Xiao LIU

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Education Background

Shanghai Jiao Tong University *Sept. 2014-Jun. 2018(Expected)*
Bachelor of Science in Computer Science (English-Teaching Honor Class)
GPA: 87.5/100(Major), 85.5/100(Overall)
Relevant Coursework: Probability and Statistics, Artificial Intelligence, Algorithms, Statistical Pattern Recognition, Machine Learning in Data Analysis.

Publication

Mingding Liao, **Xiao Liu**, Xiaofeng Gao, Jiaofei Zhong, and Guihai Chen, iSim: An Efficient Integrated Similarity based Collaborative Filtering Approach for Trust Prediction in Service-Oriented Social Networks, The 14th International Conference on Service Oriented Computing (ICSOC), Banff, Alberta, Canada, October 10-13, 2016.

Research Experience

Shanghai Jiao Tong University, Advanced Network Laboratory

Undergraduate Researcher, Prof. Xiaofeng Gao's Lab

Project: Analysis and Prediction of Information Diffusion in Social Networks *Jun. 2016-present*

- Established a model to evaluate the state-of-the-art methods for predicting topic popularity, based on their accuracy, practicality, efficiency.
- As a third-party evaluation system, quantitatively found that machine learning achieved the highest accuracy, (what kind of) modeling achieved the highest efficiency etc.
- Working on adjusting the system to fit more models and finding out a new algorithm/model to evaluate the prediction value of topic popularity both efficiently and accurately.

Shanghai Jiao Tong University, Advanced Network Laboratory

Undergraduate researcher, Prof. Xiaofeng Gao's Lab

Project: An Efficient Integrated Similarity Based Collaborative Filtering Approach for Trust Prediction in Service-Oriented Social Networks *Dec. 2015-May 2016*

- Integrated vector space similarity, matrix factorization, and propagated trust to study the similarity of users, in which matrix factorization and propagated trust are first leveraged in the study of similarity.
- Introduced inverted index to reduce the time complexity of our approach and computed the theoretical time bound precisely at the same time.
- Compared our approach with two state-of-the-art trust inference approaches: PROP(TrustCom-2013) and SCMF(AAAI-2014) by extensive experiments on real-world dataset, showing that our approach yielded higher accuracy (11.9%-30.5% improvement) and faster speed (only 6.8% and 3.5% execution time of SCMF and PROP).

Notable Project

Interactive Course Website *Aug. 2016-Oct. 2016*

- Built a course website, where downloading lecture notes, voting on group presentation and uploading homework are supported for students, and publishing assignments, downloading homework, uploading grades are supported for teaching assistants in a 5-member team.
- Implemented downloading and uploading part with Node.js.
- Used MongoDB to store basic information, homework and lecture notes for students.
- Contributed to user interface design.

Honors and Awards

2016 China Undergraduate Mathematical Contest in Modelling, First prize in Shanghai

Skills

Programming: C/C++, Java, HTML, Node.js, Python, Matlab, LATEX
Platforms: Windows, Linux, Android, Embedded System
Language: English, Chinese (native)