1. Find Similar Items (Hashing)

- (1) Shrivastava A, Li P. Asymmetric LSH (ALSH) for sublinear time maximum inner product search (MIPS)[C]//Advances in Neural Information Processing Systems. 2014: 2321-2329.
- (2) Jiang Q Y, Li W J. Scalable graph hashing with feature transformation[C]//Proceedings of the International Joint Conference on Artificial Intelligence. 2015.
- (3) Liu X, Huang L, Deng C, et al. Multi-View Complementary Hash Tables for Nearest Neighbor Search[C]//Proceedings of the IEEE International Conference on Computer Vision. 2015: 1107-1115.

2. Network Embedding

- (1) Wu F, Song J, Yang Y, et al. Structured Embedding via Pairwise Relations and Long-Range Interactions in Knowledge Base[C]//Twenty-Ninth AAAI Conference on Artificial Intelligence. 2015.
- (2) Perozzi B, Al-Rfou R, Skiena S. Deepwalk: Online learning of social representations[C]//Proceedings of the 20th ACM SIGKDD international conference on Knowledge discovery and data mining. ACM, 2014: 701-710.
- (3) Tang J, Qu M, Wang M, et al. Line: Large-scale information network embedding[C]//Proceedings of the 24th International Conference on World Wide Web. International World Wide Web Conferences Steering Committee, 2015: 1067-1077.
- (4) Wang D, Cui P, Zhu W. Structural Deep Network Embedding [C]. //Proceedings of the 22th ACM SIGKDD international conference on Knowledge discovery and data mining. ACM 2016

3. Multimodal analysis

- (1) Karpathy A, Fei-Fei L. Deep visual-semantic alignments for generating image descriptions[C]//Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition. 2015: 3128-3137.
- (2) Socher R, Ganjoo M, Manning C D, et al. Zero-shot learning through cross-modal transfer[C]//Advances in neural information processing systems. 2013: 935-943.

4. Recommendation A

- (1) Tang J, Aggarwal C, Liu H. Recommendations in signed social networks[C]//Proceedings of the 25th International Conference on World Wide Web. International World Wide Web Conferences Steering Committee, 2016: 31-40.
- (2) Elkahky A M, Song Y, He X. A multi-view deep learning approach for cross domain user modeling in recommendation systems[C]//Proceedings of the 24th International Conference on World Wide Web. International World Wide Web Conferences Steering Committee, 2015: 278-288

5. Recommendation B

- (1) Sar Shalom, Oren, et al. "Beyond Collaborative Filtering: The List Recommendation Problem." Proceedings of the 25th International Conference on World Wide Web. International World Wide Web Conferences Steering Committee, 2016.
- (2) Lee, Dokyun, and Kartik Hosanagar. "When do Recommender Systems Work the Best? The Moderating Effects of Product Attributes and Consumer Reviews on Recommender Performance."

6. Word Embedding

- (1) Mikolov T, Chen K, Corrado G, et al. Efficient estimation of word representations in vector space[J]. arXiv preprint arXiv:1301.3781, 2013.
- (2) Mikolov T, Sutskever I, Chen K, et al. Distributed representations of words and phrases and their compositionality[C]//Advances in neural information processing systems. 2013: 3111-3119.

7. Deep Learning

- (1) Rezende D J, Mohamed S, Danihelka I, et al. One-Shot Generalization in Deep Generative Models[J]. arXiv preprint arXiv:1603.05106, 2016.
- (2) Kingma D P, Mohamed S, Rezende D J, et al. Semi-supervised learning with deep generative models[C]//Advances in Neural Information Processing Systems. 2014: 3581- 3589.
- (3) Song Y, Schwing A G, Zemel R S, et al. Direct Loss Minimization for Training Deep Neural Nets[J]. arXiv preprint arXiv:1511.06411, 2015. (ICML 2016)

8. Classification

- (1) Salakhutdinov R, Tenenbaum J, Torralba A. One-shot learning with a hierarchical nonparametric bayesian model[J]. 2010.
- (2) Salakhutdinov R, Tenenbaum J B, Torralba A. Learning with hierarchical-deep models[J]. Pattern Analysis and Machine Intelligence, IEEE Transactions on, 2013, 35(8): 1958-1971.
- (3) Rezende D J, Mohamed S, Danihelka I, et al. One-Shot Generalization in Deep Generative Models[J]. arXiv preprint arXiv:1603.05106, 2016.

9. Transfer Learning

- (1) Lei Ba J, Swersky K, Fidler S. Predicting deep zero-shot convolutional neural networks using textual descriptions[C]//Proceedings of the IEEE International Conference on Computer Vision. 2015: 4247-4255.
- (2) Azizpour H, Razavian A, Sullivan J, et al. From generic to specific deep representations for visual recognition[C]//Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops. 2015: 36-45.
- (3) Tzeng E, Hoffman J, Darrell T, et al. Simultaneous deep transfer across domains and tasks[C]//Proceedings of the IEEE International Conference on Computer Vision. 2015: 4068-4076.

10. Social Network A

- (1) Isabel Kloumann, Lada Adamic, Jon Kleinberg, Shaomei Wu. The Lifecycles of Apps in a Social Ecosystem. WWW, 2015.
- (2) Romero, Daniel M., Brian Uzzi, and Jon Kleinberg. "Social Networks Under Stress." Proceedings of the 25th International Conference on World Wide Web. International World Wide Web Conferences Steering Committee, 2016.
- (3) Yin, Ming, et al. "The Communication Network Within the Crowd."Proceedings of the 25th International Conference on World Wide Web. International World Wide Web Conferences Steering Committee, 2016.

11. Social Network B

(1) Ohsaka, Naoto, Takanori Maehara, and Ken-ichi Kawarabayashi. "Efficient PageRank Tracking

- in Evolving Networks." Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2015.
- (2) Shah, Neil, et al. "TimeCrunch: Interpretable Dynamic Graph Summarization." Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2015.
- (3) Su, Jessica, Aneesh Sharma, and Sharad Goel. "The Effect of Recommendations on Network Structure." WWW, 2016

12. Urban Computing

- (1) Hristova, Desislava, et al. "Measuring Urban Social Diversity Using Interconnected Geo-Social Networks." Proceedings of the 25th International Conference on World Wide Web. International World Wide Web Conferences Steering Committee, 2016.
- (2) De Nadai, Marco, et al. "The Death and Life of Great Italian Cities: A Mobile Phone Data Perspective." Proceedings of the 25th International Conference on World Wide Web. International World Wide Web Conferences Steering Committee, 2016.

13. Human Dynamics

- (1) Barzel, Baruch, Yang-Yu Liu, and Albert-László Barabási. "Constructing minimal models for complex system dynamics." Nature communications 6 (2015).
- (2) KC, Santosh, and Arjun Mukherjee. "On the Temporal Dynamics of Opinion Spamming: Case Studies on Yelp." Proceedings of the 25th International Conference on World Wide Web. International World Wide Web Conferences Steering Committee, 2016.
- (3) Ferraz Costa, Alceu, et al. "RSC: Mining and Modeling Temporal Activity in Social Media." Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2015.

14. Information Spreading

- (1) Cheng, Justin, et al. "Do Cascades Recur?." Proceedings of the 25th International Conference on World Wide Web. International World Wide Web Conferences Steering Committee, 2016.
- (2) Zhao, Qingyuan, et al. "SEISMIC: A Self-Exciting Point Process Model for Predicting Tweet Popularity." Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2015.
- (3) Rapti, Angeliki, et al. "Virus Propagation in Multiple Profile Networks." Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2015.

15. Miscellaneous Social Network

- (1) Zhou, Lu, Wenbo Wang, and Keke Chen. "Tweet Properly: Analyzing Deleted Tweets to Understand and Identify Regrettable Ones." Proceedings of the 25th International Conference on World Wide Web. International World Wide Web Conferences Steering Committee, 2016.
- (2) Lucier, Brendan, Joel Oren, and Yaron Singer. "Influence at Scale: Distributed Computation of Complex Contagion in Networks." Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2015.

- (3) Kumar, Srijan, Robert West, and Jure Leskovec. "Disinformation on the Web: Impact, Characteristics, and Detection of Wikipedia Hoaxes." Proceedings of the 25th International Conference on World Wide Web. International World Wide Web Conferences Steering Committee, 2016.
- (4) Rong, Yu, Hong Cheng, and Zhiyu Mo. "Why It Happened: Identifying and Modeling the Reasons of the Happening of Social Events." Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining.

 ACM, 2015.

16. Prediction

- (1) Martin, Travis, et al. "Exploring limits to prediction in complex social systems." Proceedings of the 25th International Conference on World Wide Web. International World Wide Web Conferences Steering Committee, 2016.
- (2) Li, Liangyue, and Hanghang Tong. "The child is father of the man: Foresee the success at the early stage." Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2015.
- (3) Baeza-Yates, Ricardo, et al. "Predicting the next app that you are going to use." Proceedings of the Eighth ACM International Conference on Web Search and Data Mining. ACM, 2015.

17. Complex Network

- (1) Gao, Jianxi, Baruch Barzel, and Albert-László Barabási. "Universal resilience patterns in complex networks." Nature 530.7590 (2016): 307-312.
- (2) Barabási, Albert-László. "Spectrum of controlling and observing complex networks." (2015).
- (3) Benson A R, Gleich D F, Leskovec J. Higher-order organization of complex networks[J]. Science, 2016, 353(6295): 163-166.

18. Influence Maximization

- (1) Lin, Su-Chen, Shou-De Lin, and Ming-Syan Chen. "A Learning-based Framework to Handle Multiround Multi-party Influence Maximization on Social Networks." Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2015.
- (2) Lei, Siyu, et al. "Online influence maximization." Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2015.
- (3) Chen W, Lin T, Tan Z, et al. Robust influence maximization[J]. arXiv preprint arXiv:1601.06551, 2016.
- (4) Chen W, Wang Y, Yang S. Efficient influence maximization in social networks[C]//Proceedings of the 15th ACM SIGKDD international conference on Knowledge discovery and data mining. ACM, 2009: 199-208.

19. Community Detection A

- (1) Chakraborty, Tanmoy, et al. "On the Formation of Circles in Co-authorship Networks." Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2015.
- (2) Han, Yu, and Jie Tang. "Probabilistic community and role model for social networks."

Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2015.

(3) Shao, Junming, et al. "Community Detection based on Distance Dynamics." Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2015.

20. Community Detection B

- (1) Lim, Shiau Hong, Yudong Chen, and Huan Xu. "Clustering from labels and time- varying graphs." Advances in Neural Information Processing Systems. 2014.
- (2) Kozdoba, Mark, and Shie Mannor. "Community Detection via Measure Space Embedding." Advances in Neural Information Processing Systems. 2015.
- (3) Hallac, David, Jure Leskovec, and Stephen Boyd. "Network lasso: Clustering and optimization in large graphs." Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2015.

21. Sequence Mining

- (1) Benson, Austin R., Ravi Kumar, and Andrew Tomkins. "Modeling User Consumption Sequences." Proceedings of the 25th International Conference on World Wide Web. International World Wide Web Conferences Steering Committee, 2016.
- (2) Shokoohi-Yekta, Mohammad, et al. "Discovery of Meaningful Rules in Time Series." Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2015.
- (3) Barbosa, Samuel, et al. "Averaging Gone Wrong: Using Time-Aware Analyses to Better Understand Behavior." Proceedings of the 25th International Conference on World Wide Web. International World Wide Web Conferences Steering Committee, 2016.

22. Multi-view Learning

- (1) Ni, Jingchao, et al. "Flexible and Robust Multi-Network Clustering." Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM, 2015.
- (2) Xu, Chang, Dacheng Tao, and Chao Xu. "Multi-view intact space learning." Pattern Analysis and Machine Intelligence, IEEE Transactions on 37.12 (2015): 2531-2544.
- (3) Ding, Zhengming, and Yun Fu. "Robust Multi-View Subspace Learning through Dual Low-Rank Decompositions." Thirtieth AAAI Conference on Artificial Intelligence. 2016.

23. Causal Inference A

- (1) Aral S, Muchnik L, Sundararajan A. Distinguishing influence-based contagion from homophily-driven diffusion in dynamic networks [J]. Proceedings of the National Academy of Sciences, 2009, 106(51): 21544-21549.
- (2) Sun W, Wang P, Yin D, et al. Causal Inference via Sparse Additive Models with Application to Online Advertising[C]//AAAI. 2015: 297-303.
- (3) Austin P C. An introduction to propensity score methods for reducing the effects of confounding in observational studies[J]. Multivariate behavioral research, 2011, 46(3): 399-424.

24. Causal Inference B

(1) Athey S, Imbens G. Recursive partitioning for heterogeneous causal effects[J]. Proceedings of

the National Academy of Sciences, 2016, 113(27): 7353-7360.

- (2) Hainmueller J. Entropy balancing for causal effects: A multivariate reweighting method to produce balanced samples in observational studies[J]. Political Analysis, 2011: mpr025.
- (3) Chalupka K, Perona P, Eberhardt F. Visual causal feature learning[J]. arXiv preprint arXiv:1412.2309, 2014.