

Yaqing Wang

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EDUCATION

Ph.D. Sep. 2016 - present, Computer Science and Engineering, University at Buffalo, Buffalo, NY, USA

Advisor: Prof. Jing Gao

M.S. Sep. 2014 - Jun. 2016, Statistics, University of California, San Diego, CA, USA

B.S. Sep. 2009 - Jun. 2013, Mathematics, Shandong University, Jinan, Shandong, China

RESEARCH INTERESTS

I am broadly interested in data science and artificial intelligence with a focus on data mining and machine learning. In particular, I am interested in Data Integration and Information Trustworthiness Evaluation, Natural Language Processing, Deep Reinforcement Learning and Generative Models such as GAN.

RESEARCH EXPERIENCE

Research Assistant

Department of Computer Science and Engineering
The State University of New York at Buffalo

Sep. 2016 - present

Advisor: Jing Gao

Project i: *Fake News Detection on newly emerged and time-critical events*

- Proposed a novel fake news detection framework for *new and time-critical events*, which can identify fake news based on multi-modal features and learn transferable features among events via *adversarial learning*.
- Evaluated the framework on two large-scale real social media datasets.
- One paper accepted by KDD'18.

Project ii: *Explainable Models in Health Domain*

- Proposed the transformation framework to map hidden word embedding vectors to a new space where they are interpretable and their original expressive features are retained.
- Experiments conducted on the largest available biomedical corpus MEDLINE suggest that the model has reasonable interpretability that resembles closely to the human-level intuition.
- One Paper accepted by ICDM'18.

Project iii: *Distributed Truth Discovery*

- Proposed a novel *distributed* truth discovery framework, which can infer true information from noisy and conflicting distributed data by incorporating learned *uncertainty* values of objects.
- Empirically show that the proposed framework can efficiently estimate object truths in the distributed environments.
- One Paper accepted by ICDM'17.

COURSE TAKEN

Computer Science

- Probabilistic Reasoning&Learning, Machine Learning, Data Mining, Database, Deep Learning and Reinforcement Learning, Advanced Topics in Scalable Bayesian Methods, Parallel Computing, Distributed System

Statistics&Mathematics

- Applied Statistics, Statistical Learning, Mathematical Statistics, Probability Theory, Numerical Optimization, Numerical Computing Method, Operational Research

PUBLICATIONS

Preprints & Submissions

- 1 **Yaqing Wang**, Weifeng Yang, Fenglong Ma, Jin Xu, Bin Zhong, Qiang Deng, Jing Gao. *Weak Supervision for Fake News Detection via Reinforcement Learning*. Under Review.
- 2 Hanbo Li*, **Yaqing Wang***, Changyou Chen, Jing Gao. *AIM: Adversarial Inference by Matching Priors and Conditionals*. Proceedings of the Thirty-sixth International Conference on Machine Learning (ICML 2019), Jun 10-15th, Long Beach, California. Under Review. (* Equal Contribution)
- 3 Fenglong Ma*, **Yaqing Wang***, Jing Gao, Ye Yuan, Houping Xiao, Jing Zhou, Yaliang Li and Lu Su. *Fake is the New Real: Predicting Rare Diseases with Deep Generative Networks and Reinforcement Learning*. Under Review. (* Equal Contribution)

Journals

Guangxu Xun, Kishlay Jha, Ye Yuan, **Yaqing Wang** and Aidong Zhang. *MeSHProbeNet: A Self-attentive Probe Net for MeSH Indexing*. Bioinformatics, Oxford University Press, 2019

Conferences

- BIBM18a Fenglong Ma, **Yaqing Wang**, Houping Xiao, Ye Yuan, Radha Chitta, Jing Zhou and Jing Gao. *A General Framework for Diagnosis Prediction via Incorporating Medical Code Descriptions*. Proceedings of the IEEE International Conference on Bioinformatics and Biomedicine (BIBM), Madrid, Spain, December, 2018. Acceptance rate: $105/534 = 19.6\%$
- BIBM18b Ye Yuan, Fenglong Ma, Guangxu Xun, **Yaqing Wang**, Kebin Jia, Lu Su and Aidong Zhang. *Multivariate Sleep Stage Classification using Hybrid Self-Attentive Deep Learning Networks*. Proceedings of the IEEE International Conference on Bioinformatics and Biomedicine (BIBM), Madrid, Spain, December, 2018. Acceptance rate: $105/534 = 19.6\%$
- ICDM18a Kishlay Jha*, **Yaqing Wang***, Guangxu Xun, and Aidong Zhang. *Interpretable Word Embeddings For Medical Domain*. Proceedings of the 18th IEEE International Conference on Data Mining (ICDM), Singapore, November 2018. (* equal contribution). Acceptance rate: 11.08%
- ICDM18b Ye Yuan, Guangxu Xun, Fenglong Ma, **Yaqing Wang**, Nan Du, Kebin Jia, Lu Su and Aidong Zhang. *MuVAN: A Multi-view Attention Network for Clinical Temporal Data*. IEEE International Conference on Data Mining (ICDM), Singapore, November 2018. Acceptance rate: 8.86%
- MobiCom18 Wenjun Jiang, Chenglin Miao, Fenglong Ma, Shuochao Yao, **Yaqing Wang**, Ye Yuan, Hongfei Xue, Chen Song, Xin Ma, Dimitrios Koutsonikolas, Wenya Xu, and Lu Su. *Towards Environment Independent Device Free Human Activity Recognition*. The 24th Annual International Conference on Mobile Computing and Networking (MobiCom), New Delhi, India, October 29-November 2, 2018. Acceptance rate: $42/187 = 22\%$

- KDD18a **Yaqing Wang**, Fenglong Ma, Zhiwei Jin, Ye Yuan, Guangxu Xun, Kishlay Jha, Lu Su and Jing Gao. *EANN: Event Adversarial Neural Networks for Multi-Modal Fake News Detection*. Proceedings of the 24th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD 2018), London, United Kingdom, August, 2018. Acceptance rate: $112/496 = 22.6\%$
- KDD18b Kishlay Jha, Guangxu Xun, **Yaqing Wang**, Vishrawas Gopalakrishnan, Aidong Zhang. *Concepts-Bridges: Uncovering Conceptual Bridges Based on Biomedical Concept Evolution*. Proceedings of the 24th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), London, United Kingdom, August, 2018. Acceptance rate: $107/983 = 10.9\%$
- ICDM17 **Yaqing Wang**, Fenglong Ma, Lu Su, Jing Gao. *Discovering Truths from Distributed Data*. IEEE International Conference on Data Mining (ICDM), New Orleans, USA, November 2017. Acceptance rate: $72/778 = 9.25\%$

PROGRAMING LANGUAGES

Java, C, C++, Python, Matlab, R, Pytorch, Tensorflow, UNIX shell scripting, MySQL, Hadoop

PROFESSIONAL SERVICE

- External Reviewer
 - SIGKDD (2018), VLDB (2018), WWW (2017, 2018)
 - WSDM (2018, 2019), ICDM (2018)
 - SDM (2018), AAAI (2016, 2017, 2018), IJCAI (2018)
- Conference Volunteer
 - KDD 2018, ICDM 17

HONORS & AWARDS

- 2018 Student Travel Award, KDD, London, UK
- 2017 Student Travel Award, ICDM, New Orleans, Louisiana, USA
- 2016-2020 Presidential Fellowship from SUNY Buffalo
- 2013 Honorable Mention Prize in Mathematical Contest in Modeling, the Consortium for Mathematics and Its Application (COMAP), USA