

# Fan Yang

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## Research Interests

Information extraction and knowledge management. Neuro-symbolic reasoning.

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## Education

2016–now **Ph.D. (in progress) Machine Learning**, *Carnegie Mellon University*, Pittsburgh, PA.  
Advisor: William W. Cohen

2012–2016 **B.S. Mathematical Sciences**, *Carnegie Mellon University*, Pittsburgh, PA.  
Additional major in Computer Science, minor in Machine Learning

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## Awards and Honors

- **University Honor**, Carnegie Mellon University, 2016
- **College Honor**, Carnegie Mellon University, 2016
- **Undergraduate Presentation Award**, Carnegie Mellon University, 2015
- **Dean's List**, Carnegie Mellon University, 2012-2016

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## Publications

- AKBC 2017 **Fan Yang**, Jiazhong Nie, William W. Cohen, Ni Lao. Learning to Organize Knowledge with N-Gram Machines. *Workshop on Automated Knowledge Base Construction*, 2017.
- NIPS 2017 **Fan Yang**, Zhilin Yang, William W. Cohen. Differentiable Learning of Logical Rules for Knowledge Base Reasoning. *Neural Information Processing Systems*, 2017.
- NIPS 2017 Zihang Dai\*, Zhilin Yang\*, **Fan Yang**, William W. Cohen, Ruslan Salakhutdinov (\*: equal contribution). Good Semi-supervised Learning that Requires a Bad GAN. *Neural Information Processing Systems*, 2017.

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## Preprints

- 2017 William W. Cohen, **Fan Yang**, Kathryn Rivard Mazaitis. TensorLog: Deep Learning Meets Probabilistic DBs.
- 2014 Christopher Coscia, Jonathan DeWitt, **Fan Yang**, Yiguang Zhang. Best and Worst Case Permutations for Random Domination of the Path.

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## Research Experience

- Fall **Graduate Research Assistant**, *Carnegie Mellon University*, Pittsburgh, PA.  
2016–now Working on neuro-symbolic learning and reasoning problems.  
Advisor: Professor William W. Cohen
- Spring 2015 **Undergraduate Research Assistant**, *Carnegie Mellon University*, Pittsburgh, PA.  
Worked on high dimensional Bayesian optimization.  
Advisor: Professor Jeff Schneider

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## Work Experience

- Summer **Research intern**, *Google*, Mountain View, CA.  
2017 Developed symbolic memory model for question answering.
- Summer **Data science intern**, *Oncora Medical*, Philadelphia, PA.  
2016 Applied metric learning algorithms to medical data.
- Summer **Quantitative analyst intern**, *Citigroup*, New York, NY.  
2015 Developed indices trading strategies using option market implied probability.

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## Selected Coursework

Deep Reinforcement Learning, Probabilistic Graphical Models, Convex Optimization, Statistical Machine Learning.

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## Language Skills

Python, PyTorch, TensorFlow,  $\text{\LaTeX}$   
English, Chinese (native)