**CSE 3021**

**Social and Information Networks**

**Review 1**

**Topic**

**Collaborative filtering based Social Media Analysis in Blogging**

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**Abstract:**

The world of Social Networking has grown rapidly in the past decade and is continuing at the same rate. In this growth from being a start ups to billion-dollar companies they have implemented many different features to increase their userbase. One of this is a recommender system which we can usually see as “Friends Suggestions” on “Facebook” or “People who bought this also bought this” on “Amazon” and according to reports these kinds of features are helping to increase their revenue by 15 to 20%.

We are planning to implement the same feature for our social blogging platform as the major added value of social platforms is to encourage interaction between users. Each interaction can be extracted and used as an input for the Recommendation System, as it helps to better understand the user interests and information needs. On the other hand, Recommendation Systems can clearly help to improve user participation in social blogging, as they can recommend new authors or interesting content. Thus, the user will be more motivated to keep on-going participation in this social platform, because the more content he/she shares, the more relevant connections the system can recommend, having a precise proﬁle about him/her.

To implement such feature the traditionally available approach is content based collaborative filtering which considers all the content-based data sets and generates a similar dataset for the user depending of his browsing history. Later both datasets are compared using probabilistic analysis and predictions are generated.

Although the such kind of algorithms like content – based filtering or k-based collaborative filtering has proved very successful in the past but as the number of users grow it soon poses a lot of challenges as the database also increases and extracting quality information becomes a very time-consuming task. So, a better solution for such kind of problem was proposed which is called as item-based collaborative filtering in which rather than going through all the data set available we only go through a quality dataset leading to minimum time for computation while keeping the quality of the recommendation. In item-based collaborative filtering, the first thing is to isolate users who have rated the items equally and then similarities score between various item has been computed (with the help of similarity algorithms like cosine similarity algorithm) and after that the concept of weighted sum is used to generate the prediction of items for the user based on the interaction between his previously bought item.

So, we can infer that collaborative filtering is a better approach to implement RSs on out platform than the most commonly used content-based approach on blogging systems as they don’t just consider only the content but also the users as well while generating an error of just 9%.