

magnitude (e.g., number of interactions) in addition to topic distribution in determining social dependency between users.

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References

- [1] Association for Computing Machinery. 2011. ACM Digital Library.
- [2] Frank M. Bass. A new product growth for model consumer durables. *Manage. Sci.*, 50:1825–1832, December 2004.
- [3] Chumki Basu, Haym Hirsh, and William Cohen. Recommendation as classification: using social and content-based information in recommendation. *AAAI '98/IAAI '98*, pages 714–720, 1998.
- [4] David M. Blei and John D. Lafferty. Dynamic topic models. In *Proceedings of the 23rd international conference on Machine learning, ICML '06*, pages 113–120, 2006.
- [5] David M. Blei, Andrew Y. Ng, and Michael I. Jordan. Latent dirichlet allocation. *J. Mach. Learn. Res.*, 3:993–1022, March 2003.
- [6] Alexander Brodsky, Csilla Farkas, and Sushil Jajodia. Secure databases: Constraints, inference channels, and monitoring disclosures. *IEEE Trans. Knowl. Data Eng.*, 12(6):900–919, 2000.
- [7] Kevin R. Canini, Lei Shi, and Thomas L. Griffiths. Online Inference of Topics with Latent Dirichlet Allocation. In *Proceedings of AI Stats*, 2009.
- [8] Dan Cosley, Daniel P. Huttenlocher, Jon M. Kleinberg, Xiangyang Lan, and Siddharth Suri. Sequential influence models in social networks. In *International Conference on Weblogs and Social Media*, 2010.
- [9] David Crandall, Dan Cosley, Daniel Huttenlocher, Jon Kleinberg, and Siddharth Suri. Feedback effects between similarity and social influence in online communities. *KDD '08*, pages 160–168, 2008.
- [10] Laura Dietz, Steffen Bickel, and Tobias Scheffer. Unsupervised prediction of citation influences. *ICML '07*, pages 233–240, 2007.
- [11] Amit Goyal, Francesco Bonchi, and Laks V.S. Lakshmanan. Learning influence probabilities in social networks. *WSDM '10*, pages 241–250, 2010.
- [12] M. G. Kendall. A new measure of rank correlation. *Biometrika*, 30(1/2):pp. 81–93, 1938.
- [13] Timothy La Fond and Jennifer Neville. Randomization tests for distinguishing social influence and homophily effects. In *WWW*, pages 601–610, 2010.
- [14] Jure Leskovec, Kevin J. Lang, Anirban Dasgupta, and Michael W. Mahoney. Statistical properties of community structure in large social and information networks. *WWW '08*, pages 695–704, 2008.
- [15] Michael Ley. *DBLP Computer Science Bibliography*, 2005.
- [16] Jianhua Lin. Divergence measures based on the Shannon entropy. *IEEE Transactions on Information Theory*, 37(1):145–151, 1991.
- [17] Lu Liu, Jie Tang, Jiawei Han, Meng Jiang, and Shiqiang Yang. Mining topic-level influence in heterogeneous networks. In *CIKM*, 2010.
- [18] Hao Ma, Haixuan Yang, Michael R. Lyu, and Irwin King. Sorec: social recommendation using probabilistic matrix factorization. *CIKM '08*, pages 931–940, 2008.
- [19] Miller McPherson, Lynn Smith-Lovin, and James M. Cook. Birds of a feather: Homophily in social networks. *Annual Review of Sociology*, 27:415–444, 2008.
- [20] R. Nallapati and W. Cohen. Link-PLSA-LDA: A new unsupervised model for topics and influence of blogs. In *Proceedings of ICWSM*, 2008.
- [21] Jennifer Neville and David Jensen. Relational dependency networks. *J. Mach. Learn. Res.*, 8:653–692, 2007.
- [22] M. E. J. Newman and M. Girvan. Finding and evaluating community structure in networks. *Phys. Rev. E*, 69(2):026113, Feb 2004.
- [23] Huiming Qu, Jimeng Sun, and Hani T. Jamjoom. Scoop: Automated social recommendation in enterprise process management. In *ICSC*, 2008.
- [24] Michal Rosen-Zvi, Thomas Griffiths, Mark Steyvers, and Padhraic Smyth. The author-topic model for authors and documents. *UAI '04*, pages 487–494, 2004.
- [25] Upendra Shardanand and Pattie Maes. Social information filtering: algorithms for automating “word of mouth”. *CHI '95*, pages 210–217, 1995.
- [26] Parag Singla and Matthew Richardson. Yes, there is a correlation: - from social networks to personal behavior on the web. In *WWW*, pages 655–664, 2008.
- [27] Jie Tang, Jimeng Sun, Chi Wang, and Zi Yang. Social influence analysis in large-scale networks. *KDD '09*, pages 807–816, 2009.
- [28] Ken Wakita and Toshiyuki Tsurumi. Finding community structure in mega-scale social networks. *WWW '07*, pages 1275–1276, 2007.
- [29] Lingyu Wang, Duminda Wijesekera, and Sushil Jajodia. Towards secure xml federations. In *DBSec*, 2002.
- [30] Duminda Wijesekera and Sushil Jajodia. Policy algebras for access control: the propositional case. *CCS*, 2001.
- [31] Duminda Wijesekera and Sushil Jajodia. Policy algebras for access control the predicate case. *CCS*, 2002.
- [32] Xin Xin, Irwin King, Hongbo Deng, and Michael R. Lyu. A social recommendation framework based on multi-scale continuous conditional random fields. *CIKM '09*, pages 1247–1256, 2009.
- [33] J. Yang and J. Leskovec. Modeling information diffusion in implicit networks. In *ICDM*, 2010.