

Qingkai Zeng

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| RESEARCH INTERESTS | Text Mining, Machine Learning, Natural Language Processing, Information Extraction. |
| EDUCATION | <p>University of Notre Dame, IN, US Jan. 2018 – Ph.D. student in Computer Science and Engineering.</p> <ul style="list-style-type: none">• GPA: 3.8/4.0• Advisor: Dr. Meng Jiang; Excepted to graduate in 2023 <p>University of Illinois at Urbana-Champaign, IL, US Aug. 2016 – Dec. 2017 Master of Engineering in Electrical and Computer Engineering</p> <ul style="list-style-type: none">• GPA: 3.6/4.0 <p>Sun Yat-sen University, Guangzhou, China Aug. 2011 – June 2015 Bachelor of Engineering in Electrical and Computer Engineering</p> <ul style="list-style-type: none">• GPA: 3.6/4.0• Thesis: Research about European and African Population Based on WDD Algorithm |
| PUBLICATIONS | <p>[1] Wenhao Yu, Zongze Li, Qingkai Zeng, Meng Jiang. “Tablepedia: Automating PDF Table Reading in an Experimental Evidence Exploration and Analytic System”, The World Wide Web Conference (WWW). ACM, 2019.</p> <p>[2] Daniel (Yue) Zhang, Bo Ni, Qiyu Zhi, Thomas Plummer, Qi Li, Hao Zheng, Qingkai Zeng, Yang Zhang and Dong Wang. “Through The Eyes of A Poet: Classical Poetry Recommendation with Visual Input on Social Media.” In 2019 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), (Acceptance rate: 14%)</p> <p>[3] Yihong Ma, Qingkai Zeng, Tianwen Jiang, Liang Cai, Meng Jiang A Study of Person Entity Extraction and Profiling from Classical Chinese Historiography, International Workshop on Entity Retrieval (EYRE) in conjunction with ACM International Conference on Information and Knowledge Management (CIKM), 2019.</p> <p>[4] Daheng Wang, Meng Jiang, Xueying Wang, Tong Zhao, Qingkai Zeng and Nitesh Chawla. “A Project Showcase for Planning Research Work towards Publishable Success”, at the Project Showcase track in ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2018.</p> <p>[5] Daheng Wang, Meng Jiang, Qingkai Zeng, Zachary Eberhart and Nitesh Chawla. “Multi-Type Itemset Embedding for Learning Behavior Success”, in ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2018. (Long presentation, acceptance rate = 10.9%)</p> <p>[6] Yunong Zhang, Jinjin Wang, Qingkai Zeng, Heng Qiu, Hongzhou Tan. “Near Future Prediction of European Population through Chebyshev-Activation WASD Neuronet”, Intelligent Control and Information Processing (ICICIP), 2015 Sixth International Conference on. IEEE, 2015.</p> <p>[7] Qingkai Zeng, Jingyao Ren, Chengxu Ye, Yonghua Yin, Yunong Zhang. “Origination, transition and expectation of weights direct determination (WDD) method”, China Science and Technology Information, vol.130, 2014.</p> |
| PUBLICATIONS UNDERREVIEW | [1] Meng Jiang, Brooke Ammerman, Qingkai Zeng , Ross Jacobucci. “Phrase-level Pairwise Topic Modeling to Uncover Helpful Peer Responses to Online Suicidal |

Crises”, under review at Nature Palgrave Communications.

[2] Daheng Wang, **Qingkai Zeng**, Netish.V. Chawla, Meng Jiang. “Modeling Complementarity in Behavior Data with Multi-Type Itemset Embedding”, under review at Transactions on Intelligent Systems and Technology. (IF=3.190)

[3] **Qingkai Zeng**, Mengxia Yu, Wei Peng, Tianwen Jiang, Tim Weninger, Meng Jiang. “Handling the Variety of Distant Labeling Methods for Recognizing Scientific Concepts”, under review at ACM International Conference on Web Search and Data Mining (**WSDM**), 2020.

[4] **Qingkai Zeng**, Mengxia Yu, Wenhao Yu, Jinjun Xiong, Yiyu Shi, Meng Jiang. “Faceted Hierarchy: A New Graph Type to Organize Scientific Concepts and a Construction Method”, under review at Workshop on Graph-Based Natural Language Processing (TextGraphs) in conjunction with Conference on Empirical Methods in Natural Language Processing (**EMNLP**), 2019.

RESEARCH PROJECTS

Handling distant labeling methods on scientific concept recognition

Supervised by Prof. Meng Jiang

Aug. 2018 – Aug. 2019

- Proposed three types of distant labeling methods and study how to handle the variety of these methods to generate quality distantly labeled sentences from auxiliary data.
- Developed a joint learning framework that separately learn the multi-class and binary signals from training data and distantly labeled data to address the no-type issue.
- Experiments show that our distant labeling assisted model significantly outperforms the state-of-the-art in the task of concept recognition by +4.5%.
- Submitted a paper to WSDM 2020.

Construct Faceted Concept Hierarchy from Scientific Literature

Supervised by Prof. Meng Jiang

Jan. 2018 – May 2018

- Proposed an efficient framework (HiGrowth) that extracting concepts and the hierarchical relations among these concepts, growing a concept hierarchy by scanning the set of relation tuples just once and inferring parent-to-child relations.
- Submitted a paper to EMNLP 2019.

Use of Neural Network in Data Recover and Trend Prediction

Research Assistant, Supervised by Prof. Yunong Zhang

Oct. 2013 – May 2015

- Built a prediction model using WASD neural network and applied it to data recovery research.
- Improved the convergence speed and largely simplified the network structure of hidden layers.

SKILLS

Programming Languages: Python, MATLAB, C++, C, CUDA

Deep Learning Platforms: PyTorch, TensorFlow

Computer Skills: Git, L^AT_EX, Linux, Keynotes, MS Offices

Related Courses: Natural Language Processing, Data Mining Principle, Pattern Recognition, Complexity and Algorithm, etc.

HONORS AND AWARDS

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| The 1 st Prize in Innovative Training Program for Undergraduate Students | 2015 |
| Reward of Excellent from Summer Internship Program in CTS | 2014 |