

# 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, Knowledge Graph, 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: Knowledge Graph Validation** (ongoing)

- Working on cross-checking the knowledge in the large scale knowledge graph with the help of existing external knowledge graphs and limited human supervision. The aim of this project is to validate the enormous knowledge automatically with affordable human efforts.

### **Project ii: 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 iii: 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 iiiii: 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

### 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, Wen Yao 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:  $72/778 = 9.25\%$

## **Preprints & Submissions**

Guangxu Xun, Kishlay Jha, Ye Yuan, **Yaqing Wang** and Aidong Zhang. *MeSHProbeNet: A Self-attentive Probe Net for MeSH Indexing*. The model *MeSHProbeNet* (formerly named as *xxg*) won the first place in Task 6A of the 2018 BioASQ challenge. Accepted by Bioinformatics.

## **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