

## Yuan Yang

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GENERAL INFORMATION	Tel: 412-623-9464 Homepage: <a href="https://github.com/gblackout">gblackout.github.io</a>	Email: <a href="mailto:yyang754@gatech.edu">yyang754@gatech.edu</a>
EDUCATION	<b>Georgia Institute of Technology</b> Ph.D. Machine Learning, College of Computing <b>Carnegie Mellon University</b> M.S. Computational Data Science, School of Computer Science <b>Beihang University</b> B.Eng. Software Engineering, School of Software Engineering	Atlanta, GA 2018-Present Pittsburgh, PA 2016-2017 Beijing, Beijing 2012-2016
RESEARCH INTEREST	I'm interested in developing data-labeling tools and interpretable ML models for graph/vision/QA applications. <b>Topics:</b> graph and logic reasoning, data programming, QA, computer vision, autonomous driving.	
RESEARCH EXPERIENCE	<b>Georgia Institute of Technology</b> SPC Lab, research assistant advised by <a href="#">Faramarz Fekri</a> <ul style="list-style-type: none"><li>• Develop auto data-labeling tools for vision and driving tasks.</li><li>• Research on interpretable models with graph and logic reasoning.</li></ul> ML Group, research assistant advised by <a href="#">Le Song</a> <ul style="list-style-type: none"><li>• Researched on GNN-/logic-based models for efficient graph reasoning.</li></ul> <b>Amazon, Product Graph Team</b> Research intern advised by <a href="#">Luna Dong</a> <ul style="list-style-type: none"><li>• Proposed a logic-based model for weakly-supervised entity linkage.</li></ul> <b>Petuum, Medical Group</b> Research scientist <ul style="list-style-type: none"><li>• Developed a CNN-based model for discharge medication prediction.</li></ul> <b>Carnegie Mellon University</b> TREC 2017, team leader advised by <a href="#">Eric Nyberg</a> <ul style="list-style-type: none"><li>• Developed a graph-based QA system for real-time consumer health QA.</li></ul> <b>SenseTime, Speech Group</b> Research & development intern <ul style="list-style-type: none"><li>• Implemented/fine-tuned Baidu Deep Speech 2 model.</li></ul> <b>Rochester University, The Computation and Language Lab</b> Research intern advised by <a href="#">Steven Piantadosi</a> <ul style="list-style-type: none"><li>• Proposed a Bayesian model for human language learning simulation.</li></ul> <b>Tsinghua University, Statistical AI &amp; Learning Group</b> <ul style="list-style-type: none"><li>• Proposed a distributed sampling framework for large-scale LDA inference.</li></ul>	
PUBLICATIONS	<ol style="list-style-type: none"><li>1 Y. Yang, A. Payani, F. Fekri, and J. Clayton. LogicQA: A Data-Efficient Training Approach to Graph Reasoning by Asking Inductive Logic Questions. <i>Under review, Thirty-Ninth International Conference on Machine Learning (ICML 2022)</i>.</li><li>2 Y. Yang, J. Clayton, and F. Fekri. LogicDef: An Interpretable Defense Framework Against Adversarial Examples via Inductive Scene Graph Reasoning. <i>Thirty-Sixth AAAI Conference on Artificial Intelligence (AAAI 2022)</i>.</li></ol>	

- 3 Y. Yang, and S. T. Piantadosi. One model for the learning of language. *Proceedings of the National Academy of Sciences Feb 2022*, 119 (5) (PNAS).
- 4 Y. Yang, H. Wei, B. Sisman, C. Faloutsos, L. Dong. OmniLink: Multi-Source Entity Linkage with Logic Rules. *arXiv preprint*, 2021
- 5 Y. Yang, and L. Song. Learn to Explain Efficiently via Neural Logic Inductive Learning, *8th International Conference on Learning Representations* (ICLR 2020).
- 6 Y. Zhang\*, X. Chen\*, Y. Yang\*, A. Ramamurthy, B. Li, Y. Qi, and L. Song. Efficient Probabilistic Logic Reasoning with Graph Neural Networks, *8th International Conference on Learning Representations* (ICLR 2020).
- 7 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).
- 8 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.
- 9 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).
- 10 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

- 3<sup>rd</sup> Place in TREC 2017 LiveQA Competition. 2017
- 1<sup>st</sup> Prize in Undergrad. Mathematical Contest in Modeling, CSIAM. 2014
- 2<sup>nd</sup> Prize in Imagine Cup 2014 Chinese Region, Microsoft. 2014
- National Scholarship, Beihang University. 2014
- 2<sup>nd</sup> Prize in Beihang Fengru Cup, Beihang University. 2014
- Excellent Student Prize, Beihang University. 2014

#### TEACHING

- Teaching Assistant, Fall 2020, CSE 6040, Computing for Data Analysis: Methods and Tools. 2020
- Teaching Assistant, Spring 2019, CSE 6740, Computational Data Analysis. 2019
- Seminar Lecturer, VR and Matrix application Lab, Beihang University. 2013-2015

#### PROFESSIONAL SERVICE

- Program Committee/Reviewer: ICML 20/21/22, NIPS 20/21, ICLR 21/22, IJCAI 21/22

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\*Equal contribution