

Wei Xie

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RESEARCH PROJECTS

Real-time Bursty Topic Detection from Twitter

Despite the wealth of research work on topic modelling and analysis in Twitter, it remains a huge challenge to detect bursty topics in real-time. As existing methods can hardly scale to handle the task with the tweet stream in real-time, we propose TopicSketch, a novel sketch-based topic model together with a set of techniques to achieve real-time detection. It is demonstrated that TopicSketch can potentially handle hundreds of millions tweets per day which is close to the total number of daily tweets in Twitter and present bursty event in finer-granularity. **Demo** available here.

Discovering Offline Social Network from Online Social Network

In this project, we study the problem of identifying a user's off-line real-life social community, purely from examining Twitter network structure. Based on observations from our user-verified Twitter data and results from previous works, we propose three principles about Twitter off-line communities. Incorporating these principles, we develop a novel algorithm to iteratively discover the Twitter off-line community based on a new way of measuring user closeness. **Demo** available here.

EDUCATION

Anticipated Graduation Date May, 2017

2012 – NOW

Singapore Management University

Ph.D. Candidate

Advisor: Feida Zhu, Faculty advisor: Ee-Peng Lim

Research area: Social Network Mining, Data Stream Mining, Text Mining

Ave. GPA: 3.96/4.0

2014-2015

Carnegie Mellon University

Visiting Student

Advisor: Alexander J. Smola

Research area: Machine Learning on Data Stream

2009 – 2012

East China Normal University

Master of Computer Science

2003 – 2007

Wuhan University

Bachelor of Mathematics

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SKILLS

Programming Java, Python, Matlab, C/C++, MySQL, Hadoop.

Language Mandarin (native), English (fluent).

PUBLICATIONS

TKDE'16

Wei Xie, Feida Zhu, Jing Jiang, Ee-Peng Lim, and Ke Wang. **TopicSketch: Real-time Bursty Topic Detection from Twitter**. IEEE Transactions on Knowledge and Data Engineering, Volume:28, Issue 8, Aug 2016.

BigData'15

Wei Xie, Feida Zhu, Siyuan Liu and Ke Wang. **Modelling Cascades Over Time in Microblogs**. 2015 IEEE International Conference on Big Data, Santa Clara, CA, 2015.

VLDB'14

Runquan Xie, Feida Zhu, Hui Ma, **Wei Xie**, Chen Lin. **CLEAr: A Real-time Online Observatory for Bursty and Viral Events**. Proceedings of the 40th International Conference on Very Large Databases.

ICDM'13

Wei Xie, Feida Zhu, Jing Jiang, Ee-Peng Lim, and Ke Wang. **TopicSketch: Real-time Bursty Topic Detection from Twitter**. Proceedings of the 13th IEEE International Conference on Data Mining.

SocInfo'13

Wei Xie, Ai Phuong Hoang, Feida Zhu and Ee-Peng Lim. **Information vs Interaction: An Alternative User Ranking Model for Social Networks**. Proceedings of the 5th International Conference on Social Informatics.

DASFAA'13

Juan Du, **Wei Xie**, Cheng Li, Feida Zhu and Ee-Peng Lim. **TwiCube: A Real-time Twitter Online Community Analysis Tool**. The 18th International Conference on DASFAA.

WebSci'12

Wei Xie, Cheng Li, Feida Zhu, Ee-Peng Lim and Xueqing Gong. **When a friend in Twitter is a friend in life**. ACM Web Science.