International Journal of
Emerging Research in Management &Technology
ISSN: 2278-9359 (Volume-4, Issue-4)

Research Article

April 2015

Mining and Representing User Interests Using Folksonomy

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Abstract-

The main goal of our projects is tagging the online social communities based on Individual users Interests. Social tagging in online communities has become an important method for reflecting classified thoughts of individual users. A number of social Web sites provide tagging functionalities and also offer folksonomies within or across the sites. However, it's practically not easy to find users' interests based on such folksonomies. This project provides a novel approach for clustering user-centric interests by analyzing tagging practices of individual users.

To do this, collect data from blogosphere, find conceptual clusters using formal concept analysis, and then evaluate the significance of these clusters. The term blogs implies connected community (or as a collection of connected communities) or as a social network in which everyday authors can publish their opinions. Formal concept analysis is a principled way of automatically deriving an ontology from a collection of objects and their properties.

The results of the empirical evaluation show that it can effectively recommend different collections of tags to an individual or a set of users.

Keywords: Folksonomy, Blogosphere, Tagging practices and Web Mining.

I. INTRODUCTION

FCA in Social Tagging

Semantic-Web-based approaches can support a standardized metadata schema to represent both structures and semantics of tagging data. The Semantic Web, enables the Web to understand the requests of people and machines to use the Web content semantically. It aims to provide a common framework that allows data to be shared and reused across application, enterprise, and community.

Formal Context

FCA is a mathematical theory used for conceptual data analysis and unsupervised machine learning. FCA models the world of data through the use of objects and attributes. The relations between objects and attributes in a data set form the formal context. This is represented by the triple (G,M, I), where G is a set of objects, M refers to a set of attributes, and I $\subseteq$ G $\times$M specifies the binary relation between G and M. If an object g $\in$ G has an attribute m $\in$ M, the relation is represented by (g,m) $\in$ I or gIm. A formal context G is often described by a 2-D matrix. Example: illustrates the " formal context" of a number of people and the hobbies that they have.

Table 1 Example of Formal Context

	Book	Movie	Travel	Photo
Adam	X		X	
Bill	X			
John		X		
Bob		X	X	X
William		X	X	X

II. PROBLEM DEFINITION

Tagging has become a popular method for annotating and organizing online resources, and it is also a widely used function in social software . Social tagging or folksonomies as new ways of information categorization and indexing have received a great deal of attention from the Semantic Web and Web 2.0 communities. Most people agree that a tag is not simply a keyword anymore but that there is semantic information around a "tag" . When individual tags are shared among different users and used with other tags, they evolve into "social" tags. folksonomies (which embed social relationships) have shared meaning and understanding, reflecting a conscious perception of individual users. Since any act of classification affects the definition of the entire tag, people who use a common set of tags in a certain community can be viewed as a potential interest group given their tagging practices.

III. SYSTEM ANALYSIS

EXISTING WORK:

An all social network sites are common to everyone, all kind of user can involve together and share their things. The most common drawback in social networks is that it does not separate activities based on user interest.

Limitation of Existing System:

- This network share all the activities to everyone, it cannot work for individuals user interest.
- The user cannot view the necessary actions
- From all the information's the user has to view the necessary information, it is very difficult
- Sometimes the user will miss to see the wanted information from all the activities.

PROPOSED SYSTEM

This network works based on user interest, for example music lovers will join only music page and they will not involve others activities thus the same rule for everyone.

VI. FEASIBILITY STUDY

The feasibility of the project is analyzed in this phase and business proposal is put forth with a very general plan for the project and some cost estimates. During system analysis the feasibility study of the proposed system is to be carried out. This is to ensure that the proposed system is not a burden to the company. For feasibility analysis, some understanding of the major requirements for the system is essential.

Three key considerations involved in the feasibility analysis are

- Economical Feasibility
- Technical Feasibility
- Social Feasibility

Economical Feasibility

This study is carried out to check the economic impact that the system will have on the organization. The amount of fund that the company can pour into the research and development of the system is limited. The expenditures must be justified. Thus the developed system as well within the budget and this was achieved because most of the technologies used are freely available. Only the customized products had to be purchased.

Technical Feasibility

This study is carried out to check the technical feasibility, that is, the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. This will lead to high demands on the available technical resources. This will lead to high demands being placed on the client. The developed system must have a modest requirement, as only minimal or null changes are required for implementing this system.

Social Feasibility

The aspect of study is to check the level of acceptance of the system by the user. This includes the process of training the user to use the system efficiently. The user must not feel threatened by the system, instead must accept it as a necessity. The level of acceptance by the users solely depends on the methods that are employed to educate the user about the system and to make him familiar with it. His level of confidence must be raised so that he is also able to make some constructive criticism, which is welcomed, as he is the final user of the system.

V. MODULE DESCRIPTION

The MRU tagging practices will divided into 5 Phase

1. Application Phase
2. Personomy Phase (based on user interest)
3. Folksonomy Phase
4. Generalized Folksonomy Phase
5. Search Phase

Application Phase

In this Phase, user will register their details with interest and based on the registered the value user will log in on with user's interest. In the way login, user will access the page which he mentioned while register.

Personomy Phase (based on user interest)

An individual tagging event is represented in tag: Tagging with some properties (i.e., tag:associatedTag, tag:taggedBy, tag:taggedOn, and tag:taggedResource) in ontology. ontology deals with questions concerning what entities exist or can be said to exist, and how such entities can be grouped, related within a hierarchy, and subdivided according to similarities and differences.

SCOT(Social Semantic Cloud Of Tags) introduces some approaches defining collective and aggregated properties of tagging activities. Thus, all tagging events for a user are collectively linked to an instance of the Tag Cloud class. Multiple tags in tagging events are aggregated to one unique scot: Tag if the names of the tags coincide.

Folksonomy Phase

Folksonomy is a method of collaboratively creating and managing tags to annotate and categorize content.A Tag Cloud class in SCOT(Social Semantic Cloud Of Tags) aggregates all tagging instances with their relevant information. At this level, tagging entities are represented with their collective features underlying their relationships. SCOT introduces the scot: composed Of property to link multiple Tag Clouds. With this property, Cloud lands and personomies can be interlinked. The tagging information of both users can be stored within one tag cloud (i.e., folksonomy) and simultaneously interlinked between them.

This approach shows how a user-centric folksonomy for representing the interests of small groups or communities can be created in SCOT. And this will happen across, the entities involved in the tagging activities are explicitly linked to each other, and the structure of the tagging data is consistent for sharing and reuse. The merged folksonomy from both Cloudlands and personal tag clouds (i.e., personomies).

This approach shows how a user centric folksonomy to represent the interests of small groups or communities can be created by combining RDF vocabularies. Although our example is limited to Weblogs, it is also possible to extend this approach across sites or applications. For instance, different users have tagging data on sites. Our method can be adopted to create their Customized folksonomy. In addition, the SCOT ontology can be utilized by SPARQL, the query language for Semantic Web data. This ontology does not support the significance measure, which we proposed, directly. However, using Semantic Web technologies such as SPARQL queries, we can get minimal information to compute. SPARQL stands for SPARQL Protocol and RDF Query Language.SPARQL allows for a query to consist of triple patterns, conjunctions, disjunctions, and optional patterns. It was made a standard by the RDF Data Access Working Group (DAWG) of the World Wide Web Consortium, and considered as one of the key technologies of semantic web.

Generalized folksonomy Phase

All collected folksonomy can put together in one rdf ontology file, and which is going to post in IIS Server.

Search Phase

This is the final phase of the project; user will get his desire item based on the input key word search. And also note that search will be happen globally as well locally.

VI. CONCLUSION AND FUTURE ENHANCEMENT

Mining clusters through tagging data has become quite popular. However, the majority of social sites providing tagging functionalities do not allow the reuse of user-generated data across other sites or applications. Under these circumstances, it is not easy to aggregate user interests from multiple sources. In this project, Our approach can be used to suggest new social relationships within a small-size group based on the users' interests by analyzing the tagging practices of individual users. We acknowledge that it is not straightforward to build a general-level folksonomy for the given data.

In order to construct a more generic community for a given data set, and to consider ways of linking or integrating among concepts. In the future, this project is enhanced to carry out the building of large community-level folksonomies by adopting the approaches presented in it. In addition, it intend to improve the significance measure of a concept by taking into account co-occurrence relationships between individual tags. This might result in further refined tagging clusters which can consequently be employed to build interest-centric folksonomies.

REFERENCES

1] Hak-Lae Kim, John G. Breslin, Stefan Decker, and Hong-Gee Kim, " Mining and Representing User Interests: The Case of Tagging Practices " IEEE TRANSACTIONS ON SYSTEMS, MAN, AND CYBERNETICS, VOL. 41, NO. 4, JULY 2011

[2] L. Backstrom, D. Huttenlocher, J. Kleinberg, and X. Lan, "Group formation in large social networks: Membership, growth, and evolution," in Proc. 12th ACM SIGKDD Int. Conf. Knowl. Discov. Data Mining, 2006, pp. 44–54.

[3] S. Bechhofer, F. van Harmelen, J. Hendler, I. Horrocks, D. L.McGuinness, P. F. Patel-Schneider, and L. A. Stein, OWL Web OntologyLanguage Reference, Technical report, World Wide Web Consortium,2004. (accessed Dec. 22, 2010). [Online]. Available: http://www.w3.org/ TR/owl-ref/

[4] T. Berners-Lee, Semantic Web Roadmap. World Wide Web: Design Issues, 1998. (accessed Dec. 22, 2010). [Online]. Available: http://www.w3.org/DesignIssues/Semantic.html

[5] T. Berners-Lee, Linked data. World Wide Web: Design Issues, Jul. 2006.(accessed Dec. 22, 2010). [Online]. Available: http://www.w3.org/DesignIssues/LinkedData.html

[6] H.-L. Kim, S. Decker, and J. G. Breslin, "Representing and sharing folksonomies with semantics," J. Inf. Sci., vol. 36, no. 1, pp. 57–72, Feb. 2010.

[7] H.-L. Kim, S. Decker, and J. G. Breslin, "Social Semantic Cloud of Tags:Semantic model for folksonomies," Knowl. Manage. Res. Pract., vol. 8,no. 3, pp. 193–202, Sep. 2010.

