# Zheng Gao

Contact INFORMATION School of Informatics, Computing, and Engineering Indiana University Bloomington

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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: Daging 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

• Pattern analysis on user request context

06/2019 - 09/2019

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 (SI-GIR 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