Deep Modeling of Social Relations for Recommendation

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**Time**  2:00 pm - 2:30 pm  
**Venue**  CS Seminar Room, Y6405  
6th Floor, Yellow Zone  
Yeung Kin Man Academic Building  
City University of Hong Kong  
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**Abstract**

Social-based recommender systems have been recently proposed by incorporating social relations of users to alleviate sparsity issue of user-to-item rating data and to improve recommendation performance. Many of these social-based recommender systems linearly combine the multiplication of social features between users. However, these methods lack the ability to capture complex and intrinsic non-linear features from social relations. In this paper, we present a deep neural network based model to learn non-linear features of each user from social relations, and to integrate into probabilistic matrix factorization for rating prediction problem. Experiments demonstrate the advantages of the proposed method over state-of-the-art social-based recommender systems.

This paper has been presented in the Thirty-Second AAAI Conference on Artificial Intelligence (SA-18), February 2-7, 2018, New Orleans, Louisiana, USA.

Supervisor: Prof LI Qing  
Research Interest: Recommender Systems

All are welcome!

In case of questions, please contact Prof LI Qing at Tel: 3442 9695, E-mail: itq@cityu.edu.hk, or visit the CS Departmental Seminar Web at [http://www.cs.cityu.edu.hk/news/seminars/seminars.html](http://www.cs.cityu.edu.hk/news/seminars/seminars.html).