user id and password.
- Login: Provides login to users to login into ecommerce website
- Search of Products: provides search of products
- View Products: provides view of products
- Bargain for Price: provides Bargain to Products
- View Combination Offers: Reports to view various combinations of products
- View willing Price Vendors List: Reports to view various willing list

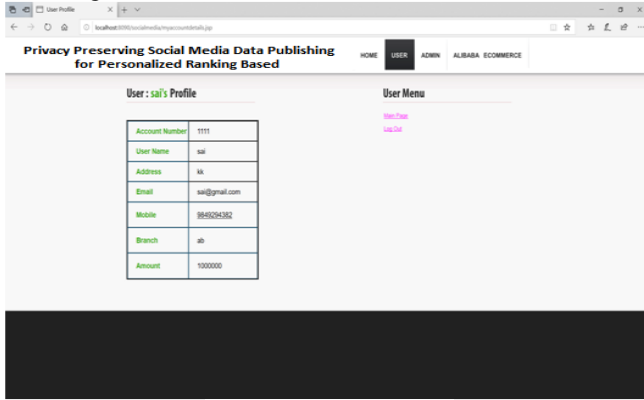


Figure 5: User Profile

Search Friend

In this module the users can search and find their friends they are looking for in the social media, only if they have registered in the same media.

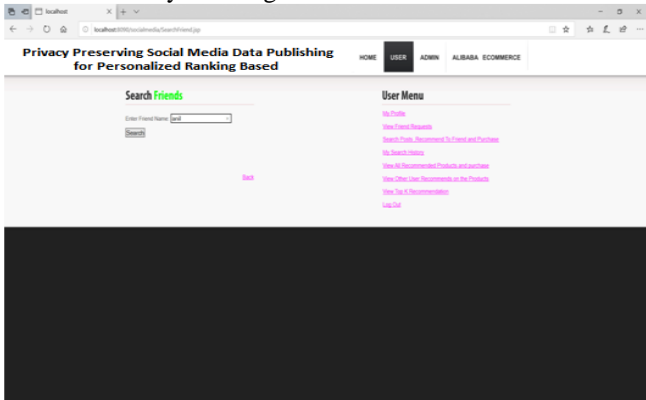


Figure 6: Searching Friends

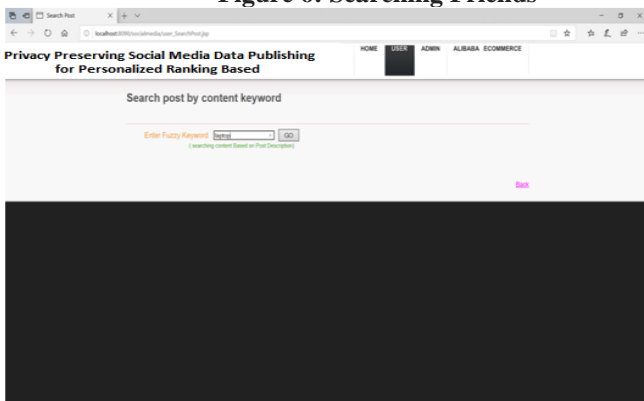


Figure 8: Search post by content

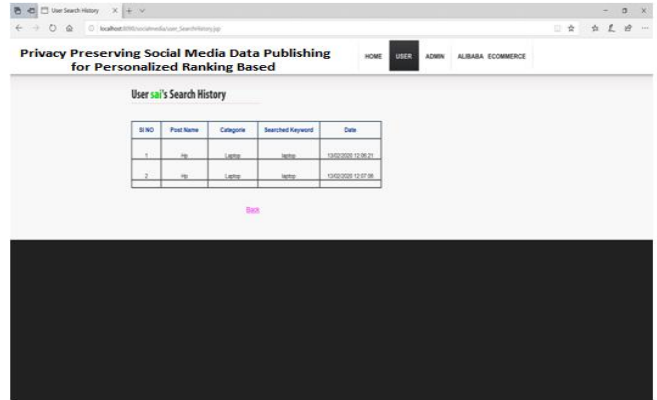


Figure 9: User History

- **POST RECOMMENDATION:** The product recommendations can be made to their friends on social media by the registered users.

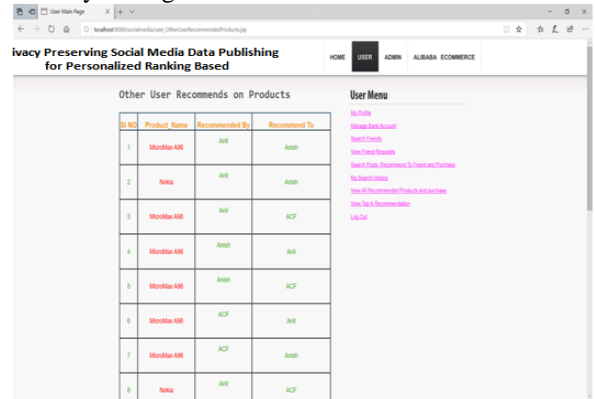


Figure 10: Recommendation

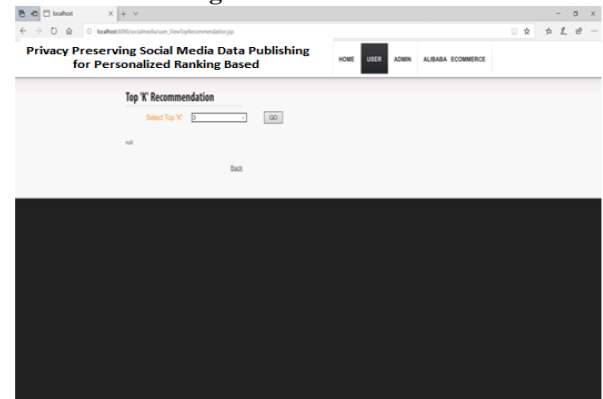


Figure 11: Top Recommendation

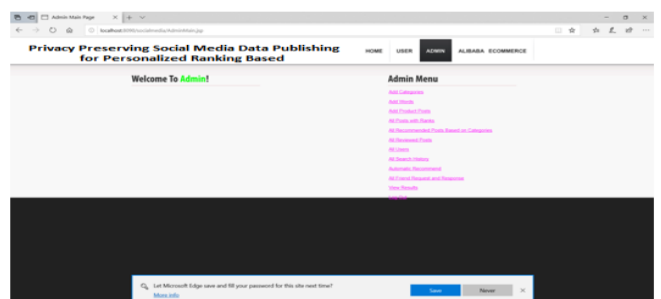


Figure 12: Admin Menu

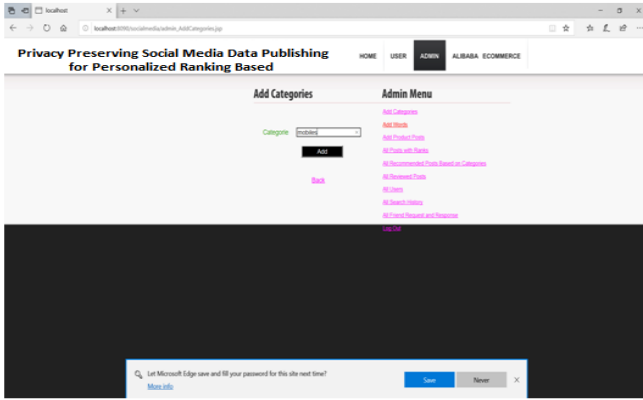


Figure 13: Adding Categories

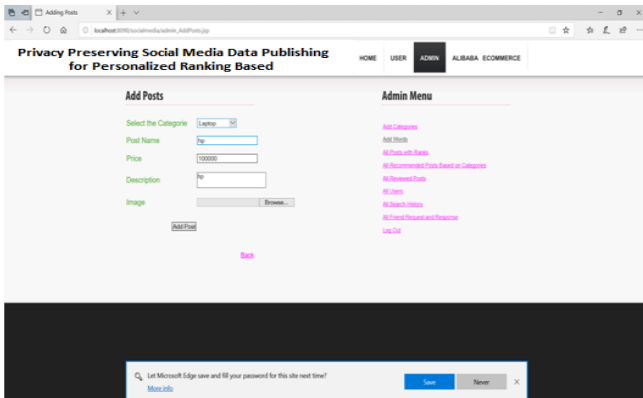


Figure 14: Adding posts

ID	Post Image	Post Name	Price	Category	Rank
1		Mobiles 50	7000 IN	Mobiles	10
2		500	1000 IN	500	10
3		500	2000 IN	Camera	7
4		50	2000 IN	Camera	6
5		50 IN	50 IN	50 IN	5

Figure 15: All posts with Ranks

VI CONCLUSION

This Project introduced Privacy Rank, an adjustable and always preserving privacy on social media data publishing framework. It always protects the data that is specified by the user against inference attacks by publishing blurred user activity data, while still ensuring the usage of the published data to power personal rank based suggestions. Even through these extensive experiments we showed that Privacy Rank can guarantee an efficient protection of private data, while it still preserves the usage of the published data for different rank based recommendation use cases.

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