LIKE and Recommendation in Social Media

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ABSTRACT
This tutorial covers the state-of-the-art developments in LIKE and recommendation in social media. It is designed for graduate students, practitioners, or IT managers with general understanding on WWW and social media. No prerequisite is expected.

1. TOPICS AND DESCRIPTION

The recent dramatic increase in the usage and prevalence of social media has led to the creation and sharing of a significant amount of information in various formats such as texts, photos, or videos. When it comes to information consumption, people not only access and appreciate published contents, but also interact with them by adding comments or pressing Like buttons (or expressing other relationships similar to Like in nature such as "+1" in Google+, "re-pin" in Pinterest, and "favorite" in Flickr).

With such massive social media data with rich LIKE-like relationships therein, *recommendation* techniques has been proven to be effective in mitigating the information overload problem. They have demonstrated their strength in improving the quality of user experience, and positively impacted the success of social media. New types of data introduced by social media not only provide more information to advance traditional recommender systems but also manifest new research possibilities for recommendation.

With the explosive increase of massive amount of user generated contents and relationships thereof found in WWW and social media, the topic covered in this tutorial is timely and important. As such, the summarized coverage of the topic in general and elaborated presentation on the selected techniques in particular would be a useful tutorial to WWW conference and participating audience. In this tutorial, therefore, we aim to provide a comprehensive overview of:

- Various examples of LIKE in social media, the analysis and modeling of LIKE activities, and techniques to predict the creation and deletion of LIKE relationship in social media, and

- Various recommendation tasks in social media, especially their recent advances and new frontiers, and the emerging challenges and opportunities.

In particular, this tutorial consists of four parts: (1) *Prelude* - we introduce real-world examples and show how to bridge LIKE and Recommendation in Social Media; (2) *LIKE in Social Media* - LIKE Analysis, Modeling, Prediction, and Summary; (3) *Recommendation in Social Media* - Friend, Content, and Location Recommendation, and summary; and (4) *Postlude* - Conclusions with Future Directions.

The reference section below lists some exemplary work related to the topics covered in the tutorial.

2. AVAILABILITY

The final version of this tutorial will be publicly available at the following URL:

`http://goo.gl/OsgOjc`

3. ABOUT THE PRESENTERS

Dongwon Lee is an associate professor of College of Information Sciences and Technology at the Pennsylvania State University, USA. He is currently also serving as a rotating program director at National Science Foundation (NSF). He obtained his Ph.D. in Computer Science from UCLA in 2002. Since joining Penn State, working mostly on the issues arising in the management and mining of data, he has (co-)authored over 130+ scholarly articles in selective publication outlets in Databases and Data Mining fields. In recent years, in addition, he has given numerous tutorials at conferences such as ICDE 2015, CIKM 2014, SBBD 2014, and DASFAA 2014. Further information can be found at his homepage: http://pike.psu.edu/dongwon/

Huan Liu is a professor of Computer Science and Engineering at Arizona State University. He obtained his Ph.D. in Computer Science at University of Southern California and B.Eng. in Computer Science and Electrical Engineering at Shanghai Jiao Tong University. Before he joined ASU, he worked at Telecom Australia Research Labs and was on the faculty at National University of Singapore. He was recognized for excellence in teaching and research in Computer Science and Engineering at Arizona State University. His research interests are in data mining, machine learning, social computing, and artificial intelligence, investigating problems that arise in many real-world, data-intensive applications with high-dimensional data of disparate forms

such as social media. His well-cited publications include books, book chapters, encyclopedia entries as well as conference and journal papers. He serves on journal editorial boards and numerous conference program committees, and is a founding organizer of the International Conference Series on Social Computing, Behavioral-Cultural Modeling, and Prediction (http://sbp.asu.edu/). He is an IEEE Fellow. Further information can be found at his homepage: http://www.public.asu.edu/~huanliu/

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