Structured Learning from Heterogeneous Behavior for Social Identity Linkage

Social identity linkage across different social media platforms is of critical importance to business intelligence by gaining from social data a deeper understanding and more accurate profiling of users. In this paper, we propose a solution framework, HYDRA, which consists of three key steps: (I) we model heterogeneous behavior by long-term topical distribution analysis and multi-resolution temporal behavior matching against high noise and information missing, and the behavior similarity are described by multi-dimensional similarity vector for each user pair; (II) we build structure consistency models to maximize the structure and behavior consistency on users' core social structure across different platforms, thus the task of identity linkage can be performed on groups of users, which is beyond the individual level linkage in previous study; and (III) we propose a normalized-margin-based linkage function formulation, and learn the linkage function by multi-objective optimization where both supervised pair-wise linkage function learning and structure consistency maximization are conducted towards a unified Pareto optimal solution. The model is able to deal with drastic information missing, and avoid the curse-of-dimensionality in handling high dimensional sparse representation. Extensive experiments on 10 million users across seven popular social networks platforms demonstrate that HYDRA correctly identifies real user linkage across different platforms from massive noisy user behavior data records, and outperforms existing state-of-the-art approaches by at least 20% under different settings, and 4 times better in most settings.

EXISTING SYSTEM

The ability of assuming multiple identities has long been a dream for many people. Yet it is not until the late advent of online social networks that this ambition of millions has been made possible in cyber virtual world. In fact, the recent proliferation of social network services of all kinds has revolutionized our social life by providing everyone with the ease and fun of sharing various information is single way to identity linkeage.one user can hava multiple social network account.but all the accounts diffent login page form google site.

PROPOSED SYSTEM

While social platforms come and go, the underlying real persons remain, and simply migrate to newer ones. User identity linkage makes it possible to integrate useful user information. we propose a normalized-margin-based linkage function formulation, and learn the linkage function by multi-objective optimization where both supervised pair-wise linkage function learning and structure consistency maximization are conducted towards a unified we refer to as heterogeneous behavior model. The platform-dependent and heterogeneous behavior would lead to extremely low-quality information matching. First, the whole temporal range of user behavior data is divided into a set of time intervals with predefined values is content oriented and basic data oriented social structure information using link user to using the heterogeneous behavior modeling.

FEATURES:

1.The whole temporal range of user behavior data is divided into a set of time intervals with predefined values

2.Then, all the distribution vectors within different time intervals are weighted and concatenated into one topic distribution vector.

3. After that, the corresponding similarity of the topic distributions in each time interval and the whole range can be constructed.

4.At last, the overall similarity between user i and i0 is calculated as the similarities of all the time intervals, where a local matching is endowed with a larger weight than a global matching.

IMPLEMENTATION

Implementation is the stage of the project when the theoretical design is turned out into a working system. Thus it can be considered to be the most critical stage in achieving a successful new system and in giving the user, confidence that the new system will work and be effective.

The implementation stage involves careful planning, investigation of the existing system and it's constraints on implementation, designing of methods to achieve changeover and evaluation of changeover methods.

Modules:

Number of Modules

After careful analysis the system has been identified to have the following modules:

- **Basic information linkage.**
- **Content Oriented Linkage.**
- **Social structure linkeage.**
  1.**update**
  2.**user graph view**
  3.**admin graph view**

1. Basic information linkage.

we model heterogeneous behavior by long-term topical distribution analysis and multi-resolution temporal behavior matching against high noise and information missing, and the behavior similarity are described by multi-dimensional similarity vector for each user pair;

2. Content oriented linkage.

we build structure consistency models to maximize the structure and behavior consistency on users' core social structure across different platforms, thus the task of identity linkage can be performed on groups of users, which is beyond the individual level linkage in previous study;

we propose a normalized-margin-based linkage function formulation, and learn the linkage function by multi-objective optimization where both supervised pair-wise linkage function learning and structure consistency maximization are conducted towards a unified Pareto optimal solution. The model is able to deal with drastic information missing, and avoid the curse-of-dimensionality in handling high dimensional sparse representation.

3. Social structure linkage

The social structure linkage to link the overall structure for people using the social networks .structure consistency maximization by modeling the core social networks behavior consistency. They are complementary to each other by jointly measuring the behavior similarity of both individual and group levels.There are multiple social network avaliable for this paper. social networks identifying the user(profile and content and overall structure) data with Structure.

SOFTWARE REQUIREMENTS:

Operating System   : Windows

Technology   : Java and J2EE

Web Technologies   : Html, JavaScript, CSS

IDE   : Macromedia Dreamweaver MX

Web Server   : Tomcat

Database   : My SQL

Java Version   : J2SDK1.5

HARDWARE REQUIREMENTS:

Hardware   :   Pentium

Speed   :   1.1 GHz

RAM   :   2GB

Hard Disk   :   20 GB

Floppy Drive   :   1.44 MB

Key Board   :   Standard Windows Keyboard

Mouse   :   Two or Three Button Mouse

Monitor   :   SVGA