Yuan Yang

GENERAL INFORMATION

Tel: 412-623-9464   Email: yyang754@gatech.edu
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RESEARCH INTEREST

I'm interested in combining symbolic reasoning with machine learning models for better data efficiency and interpretability. My search involves efficient deductive logical reasoning, differentiable inductive logic programming and inference with knowledge graph.

EDUCATION

Georgia Institute of Technology — Atlanta, GA
Ph.D. Machine Learning, College of Computing, advised by Le Song — 2018-present

Carnegie Mellon University — Pittsburgh, PA
M.S. Computational Data Science, School of Computer Science — 2016-2017

Beihang University — Beijing, Beijing
B.Eng. Software Engineering, School of Software Engineering — 2012-2016

RESEARCH EXPERIENCE

Georgia Institute of Technology, ML Group — Atlanta, GA
Research Assistant, advised by Le Song — 2018-present
- Research on symbolic reasoning with deep learning on structured data.

Petuum, Medical Group — Pittsburgh, PA
Research Scientist — 2017-2018
- Proposed a text classification CNN model for discharge medication prediction.
- Improved model interpretability with factor analysis theory

Carnegie Mellon University — Pittsburgh, PA
Team Leader, TREC 2017 LiveQA competition, advised by Eric Nyberg — 2017-2017
- Developed a QA system for real-time consumer health QA.
- A ML model that searches in tree-based knowledge graph with federated search engine.

SenseTime, Speech Group — Beijing, Beijing
Research & Development Intern — 2016-2016
- Implemented/fine-tuned Baidu Deep Speech 2 model.

Rochester University, The Computation and Language Lab — Rochester, NY
Research Intern, advised by Steven Piantadosi — 2015-2016
- Proposed a nonparametric Bayesian model for simulating human language learning.
- Model learns to represent formal languages with a functional programming system.

Tsinghua University, Statistical AI & Learning Group — Beijing, Beijing
Research Intern, advised by Jun Zhu — 2014-2016
- Proposed a distributed sampling framework for large-scale topic model inference.
- Framework outperforms state-of-the-art samplers: LightLDA and DSGLD.

PUBLICATIONS

1. Y. Yang, and L. Song. Learn to Explain Efficiently via Neural Logic Inductive Learning, *arXiv preprint arXiv:1910.02481, 2019*.

2. Y. Zhang*, X. Chen*, Y. Yang*, A. Ramamurthy, B. Li, Y. Qi, and L. Song. Can Graph Neural Networks Help Logic Reasoning?, *arXiv preprint arXiv:1906.02111, 2019*.

3. X. Si*, Y. Yang*, H. Dai, M. Naik, and L. Song. Learning a Meta-Solver for Syntax-Guided Program Synthesis, *7th International Conference on Learning Representations* (ICLR 2019).

4 Y. Yang, P. Xie, X. Gao, C. Cheng, C. Li, H. Zhang and E. Xing. Predicting Discharge Medications at Admission Time Based on Deep Learning, *arXiv preprint arXiv:1711.01386, 2017.*

5 Y. Yang, J. Yu, Y. Hu, X. Xu and E. Nyberg. A Consumer Health Question Answering System, *Text Retrieval Conference 2017 LiveQA Medical Track* (TREC 2017).

6 Y. Yang and S. T. Piantadosi. One Model For the Learning of Language, *arXiv preprint arXiv:1711.06301, 2016.*

7 Y. Yang, J. Chen and J. Zhu. Distributing the Stochastic Gradient Sampler for Large-Scale LDA, *22nd Conference on Knowledge Discovery and Data Mining* (KDD 2016).

Awards
- 1st Prize in Undergrad. Mathematical Contest in Modeling, CSIAM.   2014
- 2nd Prize in Imagine Cup 2014 Chinese Region, Microsoft.   2014
- National Scholarship, Beihang University.   2014
- 2nd Prize in Beihang Fengru Cup, Beihang University.   2014
- Excellent Student Prize, Beihang University.   2014

Teaching
- Teaching Assistant, Spring 2019, CSE 6740, Computational Data Analysis.   2019
- Seminar Lecturer, VR and Matrix application Lab, Beihang University.   2013-2015