AO WANG

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EDUCATION

Fudan University *Shanghai, China*
School of Computer Science, Bachelor in Secrecy Policy and Management *Jul.2019 expected*
Cumulative GPA: **3.62/4.0** | Rank: **1/19** | TOEFL: **115(S26)** | GRE: **328+3.5**

University of Cambridge *UK*
Summer Session in Queens' College, University of Cambridge (university fellowship support) *Jul.2017 - Aug.2017*

RESEARCH INTERESTS

Machine Learning, Knowledge Base, Data Mining

PUBLICATIONS

Ao Wang, Jindong Chen, Yanghua Xiao, and Hongwei Feng, **"FCLM: Explainable Categorization of Entities by Rule Mining with Markov Logic Network"**, submitted to *WWW*, 2019.

Jindong Chen, **Ao Wang**, Jiangjie Chen, Yanghua Xiao, Zhendong Chu, Jingping Liu, Jiaqing Liang, and Wei Wang, **"CN-Probase: A Data-driven Approach for Large-scale Chinese Taxonomy Construction"**, accepted by *ICDE*, 2019 (short paper).

RESEARCH EXPERIENCE

Construction of High-quality and Large-scale Chinese Concept Graph *Apr.2017 - Jan.2018*
Knowledge Works Laboratory in Fudan University, supervised by Prof. Yanghua Xiao and Prof. Wei Wang
Objective: Based on the hypernym-hyponym relations extracted from multiple sources, we built CN-Probase , a Chinese concept taxonomy that contains 17 million entities, 270 thousand concepts and 33 million isA relations with a precision over 95%. It is widely used by many renowned enterprises for different applications.
Core Contents:

- Carried out extraction of isA relations from multiple sources along with the effective integration
- Added conflict detection and noise canceling module by using statistic methods for accuracy enhancement
- Joined in the construction of CN-Probase and the composition of the paper as second author

Explainable Feature Contribution Learning *Sep.2017 - May.2018*
Knowledge Works Laboratory in Fudan University, supervised by Prof. Yanghua Xiao
Objective: Inspired by the representational capacity of Markov logic network (MLN), the aims are to figure out an effective approach to learn the contributions of features towards concept in categorization, so as to make interpretable and convincing categorization for entities in ontological knowledge bases.
Core Contents:

- Proposed multiple methods for first-order Horn clause mining
- Designd a heuristic sampling algorithm to solve the scalability problem of MLN
- Applied Markov logic network to learn weights of rules to acquire interpretability
- Demonstrated better performance in categorization than other classical and state-of-the-art models

Construction of Commonsense Oracle *Jun.2018 - Sep.2018*
Collaborated with researchers from MSRA, supervised by Prof. Yanghua Xiao
Objective: Different from conventional methods of building a complete taxonomy for commonsense reasoning, we brought about the idea of online commonsense proposition determination by building a commonsense oracle based on information from knowledge graph and search engine.
Core Contents:

- Carried out online commonsense inference by extended feature dimensions
- Applied graph-based supporting facts from knowledge graph
- Applied search engine to acquire web-based facts with pre-defined lexical patterns and templates

CONTEST EXPERIENCE

The Interdisciplinary Contest in Modeling (ICM) from COMAP
Meritorious Winner (top 13%) *Feb.2018*

COMPUTER SKILLS

Programming Languages: C/C++, Python, SQL, Qt/PyQt, LaTeX, MATLAB, Javascript, HTML/CSS
Operating Systems: Unix/Linux, Mac OS X, Windows
Software: Hadoop, Spark, TensorFlow, Vim, Git, Wireshark