Jiasen Yang

305 N. University St.
West Lafayette, IN 47907

Phone: +1 (765) 637-8398 Email: yang768@purdue.edu
Website: http://www.stat.purdue.edu/~yang768

Research Interests

Machine learning, point processes, statistical network analysis, Stein's method, kernel and nonparametric methods, Bayesian posterior inference, randomized sketching algorithms

Education

Purdue University

Ph.D., Statistics (GPA: 3.94/4.0) 2013 – 2019 (Expected)

M.S., Statistics and Computer Science (GPA: 4.0/4.0) 2013 – 2015

University of Science and Technology of China

B.S., Statistics (Special Class for the Gifted Young) 2009 – 2013

Professional Experience

Research Assistant Aug. 2015 – Present

Department of Computer Science, Purdue University Advisor: *Prof. Jennifer Neville*

- Developed a nonparametric goodness-of-fit test for discrete distributions with intractable normalization constants using Stein's method and reproducing kernel Hilbert spaces.
- Proposed latent space models for dynamic network data based on Poisson and Hawkes processes to capture homophily and reciprocity with network embeddings.
- Developed estimation methods with statistical guarantees for learning relational models from partial crawls of large-scale networks.

Quantitative Analyst Intern May – Aug. 2016

Google, Mountain View Supervisors: *Dr. Shuchao Bi and Dr. Meeyoung Park*

- Performed analysis of generalized linear mixed-effects models for display advertising.

Data Science Research Intern May – Aug. 2015

The Nielsen Company, Chicago Supervisors: *Dr. Ludo Daemen and Dr. Brett Baden*

- Developed statistical models and visualization tools for sales time series data.

Instructor & Teaching Assistant Aug. 2013 – May 2015

Department of Statistics, Purdue University

- Delivered lectures; prepared homeworks and exams for undergraduate statistics courses.

Refereed Publications

Jiasen Yang, Qiang Liu, Vinayak Rao, and Jennifer Neville. Goodness-of-fit testing for discrete distributions via Stein discrepancy. In *Proceedings of the 35th International Conference on Machine Learning (ICML)*, 2018.

Agniva Chowdhury, **Jiasen Yang**, and Petros Drineas. An iterative, sketching-based framework for ridge regression. In *Proceedings of the 35th International Conference on Machine Learning (ICML)*, 2018.

Jiasen Yang, Vinayak Rao, and Jennifer Neville. Decoupling homophily and reciprocity with latent space network models. In *Proceedings of the 33rd Conference on Uncertainty in Artificial Intelligence (UAI)*, 2017. (Plenary presentation)

Jiasen Yang, Bruno Ribeiro, and Jennifer Neville. Stochastic gradient descent for relational logistic regression via partial network crawls. In *Proceedings of the 7th International Workshop on Statistical Relational AI (StarAI)*, 2017. (Spotlight presentation)

Jiasen Yang, Bruno Ribeiro, and Jennifer Neville. Should we be confident in peer effects estimated from partial crawls of social networks? In *Proceedings of the 11th International AAAI Conference on Web and Social Media (ICWSM)*, 2017.

Manuscripts under Review

Agniva Chowdhury, **Jiasen Yang**, and Petros Drineas. Randomized iterative algorithms for Fisher discriminant analysis. Preprint at arXiv:1809.03045, 2018.

Agniva Chowdhury,* **Jiasen Yang**,* and Petros Drineas. Structural conditions for projection-cost preservation via randomized matrix multiplication. Preprint at arXiv:1705.10102, 2017. (** Equal contribution*.)

Honors and Awards

Fellowships and awards:

- Bilsland Dissertation Fellowship — *Purdue University* — 2018
- Outstanding Bachelor's Thesis (Top 5%) — *Univ. Sci. & Tech. China* — 2013

Travel awards:

- International Conference on Machine Learning — *Stockholm, Sweden* — 2018
- Conference on Uncertainty in Artificial Intelligence — *Sydney, Australia* — 2017
- International AAAI Conference on Web and Social Media — *Montreal, Canada* — 2017
- NSF-CBMS Conference on Topological Data Analysis — *Austin, TX* — 2016
- Amazon Graduate Research Symposium — *Seattle, WA* — 2015

Presentations

Oral presentations:

- 35th International Conference on Machine Learning (ICML) — Jul. 2018
  Goodness-of-fit testing for discrete distributions via Stein discrepancy.
- 33rd Conference on Uncertainty in Artificial Intelligence (UAI) — Aug. 2017
  Decoupling homophily and reciprocity with latent space network models.
- 7th International Workshop on Statistical Relational AI (StarAI) — Aug. 2017
  Stochastic gradient descent for relational logistic regression via partial network crawls.
- Purdue Statistics Graduate Student Seminar — Mar. 2016
  Exchangeable random graphs, graph limits, and graphons.

Poster presentations:

- 9th International Purdue Symposium on Statistics — Jun. 2018
  Goodness-of-fit testing for discrete distributions via Stein discrepancy.
- 11th International AAAI Conference on Web and Social Media (ICWSM) — May 2017
  Should we be confident in peer effects estimated from partial crawls of social networks?
- 3rd Amazon Graduate Research Symposium — Dec. 2015
  Learning relational dependency networks from random walk crawls of large-scale networks.

Teaching Experience

Instructor

- Introduction to Probability Models (STAT 225) — Fall 2014, Spring 2015

Teaching Assistant

- Statistics and Society (STAT 113) — Spring 2014
- Elementary Statistical Methods (STAT 301) — Fall 2013, Spring 2014

Professional Activities

Coordinator of Purdue Machine Learning and Applications Seminar — Fall 2015

Reviewer/program committee member for:

- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) — 2017
- Machine Learning Journal (MLJ) — 2018
- International Conference on Machine Learning (ICML) — 2017, 2018
- Neural Information Processing Systems (NIPS) — 2017, 2018
- Artificial Intelligence and Statistics (AISTATS) — 2019

Technical Skills

Programming languages:

- Python, R, MATLAB, C/C++, SQL, Mathematica, SAS, HTML, LaTeX