Zheng Gao

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RESEARCH INTERESTS

My research interests are primarily in the area of Graph Mining and Natural Language Processing (NLP). Particularly, I am applying deep learning techniques on the interdisciplinary field therein them to solve Community Detection, Information Retrieval and Recommendation related tasks.

EDUCATION

Indiana University Bloomington, USA
Ph.D. in Information Science, Advisor: Xiaozhong Liu   08/2015 - 05/2020 (expected)
- Minor in Computer Science, Advisor: Xiaofeng Wang

University of Pittsburgh, USA
M.S. in Information Science, Advisor: Daqing He   08/2013 - 05/2015

Shanghai International Studies University, China
B.S. in Information Science   08/2009 - 05/2013

INDUSTRY EXPERIENCE

Data Scientist Intern, Alexa AI, Amazon   06/2019 - 09/2019
- Pattern analysis on user request context

Research Intern, DAMO Academy / AI Lab, Alibaba   02/2018 - 03/2019
- Product review summarization from user consecutive behavior
- Cross domain community detection via pairwise learning
- Adversarial anomaly detection on high dimensional use logs

TEACHING EXPERIENCE

Indiana University Bloomington
Instructor
- ILS-Z534: Search (Spring/Fall 2018, Spring/Fall 2019)

Associate Instructor
- ILS-Z534: Search (Fall 2015, Fall 2016, Fall 2017)
- INFO-I590: Topics in Informatics (Summer 2016, Spring/Summer 2017)

PUBLICATION

[1] **Zheng Gao**, Chun Guo, Xiaozhong Liu. Efficient Personalized Community Detection via Genetic Evolution. *The Genetic and Evolutionary Computation Conference (GECCO)*, 2019.

[2] **Zheng Gao**, Gang Fu, Chunping Ouyang, Satoshi Tsutsui, Xiaozhong Liu, Jeremy Yang, Christopher Gessner, Brian Foote, David Wild, Ying Ding, Qi Yu. edge2vec: Representation learning using edge semantics for biomedical knowledge discovery. *BMC Bioinformatics*, 2019. (impact factor = 2.511).

[3] Yongzhen Wang, Xiaozhong Liu, **Zheng Gao**. Neural Related Work Summarization with a Joint Context-driven Attention Mechanism. *Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2018.

[4] **Zheng Gao**, Lin Guo, Chi Ma, Xiao Ma, Kai Sun, Hang Xiang, Xiaoqiang Zhu, Hongsong Li, Xiaozhong Liu. AMAD: Adversarial Multiscale Anomaly Detection on High-Dimensional and Time-Evolving Categorical Data. *Deep Learning Practice for High-Dimensional Sparse Data Workshop at ACM SIGKDD Conference on Knowledge Discovery and Data Mining (DLP-KDD)*, 2019.

[5] Zizhe Gao, **Zheng Gao**, Heng Huang, Zhuoren Jiang, Yuliang Yan. An End-to-end Model of Predicting Diverse Ranking On Heterogeneous Feeds. *eCOM Workshop at ACM SIGIR Conference on Research and Development in Information Retrieval (eCom-SIGIR)*, 2018.

[6] Zhuoren Jiang, Liangcai Gao, Ke Yuan, **Zheng Gao**, Zhi Tang, Xiaozhong Liu. Mathematics Content Understanding for Cyberlearning via Formula Evolution Map. *ACM International Conference on Information and Knowledge Management (CIKM)*, 2018.

[7] Xiaozhong Liu, Xing Yu, **Zheng Gao**, Tian Xia, Johan Bollen. Comparing Community-based Information Adoption and Diffusion across Different Microblogging Sites. *ACM Conference on Hypertext and Social Media*, 2016.

[8] **Zheng Gao**, Vincent Malic, Shutian Ma, Patrick Shih. How to Make a Successful Movie: Factor Analysis from both Financial and Critical Perspectives. *International Conference on Information*, 2019.

[9] Yongzhen Wang, Yan Lin, **Zheng Gao**, Yan Chen. A Two-stage Iterative Approach to Improve Crowdsourcing-based Relevance Assessment. *Arabian Journal for Science and Engineering*, 2019.

[10] **Zheng Gao**, Xiaozhong Liu. Personalized Community Detection in Scholarly Network. *International Conference on Information*, 2017.

[11] Tian Xia, Xing Yu, **Zheng Gao**, Yijun Gu, Xiaozhong Liu. Internal/External Information Access and Information Diffusion in Social Media. *International Conference on Information*, 2017.

[12] Nan Li, Naren Suri, **Zheng Gao**, Tian Xia, Xiaozhong Liu, Katy Borner. Enter a Job, Get Course Recommendations. *International Conference on Information*, 2017.

[13] **Zheng Gao**, John Wolohan, Fast NLP-based Pattern Matching in Real Time Tweet Recommendation. *Text REtrieval Conference (TREC)*, 2017.

[14] Chenwei Zhang, **Zheng Gao**, Xiaozhong Liu. How Others Affect Your Twitter #hashtag Adoption? Examination of Community-based and Context-based Information Diffusion in Twitter. *International Conference on Information*, 2015.

[15] **Zheng Gao**, Rui Bi. University of Pittsburgh at TREC 2014 Microblog Track. *Text REtrieval Conference (TREC)*, 2014.

[16] **Zheng Gao**, Patrick C. Shih. Communities of Support: Social Support Discussion in a HIV Online Forum. *International Symposium of Chinese CHI*, 2019.

[17] Satoshi Tsutsui, **Zheng Gao**, Yuzhuo Wang, Guilin Meng, Ying Ding. A Case Study on Viziometrics: Whats the Role of Western Blots in Alzheimers Disease Literature. *International Conference on Information*, 2018.

SERVICE

Conference Reviewer
- The Web Conference (WWW 2018, 2019)
- International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2018)

Journal Reviewer
- Journal of the Association for Information Science and Technology (JASIST)
- Social Network Analysis and Mining (SNAM)

Administrative Service
- Chair of Doctoral Student Association (DSA) at Department of Information and Library Science, Indiana University Bloomington (2016 - 2018)

AWARD
- Tung-li Yuan Memorial Fellowship, Indiana University Bloomington (2015 - 2018)
- Clayton A. Shepherd Scholarship, Indiana University Bloomington (2018 - 2019)
- IUB SICE Ph.D. Travel Award (2015 - 2019)
- NetSci Student Travel Award (2017)
- IUB GPSG Travel Award (2017)

SKILLS
- Languages: Python, Java, SQL, Shell, LaTeX
- Tools: TensorFlow, Spark, Maven